

Shared Register Of randomized Trials Comparing Comics to Embargo, Lexicon, Literature or Other Comics

(COLLECCTORS register)

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With contributions from: (see [Discussion section](#))

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Table of Contents

	Page
1. Introduction to the project and register	3
2. Criteria studies must meet to be included in the register	4
3. A brief comment on risk of bias assessments, studies assessed for inclusion and notes sections	5
4. Risk of bias assessments (visual summary)	7
5. Comics included in the trials (first)	11
6. Comics included in the trials (last)	33
7. Data extracted from the studies (first)	34
8. Data extracted from the studies (last)	135
9. Included studies categorized by outcomes measured	136
10. Keywords related to comics	143
11. How we search for comics trials (database searched, keywords used)	146
12. Keeping track of what was searched, when and by who (search tracker)	151
13. Backward citation searches (who are the authors citing?)	152
14. Forward citation searches (who is citing the authors?)	154
15. Contacts with comics trial authors and comics researchers	157
16. Suggestions for future comics researchers	161
17. Project details that still need to be discussed (discussion section)	162
18. How people are contributing or contributed to the project	163
19. Conflict of interests and funding statements	164
20. How to contribute to the register	165
21. Potential uses of the register for research on research (meta-research)	166
22. Things left to do	167
23. Notes and general thoughts (first)	168
24. Notes and general thoughts (last)	174
25. Studies assessed for inclusion (full-text) (first)	175
26. Studies assessed for inclusion (full-text) (last)	230
27. Risk of bias assessments (first)	231
28. Risk of bias assessments (last)	324
29. Standardized emails sent to study authors (first)	325

Introduction to the project and register

This document is an ongoing register of experimental studies assessing the effects of reading comics or derivatives (such as mangas, graphic novels, manhwas, webcomics, fotonovelas, bandes dessinées, fanzines, etc.). In research jargon the methods used to maintain this register are akin to those of [living systematic reviews](#).

The aim is to look for, identify, collect, assess and categorize all such studies for the benefit of all interested stakeholders (researchers, patients, the public, artists, funders, etc.).

To be included in the register experimental studies assessing comics or derivatives need to meet a certain number of criteria, found [here](#).





Only a certain type of studies are included ([randomized controlled trials](#)); this decision was made for feasibility reasons (there would be too many studies to cover otherwise) and because when well-designed and executed these studies are widely regarded in the field of [medicine and health research](#) as being among the most reliable tools to assess if a small to moderate effect (increased knowledge for instance) is due to an intervention (comics in this situation). Indeed, when effects are small they are easily confused with noise (chance, biases, people getting better over time by themselves, etc.) and well-designed randomized controlled trials can offer some protection against these issues. The original author of this register (VM) believes most comics cannot be assumed to have strong effects. Considering evidence showing that [most social and educational interventions have small effects](#) and [most health interventions have small effects](#) he believes most comics (with a few exceptions) are likely to lead to small effects too. People contributing to the project do not need to agree with this view and disagreement is welcome.

The full register along with its methods are meant to remain freely available to all forever.

History of the project

This project was previously composed of “[The effects of comics, as measured in randomized controlled trials: a rapid review](#)” and “[Potential studies found through abstract and title screening \(deduplicated\)](#)” and built upon “[Une revue rapide des effets relatifs à la santé de la lecture de bandes dessinées chez les enfants, les adolescents et les adultes](#) (in French)”. All of which were planned, conceived, executed and written by Martin Vuillème with help from a few contributors. The original study plan (protocol) is available [here](#).

Non-English readers, lecteurs francophones, lettori italiani, Deutschsprachige Leser, ...

For non-English readers (français , italiano , deutsch , español , etc.) I suggest using [DeepL](#) or [Google Translate](#) to translate the documents.

Feedback and suggestions can be sent to Martin Vuillème (martin.vuilleme@gmail.com) ([@ScienceofCookie](#)).

Criteria studies must meet to be included in the register:

Study methods:	<p>Studies must compare what happens to two (2) or more groups of participants.</p> <p>Participants must be allocated to two or more groups using chance, for instance by using the flip of a coin or a computer algorithm (these studies are called randomised controlled trials).</p> <p>One group must receive and read (or be read) some kind of comic or part of a comic (for instance a comic book, fotonovela, webcomic or a graphic novel).</p> <p>The studies must also include one or more comparison group(s) where participants either:</p> <ul style="list-style-type: none">a) Receive no intervention (“treatment as usual”, no comics)b) Receive a different comicc) Receive a different version of the same comic (such as colored versus black & white)d) Receive textual documents with or without illustrations (such as a brochure, leaflet, etc.) <p>If participants who receive the comic also get something else (for instance comic + DVD), the comparison group must receive the same thing (for instance a brochure + DVD).</p>
Length of the study:	Any (eg. hours, days, months, years, decades)
Study participants:	Children, adolescents, adults or older people of any age from any setting in any country with or without health conditions
Outcomes measured:	Any
Measurement tools:	Any
Note about outcomes:	So called “negative” and “statistically non-significant” ($p > 0.05$) results are welcome and equally included
Study status:	Published, unpublished, in preparation, ongoing, completed, under review or interrupted
Publication type:	Studies published in scientific journals or in the “ grey literature ” (which includes book chapters, reports, theses, etc.)
Language (study, comics):	Any
Publication year:	Any, the studies can be old or as recent as July 28, 2019

[\[Back to top\]](#)

A brief comment on the risk of bias assessments, list of studies assessed for inclusion and notes sections

The [list of studies assessed for inclusion](#) along with the detailed [risk of bias assessments](#) and [notes](#) have been left at the end of this document for I (VM) expect that they will be of limited interest to most non-academic readers. The risk associated with this decision is that these resources may end up being entirely dismissed. For the overly curious readers, here is a non-exhaustive list of things you may find in these sections.

Things you can find in the ***List of studies assessed for inclusion***:

- Studies that are likely to be included in the near future (to do / not yet done)
- Where most included studies were from and how they were found out
- Experimental studies excluded because they were not randomized controlled trials (for instance before-after studies)
- Experimental studies excluded because the comics were part of a program or complex intervention or offered along with other interventions
- Experimental studies excluded because they compared different ways of reading comics (passive vs active, parent vs doctor, etc.)
- Experimental studies excluded because they were about making comics, not reading comics
- Studies excluded because they were about illustrations, infographics, leaflets
- Studies which “almost made it to the register”
- Studies which might be worth including but lacked sufficient details to make a decision. Some of which reported contradictory information.
- Studies I could not find or assess. Some of which require a translator or going to a specific university I (VM) can hardly reach without excessive efforts.

Things you can find in the ***Risk of bias assessments***:

- Details about what researchers using comics could improve, missing information
- Details about who funded the included studies, who made the comics
- Details about challenges faced by researchers using comics
- Errors and incoherences found when extracting study results / data

Things you can find in the ***Notes***:

Warning: Notes regularly include jargon specific to meta-research, systematic reviews

- Challenges and difficulties faced in the process of building this register
- Ideas, suggestions for improvements of the register or comics studies, strategies to shorten the time required for updates or how to best keep up with this literature
- General thoughts about the process of building this register
- Potential errors I may have made, things I may have missed
- Time spent on various tasks required to build and maintain this register
- Research needs, surprises, frustrations

[\[Back to top\]](#)

Further explanations

Meaning of symbols

Yellow highlight The study has not yet been assessed to determine if it should be included in the register

Red text The study could not be found or accessed. In some cases a translator might be needed.

Abbreviations used

SD = [Standard Deviation](#)

RCT = [Randomized Controlled Trial](#) (=a type of study using chance to create groups)

SR = [Systematic Review](#) (=a type of study that involves summarizing existing research)

RoB = [Risk of Bias](#) (a measure of the likelihood of incorrect/flawed results)

VM = Vuillème Martin (=someone crazy enough to build a register of comics RCTs)

ICC = Intra Cluster Correlation (=people coming from the same group tend to have similar results, something that must be taken into account when analyzing results)

IQR = [Interquartile Range](#)

SE = [Standard Error](#)

EFL = English as Foreign Language classrooms (=students learning English)

Jargon

Explanations for jargon can be found online in the GET-IT Glossary (<http://getitglossary.org/>). If you feel like some jargon is worth removing or have suggestions for clearer sentences, please contact Martin Vuillème (see [Introduction](#) for email).

Feasibility study = a study where the main purpose is to see if a bigger study could be done

[\[Back to top\]](#)

Risk of bias assessments (visual summary)

The risk of biased (“incorrect”) results in the studies included in this register was assessed using the [Cochrane Collaboration Risk of Bias tool for randomized controlled trials \(original version\)](#). Comments explaining why a risk of bias was deemed “high”, “unclear” or “low” can be found in the risk of bias assessment section [\[here\]](#).

Risk of bias assessments, although based on a structured tool, always involve some judgement and subjectivity. This is particularly the case when the study includes conflicting information, does not report some details or reports details but only unclearly.

These assessments are presented *before* the comics as a warning that their results must be considered in the context of a typically high to unknown risk of biased results.

		1	2	3	4	5	6	7
Self-identified type of comic	Included study (Main author, publication year)	Random sequence generation	Allocation concealment	Blinding of participants and personnel	Blinding of outcome assessment	Incomplete outcome data	Selective outcome reporting	Other bias
Graphic novel	Author, 2009							

Low risk of bias	
Unclear risk of bias	
High risk of bias	

Interpretation of this risk of bias assessment (simplified)

1. There is a high risk the study authors did not assign participants to the different groups at random (using chance).
2. There is a high risk the study authors or study personnel could have changed assignments and decided non-randomly which participants went to which group.
3. There is a high risk the study participants and study personnel knew the purpose of the study and the intervention(s) they receive/offer and may have acted differently.
4. There is a high risk those who assessed outcomes knew which intervention(s) the study participant received and may have assessed outcomes differently.
5. There is a high risk participants who quit the study, did not respond, were lost to follow-up or were excluded from analysis could have lead to different results.
6. There is a high risk the study authors measured a number of other outcomes but only reported some selectively.
7. There is a high risk of bias for other reasons. For instance the study authors created the comics used in the study, they had financial conflicts of interest or participants that were not supposed to could read the comics.

Self-identified type of comic	Included study (Main author, publication year)	Risk of bias						
		Random sequence generation	Allocation concealment	Blinding of participants and personnel	Blinding of outcome assessment	Incomplete outcome data	Selective outcome reporting	Other bias
Comics	Muzumdar, 2017							
Cartoon	Junhasavasdikul, 2017a							
Cartoon	Junhasavasdikul, 2017b							
Fotonovela	Koops van't Jagt, 2018							
Fotonovela	Duizer, 2014	Translator needed						
Comics	Kraft, 2016							
Comics	Leung, 2017							
Comics	Spiegel, 2013 and Diamond, 2016							
Fotonovela	Cabassa, 2015							
Fotonovela	Gallagher-Thompson, 2015							
Cartoon	Maxwell, 2014							
Storybook	Gebarski, 2013							
Fotonovela	Prokhorov, 2013							
Cartoon	Tae, 2012							
Cartoon	Tjiam, 2012							
Fotonovela	Unger, 2013							
Cartoon	Leff, 2011							
Cartoon	Campbell, 2005							
Fotonovela	Risi, 2004							
Comics	Kirsh, 2002							
n/a	Kerr, 2000	Not assessed (clarifications needed)						
Cartoon	Delp, 1996							
Cartoon	Linden, 1988	Not assessed (clarifications needed)						
Fotonovela	Fernandez, 2017							
Manga / Comics	Leung, 2014							
Comics	Kassai, 2016							
Comics	Kovacs, 2011							
Storybook	Kuo, 2016							
Cartoon	Kamel, 2017							
Cartoon	Werch, 1989							
Cartoon	Cardenas, 1993							
Comics	Hammond, 2012							
Cartoons	Mendiburo-Seguel, 2017							
Cartoon	Cooper, 2016							
Fotonovela	James, 2005							
Comics	Muzumdar, 2015							
Cartoon	Botvin, 1984							
Cartoon	Olson, 1999							
Storybook	Macindo, 2015							
Cartoon	Moll, 1986							
Comics	Kirsh, 2000							

Cartoon	Moll, 1977							
Fotonovela	Davis H, 2017							
Picture book	Zieger, 2013							
Manga	Nasution, 2018	Translator needed						
Graphic novel	Short, 2013							
Comics	Bellingham, 1993							
Comics	Liu, 2004							
Picture book	Mengoni, 2016							
Fotonovela	Shin, 2012							
Bande dessinée	Reinwein, 1990							
Comics	Manes, 2014							
Comics	Merç, 2013							
Comics	Tabassum, 2018							
Comics	Alam, 2016	Not assessed (feasibility study)						
Fotonovela	Thompson, 2019							
n/a	Subramanian, 2016							
n/a	Rodriguez, 2016 Lin, 2013							
Comics	Lin, 2015							
Comics	Lin, 2016							
Fotonovela	Christy, 2016							
Fotonovela	Davis S, 2017							
Storybook	Kotaman, 2019							
Storybook	Kotaman, 2017							
Graphic novel	Chan, 2019							
Comics	Hands, 2018							
Graphic novel	Cohen, 2018							
Comics	Aleixo, 2016							
Comics	Mallia, 2007							
Comics	Brand, 2019							
Fotonovela	Tan, 2018							
Webcomics	Ahamed, 2016							
Comics	Ngı Yi Lok, 2015							
Fotonovela	Unger, 2019							
Storybook	Byrne, 2002							
Storybook	Tunney, 2013							
Comics	Kirsh, 2002b							
Storybook	Hartling, 2010							
Cartoon	Piaw, 2012							
Comics	Hassanirokh, 2016							
Comics	Kirsh, 2003							
Graphic novel	Ojeda-Beck, 2018	Not assessed (clarifications needed)						
Comics	McDonald, 2009							
Comics	Arlin, 1978							
Cartoon	Greene, 2017							
Cartoons	Basal, 2016							
Comics	Lambert, 2006							
Picture book	Aminabadi, 2011							
Children's book	Felder-Puig, 2003							
Cartoon	Huber, 1997							
Storybook	De Droog, 2014							
Cartoons	Chua, 2014							


Trials not yet published or their data is not yet available

Comics	Leung (completed)							
Fotonovela	Mortimer (status: ?)							

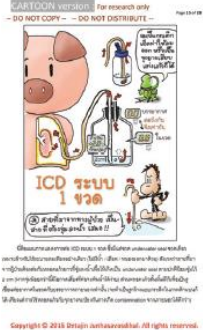
Fotonovela	Sanchez (ongoing)								
Comics	Thompson (completed)								
Comics	Suzuki (ongoing)								
Manga	Shimazaki (ongoing)								
Comics	Inaoka (ongoing)								
n/a	Durand (ongoing)								
Comics	Malavika (ongoing)								
Comics	Tigges (status: ?)								


[\[Back to top\]](#)

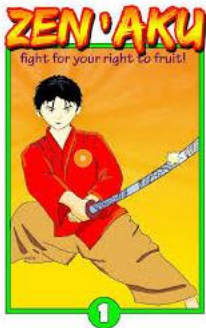
Comics assessed in the included trials

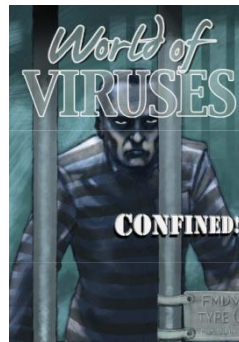

Take a moment to educate yourself on ADULT VACCINES	
	
Main topic:	Vaccines
URL:	[URL] (free?)
Assessed in:	(Muzumdar, 2017) (Muzumdar, 2015)

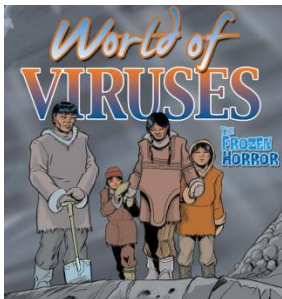

Zoete Verleiding [Sweet temptations]	
 	
Main topic:	Diabetes
URL:	Not found
Assessed in:	(Duizer, 2014) (Koops van't Jagt, 2018)

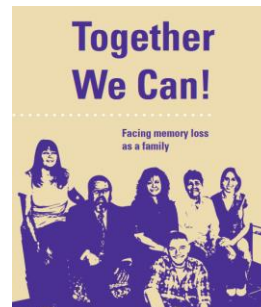

Takob & Ob Academic Session – Understand the principles of ICD Intercostal Chest Drain (Chest tube)	
	
Main topic:	Pneumothorax, intercostal drains
URL:	[URL] (free)
Assessed in:	(Junhasavasdikul, 2017)

Untitled	
	
Main topic:	Medical research
URL:	[URL] (free?)
Assessed in:	(Kraft, 2016)

Zen Aku: Fight for Your Right to Fruit	
	Not found
Main topic:	Eating fruits
URL:	Not found
Assessed in:	(Leung, 2014) (Leung, 2017)

World of viruses – Confined!	
	
Main topic:	Viruses, fout and mouth disease
URL/ISBN:	[URL] (free) 9780803243927
Assessed in:	(Spiegel, 2013)

World of viruses – The Frozen Horror	
	
Main topic:	Viruses, influenza
URL/ISBN:	[URL] (free) 9780803243927
Assessed in:	(Spiegel, 2013)

Together We Can! Facing memory loss as a family	
	
Main topic:	Challenging behaviors, dementia
URL:	[URL] (free)
Assessed in:	(Gallagher-Thompson, 2015)

Bowel prep? No sweat!




Main topic:	Colonoscopy preparation
URL:	[Link] (free?)
Assessed in:	(Maxwell, 2014)

Having a VCUG (Voiding CystoUrethroGram)

Having a VCUg

(Voiding CystoUrethroGram)



b

He or she will wash your bottom with special brown soap and put a tiny tube (catheter) in where your pee (urine) comes out. A piece of tape on your leg will keep it from falling out.



7

Main topic:	Cystourethrogram (bladder X-ray)
ISBN:	[URL] (free)
Assessed in:	(Gebarski, 2013)

?

Not found

Not found

Main topic:	Quitting smoking
URL:	Not found
Assessed in:	(Prokhorov, 2013)

How to prepare for a colonoscopy


HOW TO PREPARE FOR A COLONOSCOPY

After light to moderate sedation, you have a colonoscopy. You will be awake but relaxed. You will be able to breathe on your own. You will be able to talk to the doctor. You will be able to see the inside of your colon. You will be able to see the inside of your colon.

The following foods must be avoided one week prior to the test:


- Dark red colored foods, such as certain berries, raspberries, plums, etc.
- Highly colored foods, such as corn, carrots, etc.
- Any vegetables with an unusual color, like red, purple, orange, green, and black food.

After light to moderate sedation, you have a colonoscopy. You will be awake but relaxed. You will be able to breathe on your own. You will be able to talk to the doctor. You will be able to see the inside of your colon. You will be able to see the inside of your colon.



Other matters that require attention are:


- A guardian must be present for the sleep endoscopy
- You must avoid driving for the remainder of the day the test is taken.
- Any polyp discovered during the test will not be evaluated on site but will be sent to the division of gastroenterology for consultation on test results.
- Biopsy tests performed due to abnormal findings during the endoscopy will result in an additional charge.

- 
- Other matters that require attention are:
- A guardian must be present for the sleep endoscopy
 - You must avoid driving for the remainder of the day the test is taken.
 - Any polyp discovered during the test will not be evaluated on site but will be sent to the division of gastroenterology for consultation on test results.
 - Biopsy tests performed due to abnormal findings during the endoscopy will result in an additional charge.

Main topic:	Colonoscopy
URL:	Not found
Assessed in:	(Tae, 2012)

?	
Not found	Not found
Main topic:	Eye occlusion therapy
ISBN:	Not found
Assessed in:	(Tjiam, 2012)


<i>Sentimientos secretos [Secret feelings]</i>	
	Not found
Main topic:	Depression
ISBN:	Not found
Assessed in:	(Unger, 2013) (Cabassa, 2015)

<i>Untitled</i>	
<p>Cartoon Illustration of a Relationally Provocative Vignette and a Physically Provocative Vignette</p>  <p>10-Walk Story</p> <p>Imagine that you are taking a walk in your neighborhood one day. After you walk a block or two, you see two kids that you know from school. You walk over to the kids and say "hi". The kids act as if you are not there -- they don't say anything to you. Then they say something to each other that you can't hear and they walk the other way.</p>	
Main topic:	Provocative social situations
URL:	(Link) (free?)
Assessed in:	(Leff, 2011)

<i>Happy Patients? Maybe With a Little Help from Ross</i>	
Not found	Not found
Main topic:	Anesthesia
ISBN:	Not found
Assessed in:	(Campbell, 2005)



Nokwhezi's story	
Not found	Not found
Main topic:	Cervical cancer screening
ISBN:	Not found
Assessed in:	(Risi, 2004)

Pocahontas	
	
Main topic:	Adventure, Indians, culture
ISBN:	9780717284979
Assessed in:	(Kirsh, 2002 & 2003) (Kirsh, 2002b)



Dexter's Laboratory	
	Not found
Main topic:	Science fiction, genius
URL:	Not found
Assessed in:	(Kirsh, 2002 & 2003) (Kirsh, 2002b)


Homicide	
Not found	Not found due to homonyms
Main topic:	Unknown
ISBN:	Not found
Assessed in:	(Kirsh, 2002 & 2003) (Kirsh, 2002b)

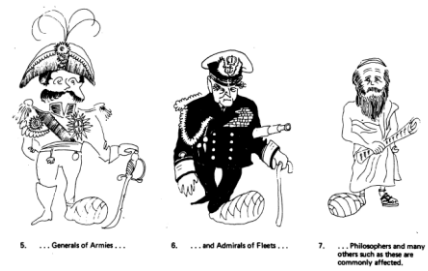
Dark Realm	
	
Main topic:	Adventure, demons
ISBN:	Not found
Assessed in:	(Kirsh, 2002 & 2003) (Kirsh, 2002b)

Cremator	
	
Main topic:	Adventure, demons
ISBN:	Not found
Assessed in:	(Kirsh, 2002 & 2003) (Kirsh, 2002b)

Archie & Friends (issue 29)	
	
Main topic:	Adventure, humor
URL:	Not found
Assessed in:	(Kirsh, 2000 & 2003) (Kirsh, 2002b)

Curse of the Spawn (issues 12 and 18)	
	
Main topic:	Adventure, demons
ISBN:	9781582401621
Assessed in:	(Kirsh, 2000 & 2003) (Kirsh, 2002b)

?	
Not found	
Main topic:	Gout
ISBN:	Not found
Assessed in:	(Moll, 1986)

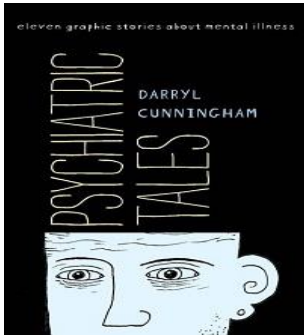

<i>Gout: A Handbook for Patients (or "Handbook on gout")</i>	
Not found	
Main topic:	Gout
ISBN:	Not found
Assessed in:	(Moll, 1977)

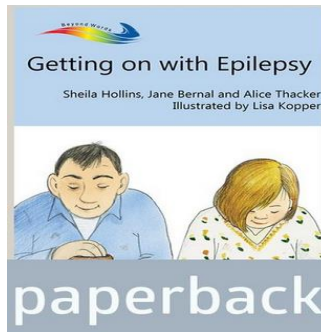

?	
Not found	Not found
Main topic:	Pain during blood withdrawal
URL:	Not found
Assessed in:	(Zieger, 2013)

?	
To do (translator needed)	To do (translator needed)
Main topic:	Dengue prevention
URL:	To do
Assessed in:	(Nasution, 2018)

Atlas Black: The Complete Adventure	
	
Main topic:	Management theory
ISBN:	9781453313114
Assessed in:	(Short, 2013)

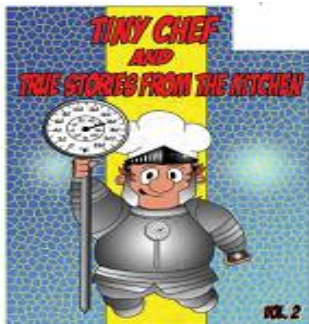
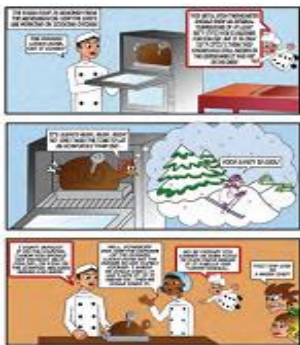
Streetwise UK An AIDS education comic for 16-19 year old	
Not found	Not found
Main topic:	HIV/AIDS
ISBN:	Not found
Assessed in:	(Bellingham, 1993)

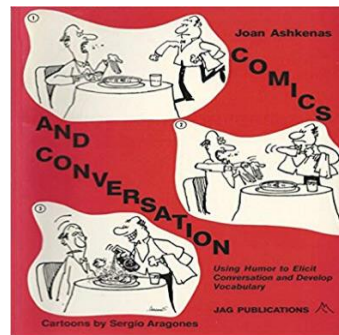
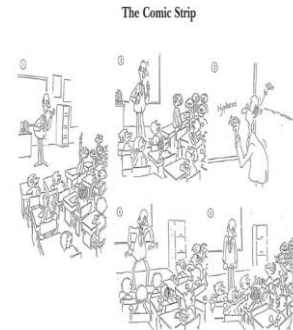
Psychiatric Tales: Eleven Graphic Stories About Mental Illness	
	
Main topic:	Mental illness
URL:	9781608192786
Assessed in:	(Cohen, 2018)

Getting on with epilepsy (2 nd Edition)	
	
Main topic:	Epilepsy & learning disability
URL:	9781874439974
Assessed in:	(Mengoni, 2016)

<p>더욱 소중한 내 몸을 위한 아름다운 실천 [Taking care of my precious body]</p>	
	
Main topic:	Cancer screening
URL:	[Link] (free)
Assessed in:	(Shin, 2012)

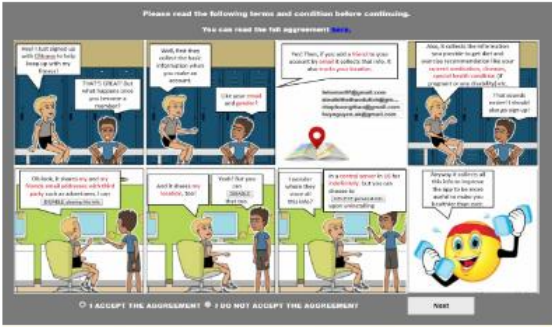
<p>Tintin - L'affaire tournesol [Tintin – The Calculus Affair]</p>	
	
Main topic:	Adventure
ISBN:	9782203001176
Assessed in:	(Reinwein, 1990)

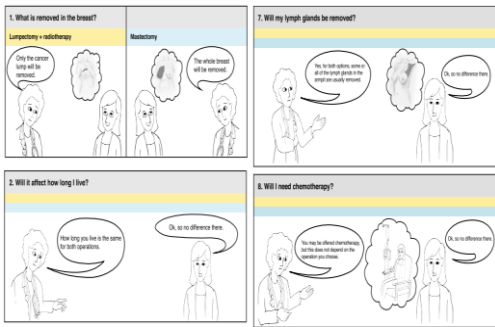
<p>Tiny chef and true stories from the kitchen vol. 2</p>	
	
Main topic:	Safe cooking
URL:	Not found
Assessed in:	(Manes, 2014)


<p>Comics and Conversation: Using Humor to Elicit Conversation and Develop Vocabulary (p. 8)</p>	
	
Main topic:	Teaching (humorous)
ISBN & URL:	9780943327006 [Link] (free page 8)
Assessed in:	(Liu, 2004) (Merç, 2013)

Philémon – Le voyage de l'incrédule [Philemon - The journey of the unbeliever]	
	
Main topic:	Fantasy, adventure
ISBN:	9782205055085
Assessed in:	(Reinwein, 1990)

Le carré arabe [The arabic square]	
Not found	Not found
Main topic:	Unknown
ISBN:	9782760700826
Assessed in:	(Reinwein, 1990)

[Untitled]	
	
Main topic:	Internet terms of service
URL:	[Link] (free?)
Assessed in:	[Tabassum, 2018]

[Untitled]	
	
Main topic:	Breast cancer treatment options
URL:	[Link] (free)
Assessed in:	[Alam, 2016]

Untitled	
	
Main topic:	Humor, politics
URL:	Not found
Assessed in:	(Mendiburo-Seguel, 2017)


Untitled	
Not found	Not found
Main topic:	Drug use
ISBN:	Not found
Assessed in:	(Botvin, 1984) (Werch, 1989)


?	
Not found	Not found
Main topic:	Colorectal cancer screening
URL:	Not found
Assessed in:	(Christy, 2016)

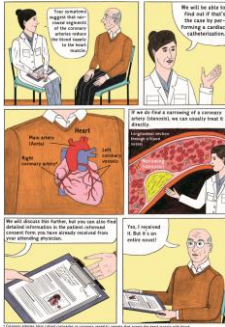
?	
Not found	Not found
Main topic:	Colorectal cancer screening
URL:	Not found
Assessed in:	(Davis, 2017)

?	
Not found	Not found
Main topic:	Inappropriate behavior
URL:	Not found
Assessed in:	(Kotaman, 2019) (Kotaman, 2017)


<p><i>It's a happy holiday</i></p>	
<p>Not found</p>	
<p>Main topic:</p>	<p>Food, culture, family</p>
<p>URL:</p>	<p>Not found</p>
<p>Assessed in:</p>	<p>(Chan, 2019)</p>

Vella's Storja ta' Malta (adapted)	
	
Main topic:	Story about Malta
URL:	[Link] (free but ©)
Assessed in:	(Mallia, 2007)

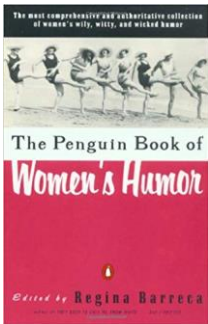
?	
Not found	
Main topic:	Health, communication
URL:	Not found
Assessed in:	(Tan, 2018)

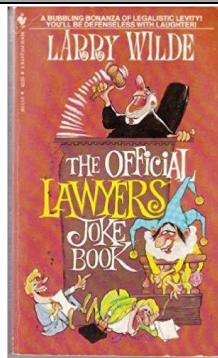
Annals Graphic Medicine - Patient-Informed Consent	
	
Main topic:	Heart, coronary surgery
URL:	[Link] (free)
Assessed in:	(Brand, 2019)

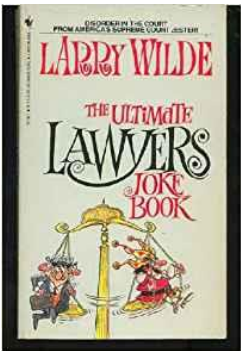
?	
Not found	Not found
Main topic:	Recycling, organic farming
URL:	Not found
Assessed in:	(Ahamed, 2016)


Untitled	
	
Main topic:	English words
URL:	[Link] (free)
Assessed in:	(Ngi Yi Lok, 2015)

Jared's Hospital adventure	
Not found	
Main topic:	Surgery preparation
URL:	Not found
Assessed in:	(Macindo, 2015)



The Penguin Book of Women's Humor	
	
Not found	
Main topic:	Humor, women
ISBN:	9780140172942
Assessed in:	(Olson, 1999)

The Official Lawyers Joke Book	
	
Not found	
Main topic:	Humor
ISBN:	9780553201116
Assessed in:	(Olson, 1999)



The Ultimate Lawyers Joke Book	
	Not found
Main topic:	Humor
URL:	9780553267365
Assessed in:	(Olson, 1999)

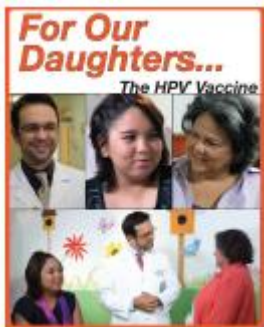
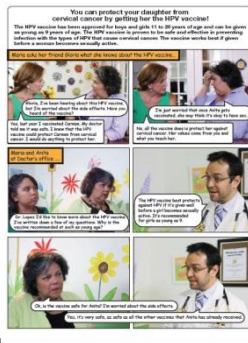
The effect of anticipatory guidance on mother's self-efficacy and behavioral intentions to prevent burns caused by hot tap water	
Not found	
Main topic:	Safety, hot water
URL:	Not found
Assessed in:	(Cardenas, 1993)



Untitled	
Not found	Not found
Main topic:	Dental treatment
URL:	Not found
Assessed in:	(Kamel, 2017)

Sick Ruirui bear	
	
Main topic:	Blood draw
URL:	Not found
Assessed in:	(Kuo, 2016)


El tebeo de la espalda (2006 version) [Comic book of the back]	
	
Main topic:	Back pain prevention
URL:	[Link] (free)
Assessed in:	(Kovacs, 2011)

Je vais me faire opérer... Alors on va t'endormir ! 🇫🇷 [I am going to have surgery... Then we'll put you to sleep!]	
	
Main topic:	Surgery preparation
ISBN:	9782912096210
Assessed in:	(Kassai, 2016)

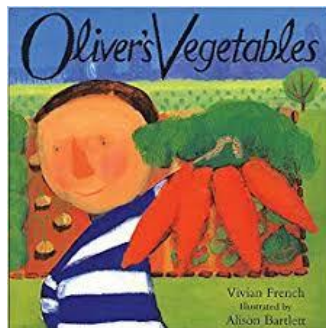

Por Nuestras Hijas [For our daughters...]	
	
Main topic:	HPV vaccination
URL:	[Link] (free)
Assessed in:	(Fernandez, 2017)

Wound care instructions	
	
Main topic:	Wound care
URL:	[Link] (free?)
Assessed in:	(Delp, 1996)

<i>Laduma</i>	
Not found	Not found
Main topic:	Sexually transmitted diseases
URL:	Not found
Assessed in:	(James, 2005)

<i>El Reto De Marta [Marta on a Mission]</i>	
Not found	 <p>The comic strip consists of three panels. In the first panel, a group of people are sitting around a table. A speech bubble from one person says: 'After the meeting, Marta and Inga talk to Ricardo and Sandra.' Another speech bubble says: 'Ricardo, I know you are trying to do the right thing by smoking outside.' A third speech bubble says: 'I didn't know that smoking smokers can get inside and hurt people.' In the second panel, a speech bubble says: 'Is there a good place where people can smoke?' In the third panel, a speech bubble says: 'It should be outside, away from the playground, family room, and other common areas.' A fourth speech bubble says: 'Some place away from windows, doors, and air vents.' A fifth speech bubble says: 'Let's talk more about this with the manager.'</p>
Main topic:	Secondhand smoke
URL:	Not found
Assessed in:	(Unger, 2019)

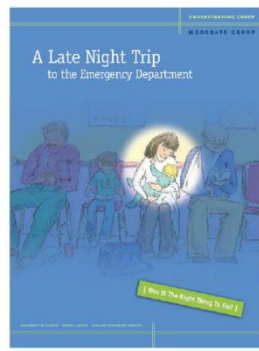

<i>Untitled</i>	
 <p>The cartoon shows a pregnant woman sitting in the driver's seat of a car. Above her is a large sign that reads: 'WARNING: SMOKING DURING PREGNANCY CAN HARM YOUR BABY.' Below the sign, the text '1-800-QUIT-NOW' is visible. The cartoon is signed '© R.S. 1985' in the bottom right corner.</p>	
Main topic:	Smoking harms
URL:	Not found
Assessed in:	(Hammond, 2012)

<i>Oliver's vegetables</i>	
 <p>The book cover for 'Oliver's Vegetables' features a cartoon illustration of a boy named Oliver with a large, happy face, wearing a blue and white striped shirt. He is holding a large bunch of red carrots. The background is a green field with a small tree and a blue sky. The title 'Oliver's Vegetables' is written in a stylized font at the top. At the bottom, it says 'Vivian French' and 'Illustrated by Alison Bartlett'.</p>	 <p>The image shows an open book. The left page has a yellow background with a small illustration of a person. The right page has a green background with a large illustration of a vegetable, possibly a beet or a similar root vegetable, with a person's face integrated into it.</p>
Main topic:	Eating vegetables
ISBN:	9780340634790
Assessed in:	(Byrne, 2002)


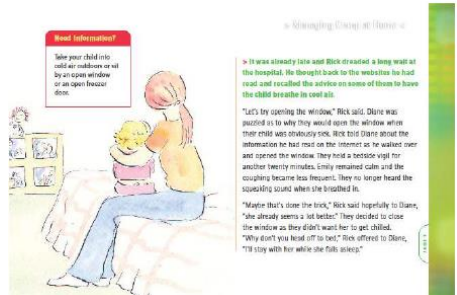
<i>Max found two sticks</i>	
	
Main topic:	Adventure, drumming, music
ISBN:	9780689815935
Assessed in:	(Byrne, 2002)

<i>The Tale of Woody's Tonsils</i>	
Not found	Not found
Main topic:	Tonsillectomy, surgery
URL:	Not found
Assessed in:	(Tunney, 2013)


<i>Evil Ernie, Purgatory, Undertaker, Cherry blossom, Rugrats, Sabrina (multiple titles)</i>	
Not shown for brevity	Not shown for brevity
Main topic:	Multiple
URL:	n/a
Assessed in:	(Kirsh, 2002b)

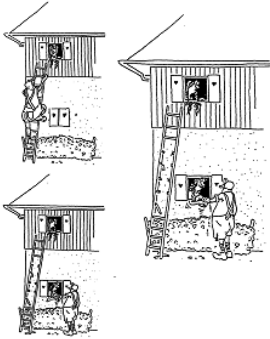
<i>A late night trip to the emergency department</i>	
	
Main topic:	Hospitalization, croup
URL:	(Link) (free)
Assessed in:	(Hartling, 2010)

Things we take for granted	
	
Main topic:	Hospitalization, croup
ISBN:	[Link] (free)
Assessed in:	(Hartling, 2010)

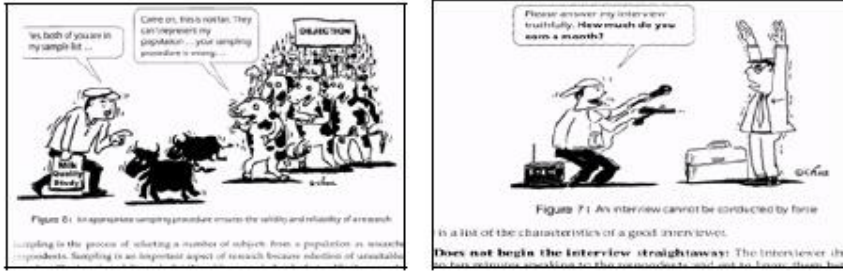
Managing croup at home	
	
Main topic:	Hospitalization, croup
URL:	[Link] (free)
Assessed in:	(Hartling, 2010)

Kedah penyelidikan [Research methods] (2006 version)	
	To do
Main topic:	Research methods
URL:	
Assessed in:	(Chua, 2014)

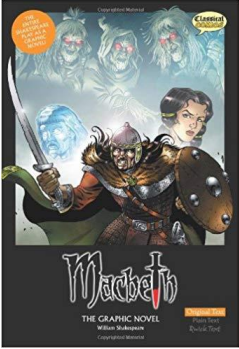

Untitled	
	
Main topic:	"Carrots make you stronger"
URL:	Not found
Assessed in:	(de Droog, 2014)

Untitled	
	
Main topic:	Humor
ISBN:	Not found
Assessed in:	(Huber, 1997)

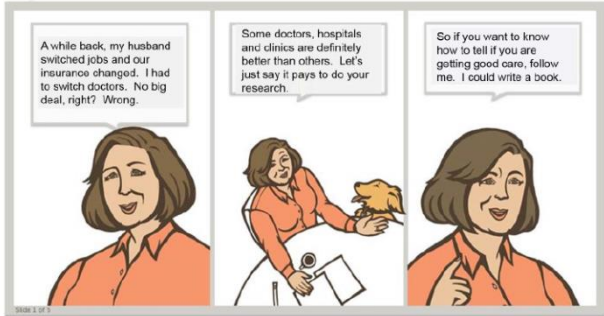
?	
Not found	Not found
Main topic:	Unknown
URL:	Not found
Assessed in:	(Hassanirokh, 2016)

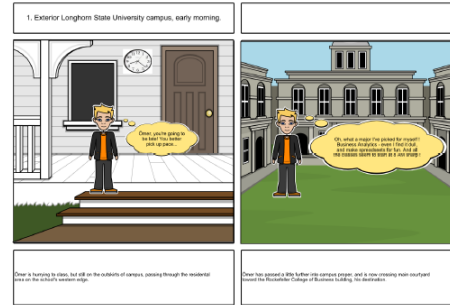
Untitled	
	
Main topic:	Interview research
URL:	Not found
Assessed in:	(Piaw, 2012)

	To do
Main topic:	
URL:	
Assessed in:	(Ojeda-Beck, 2018)

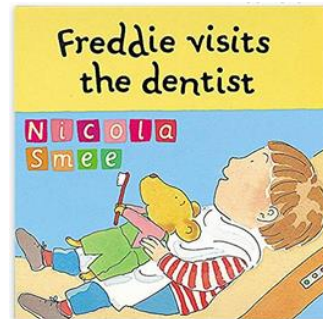
<i>Macbeth The Graphic Novel</i>	
	
Main topic:	Tragedy, History
ISBN:	9781906332037
Assessed in:	(McDonald, 2009)

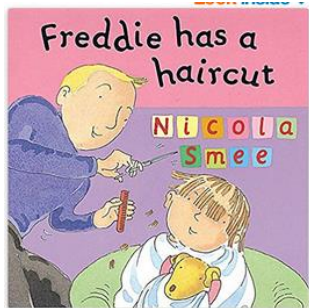
<i>Spidey Super Stories, Classics Illustrated, Marvel Classic Comics, Treasure Chest, Walt Disney (multiple titles)</i>	
Not shown for brevity	Not shown for brevity
Main topic:	Multiple
URL:	n/a
Assessed in:	(Arlin, 1978)

<i>Wisconsin Collaborative for Healthcare Quality</i>	
	
Main topic:	Physician care quality
URL:	(Link) (free)
Assessed in:	(Greene, 2017)


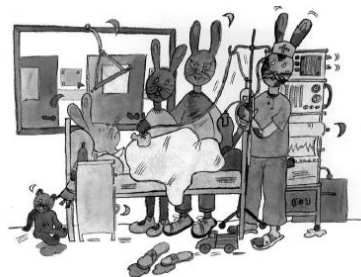
<i>Untitled</i>	
	
Main topic:	English idioms
URL:	Not found
Assessed in:	(Basal, 2016)

<i>Hi Hi Puffy Ami Yumi, Cartoon Network, Fantastic Four, Spider Man, Scooby-Doo, The Batman Strikes, etc. (multiple titles)</i>	
Not shown for brevity	Not shown for brevity
Main topic:	Multiple
ISBN:	Multiple
Assessed in:	(Lambert, 2006)

<i>Freddie visits the dentist (Freddie's First Experiences)</i>	
	Not found
Main topic:	Dental treatment, dentist
ISBN:	9781843622185
Assessed in:	(Aminabadi, 2011)



<i>Freddie has a haircut (Freddie's First Experiences)</i>	
	Not found
Main topic:	Getting a haircut
ISBN:	9781843622154
Assessed in:	(Aminabadi, 2011)

[\[Back to top\]](#)

<i>Hase Moritz und die Mandeloperation [Rabbit Maurice: Tonsillectomy and adenoidectomy]</i>	
	
Main topic:	Tonsillectomy, surgery
URL:	(Link) (free)
Assessed in:	(Felder-Puig, 2003)

Data extraction tables (data extracted from the included studies)

Muzumdar, 2017

Population	284 adults age 18+ (72% female) entering a waiting area in a US  ambulatory medical center approached by trained medical students
Intervention	a) 1 page CDC comic flyer on adult immunization then completed questionnaire (took about 10 minutes)
Comparison(s)	b) 1 page CDC "standard" flyer on adult immunization then completed questionnaire (took about 10 minutes)
Outcome(s)	Attitude toward flyer (score range 0-7, higher score means more positive attitude) a) Mean score: 5.70, SD = 1.14 b) Mean score: 5.08, SD = 1.23 Perceived informativeness of the flyer a) Mean score: 6.10, SD 1.03 b) Mean score: 5.80, SD = 1.11 Intention to seek more information on adult immunizations a) Mean score: 5.48, SD 1.52 b) Mean score: 5.44, SD = 1.34 Intention to get immunized after viewing the flyer a) Mean score: 5.52, SD 1.60 b) Mean score: 5.46, SD = 1.50
Funding	American Association of Colleges of Pharmacy
Comic details	Length: 1 page (10 minutes) Access: Physical copies Language: English  URL link: Comic is included in the study report (full-size)
Notes	Quasi-RCT (allocation by day of the week) Same comic as in (Muzumdar, 2015)

[\[Back to top\]](#)

Population	152 second year medical students in Bangkok, Thailand.
Intervention	a) Hand-drawn “cartoon style” handout with animal characters and a storyline explaining the physiology of pneumothorax and how intercostal drains work.
Comparison(s)	b) 10 pages “traditional style” handout with text and diagrams on the same content.
Outcome(s)	<p>Measured before reading the study materials and immediately after reading the handouts in a classroom setting. Participants had 45 minutes to read/study the materials before they gave them back.</p> <p>Primary: Pre-test and post-test knowledge scores on multiple questions questionnaire (20 questions, score range 0-20, higher scores means better knowledge)</p> <p>a) Pre-learning mean score: 9.63, SD = 2.42</p> <p>b) Pre-learning mean score: 10.23, SD = 2.50</p> <p>a) Post-learning mean score: 15.69, SD = 2.26</p> <p>b) Post-learning mean score: 15.57, SD = 2.07</p> <p>Secondary: “Preference for cartoon materials or comics” (measured with 5 items/point scale)</p> <p>a) Favours or strongly favours cartoons/comics: 38 (59.4%)</p> <p>b) Favours or strongly favours cartoons/comics: 40 (55.6%)</p> <p>a) Neutral towards cartoons/comics: 19 (29.7%)</p> <p>b) Neutral towards cartoons/comics: 25 (34.7%)</p> <p>a) Not in favour or strongly not in favour of cartoons/comics: 7 (10.9%)</p> <p>b) Not in favour or strongly not in favour of cartoons/comics: 7 (9.7%)</p>
Funding	Not reported. Likely none or Faculty of Medicine Ramathibodi Hospital, Mahidol University grant
Comic details	<p>Length: 23 pages</p> <p>Access: Physical copies</p> <p>Language: Thai with medical terms in English</p> <p>URL link: http://tiny.cc/cartoon_trial (English version available). 2 sample pages included in study report.</p>
Notes	“All the students reported they had finished reading their assigned handouts at the end of reading session.”

[\[Back to top\]](#)

Population	179 third year medical students in Bangkok, Thailand who hadn't yet learned intercostal drainage invited to participate, of which 93 accepted to participate.
Intervention	a) Hand-drawn "cartoon style" handout with animal characters and a storyline explaining the physiology of pneumothorax and how intercostal drains work.
Comparison(s)	b) 10 pages "traditional style" handout with text and diagrams on the same content.
Outcome(s)	<p>Measured 2 weeks after receiving the handouts.</p> <p>Primary: Pre-test and post-test knowledge scores on multiple questions questionnaire (score range 0-20)</p> <p>a) Pre-learning mean score: 10.12, SD = 2.36 Post-learning mean score: 13.98, SD = 2.81</p> <p>b) Pre-learning mean score: 10.45, SD = 1.96 Post-learning mean score: 12.29, SD = 3.37</p> <p>Secondary: Attention given to study materials, with reading completion according to self-reports</p> <p>a) Read >75%: 29 Read >50% to <75%: 2 Read >25% to <50%: 3 Read >0% to <25%: 6 Didn't read it: 1</p> <p>b) Read >75%: 16 Read >50% to <75%: 4 Read >25% to <50%: 5 Read >0% to <25%: 5 Didn't read it: 8</p> <p>Secondary: Contamination (how much of the contents of the cartoon participants in the non-cartoon group read, score range 0-5, higher scores means read more of the contents)</p> <p>1 participant reported reading <25% of the cartoon contents</p>
Funding	Faculty of Medicine Ramathibodi Hospital, Mahidol University grant
Comic details	<p>Length: 23 pages</p> <p>Access: Physical copies</p> <p>Language: Thai with medical terms in English</p> <p>URL link: http://tiny.cc/cartoon_trial (English version available). 2 sample pages included in study report.</p>
Notes	<p>The first author drew the comics; he declares selling the included cartoon characters for profit for an instant messaging and social media application.</p> <p>Pilot RCT done before this trial with 2nd year students.</p>



[\[Back to top\]](#)

Population	210 participants (family members, acquaintances) were recruited by students taking part in a course on Persuasive Health Communication at the University of Groningen, Netherlands.
Intervention	a) Fotonovela focusing on diabetes called "Zoete Verleiding" (adaptation of Sweet Temptations)
Comparison(s)	b) Traditional health brochure on diabetes with similar contents as the fotonovela c) Control condition with neither comic nor brochure
Outcome(s)	<p>Measured immediately after reading with questionnaires.</p> <p>Diabetes knowledge (7 diabetes knowledge questions with 3 choices, yes/no/don't know, 1 point for each correct answer)</p> <p>a) Mean score: 6.55, SD = 0.79 b) Mean score: 6.26, SD = 1.06 c) Mean score: 5.13, SD = 1.36</p> <p>Behavioral intentions (5 questions, e.g. "In the next month do you think you will___", 5-point scale, higher results mean stronger intention to act)</p> <p>"readers of the fotonovela did not score significantly higher than participants in the other conditions [on behavioral intentions]"</p> <p>5 EORM model variables among which: Transportation (7 items question)</p> <p>"There was no support for the claim that higher levels of transportation, identification, and perceived similarity lead to stronger behavioral intentions via increased perceived vulnerability or via decreased levels of counterarguing." ... "The only significant relation we found was a significant total effect of transportation on intention to talk to a doctor or pharmacist."</p> <p>Identification (8 items question)</p> <p>?</p> <p>Perceived similarity (4 items question)</p> <p>?</p> <p>Counterarguing (4 items question) – Only the first item was included in analysis</p> <p>?</p> <p>Perceived vulnerability (4 items question)</p> <p>?</p>
Funding	Not reported.
Comic details	<p>Length: Not reported, likely 22 pages</p> <p>Access: Physical copies</p> <p>Language: Dutch translation of English fotonovela "Sweet temptations"</p> <p>URL link: Not provided.</p>
Notes	No fotonovela samples included in study report.



[\[Back to top\]](#)

Population	92 “low-literacy” people (43 men, 49 women) taking part in literacy courses or in literacy meetings organized throughout the Netherlands. 3 of which were excluded from analysis as they reported some form of higher education.
Intervention	a) Fotonovela focusing on diabetes called “Zoete Verleiding” (adaptation of Sweet Temptations) read in the classrooms where the literacy courses took place
Comparison(s)	b) Traditional health brochure on diabetes with similar contents as the fotonovela c) Control condition with neither comic nor brochure
Outcome(s)	<p>Measured immediately after reading with questionnaires.</p> <p>Diabetes knowledge (seven diabetes knowledge questions with 3 choices, yes/no/don’t know, 1 point for each correct answer, score range 0-7, higher scores mean better knowledge)</p> <p>a) 6.42, SD = 0.83 b) 5.81, SD = 1.42 c) 4.63, SD = 1.42</p> <p>Behavioral intentions (five questions, e.g. “In the next month do you think you will___”, 5-point scale, higher scores mean stronger intention to act)</p> <p>a) Intention to regularly exercise: 4.03, SD = 1.31 b) Intention to regularly exercise: 3.81, SD = 1.47 c) Intention to regularly exercise: 4.15, SD = 1.32 a) Intention to eat vegetables: 4.39, SD = 0.97 b) Intention to eat vegetables: 4.03, SD = 1.30 c) Intention to eat vegetables: 4.15, SD = 1.22 a) Intention to eat fruits: 4.39, SD = 1.14 b) Intention to eat fruits: 4.55, SD = 0.72 c) Intention to eat fruits: 3.46, SD = 1.75 a) Intention to discuss diabetes with doctor: 2.61, SD = 1.64 b) Intention to discuss diabetes with doctor: 2.74, SD = 1.71 c) Intention to discuss diabetes with doctor: 2.31, SD = 1.67 a) Intention to talk about diabetes prevention with friends and relatives: 2.73, SD = 1.66 b) Intention to talk about diabetes prevention with friends and relatives: 3.23, SD = 1.80 c) Intention to talk about diabetes prevention with friends and relatives: 1.88, SD = 1.37</p> <p>5 EORM model variables among which: Transportation (7 items question) ?</p> <p>Identification (8 items question) ?</p> <p>Perceived similarity (4 items question) ?</p> <p>Counterarguing (4 items question) – Only the first item was included in analysis ?</p> <p>Perceived vulnerability (4 items question) ?</p>
Funding	Not reported.
Comic details	<p>Length: 22 pages</p> <p>Access: Physical copies</p> <p>Language: Dutch translation of English fotonovela</p> <p>URL link: Not provided.</p>
Notes	No fotonovela samples included in study report.



[\[Back to top\]](#)

Population	1565 English-reading US  adults' member of Survey Sampling International who had previously signed up to participate in survey research, recruited with generic emails. 65 respondents were excluded due to answering more quickly than expected and unusually extreme answers.
Intervention	Informational aids with equivalent contents conveying information on core concepts in research on medical practices. a) Comics created by Booster Shot Media
Comparison(s)	b) animated videos c) slideshows with voice-over d) Text-only version of the scripts used for the animated videos (171 and 314 words) e) No intervention, no informational aids
Outcome(s)	Measured immediately after getting the informational aids (or no intervention). Primary: Knowledge of research on medical practices (10 questions, true/false/don't know, score range 0% to 100% correct, higher scores means better knowledge) a) Mean correct answers = 60.7%, SD = 18.5 d) Mean correct answers = 57.2%, SD = 18.3 e) Mean correct answers = 50.3%, SD = 16.8
Funding	Greenwall Foundation National Center for Advancing Translational Sciences
Comic details	Length: 4 pages (?) Access: Online Language: English  URL link: https://rompethics.iths.org/study-details (URL not working but details may be found online, e.g. http://www.boostershotcomics.com/blog/research-on-medical-practices-finally-time-to-share)
Notes	No comic samples included in study report. There were also questions related to informed consent and risk in the context of research on medical practices and demographic questions (total of 39 questions) which weren't reported. There were also questions specific to consent issues which weren't reported.




[\[Back to top\]](#)


Population	All students enrolled in two North Carolina (US ) public middle schools were eligible to participate (mean age = 13.2). 86 participants in group a), 88 in group b) and 89 in group c).
Intervention	Participants were directed to 3 specific classrooms and given either a) a comic, b) a newsletter on fruits or c) a newsletter on ancient Greece. They were instructed not to speak to each other and assistants were present to ensure the surveys were completed independently. a) Fight for your Right to fruit comic story with health message page at the end
Comparison(s)	b) 5-page newsletter including information on fruits, tips to promote fruit consumption c) 5-page newsletter on ancient Greece
Outcome(s)	<p>Baseline questionnaire at day 0. The students were given the newsletters/comic 4-6 days later and a second questionnaire measured outcomes immediately after reading.</p> <p>Primary: Outcome expectations (=positive attitude towards eating fruits, 2 items, 5 point scale from 1 to 5, higher scores stronger agreement)</p> <p>a) Mean change from baseline = +0.44, SD = 1.64 b) Mean change from baseline = +0.59, SD = 1.94 c) Mean change from baseline = -0.24, SD = 1.81</p> <p>Primary: Self-efficacy (=feeling capable of eating fruits daily, 1 item, 5 point scale from 1 to 5, higher scores stronger agreement)</p> <p>a) Mean change from baseline = +0.12, SD = 1.17 b) Mean change from baseline = +0.10, SD = 1.37 c) Mean change from baseline = +0.17, SD = 1.45</p> <p>Primary: Knowledge on health benefits of fruits (7 items, 5 point scale from 1 to 5, higher scores stronger agreement)</p> <p>a) Mean change from baseline = +0.18, SD = 0.68 b) Mean change from baseline = +0.26, SD = 0.55 c) Mean change from baseline = +0.08, SD = 0.58</p> <p>Secondary: Transportation (=degree of immersion in the story, 11 items, 5 point scale from 1 to 5, higher scores stronger agreement)</p> <p>a) Mean change from baseline = +3.05, SD = 0.68 b) Mean change from baseline = +2.78, SD = 0.51 c) Mean change from baseline = +2.55, SD = 0.57</p> <p>Secondary: Enjoyment (2 items, 5 point scale from 1 to 5, higher scores more enjoyment)</p> <p>a) Mean change from baseline = +7.07, SD = 2.81 b) Mean change from baseline = +5.98, SD = 2.57 c) Mean change from baseline = +6.17, SD = 2.43</p>
Funding	AAUW Fellowship Academy of Nutrition Dietetics Foundation
Comic details	Length: 30 pages, 99 panels Access: Physical copies Language: English  URL link: Not provided.
Notes	Two items were initially used to measure self-efficacy but one was dropped due to poor correlation. No comic samples included in study report. Same comic sas in (Leung, 2014).



[\[Back to top\]](#)

Population	873 students in high school biology classes at University of Nebraska. (US )
Intervention	A) 2x Comics with information on viruses called “World of Viruses – The Frozen Horror” and “World of Viruses – Confined”
Comparison(s)	b) 2x Text-based essays with the same virus information as in the comics
Outcome(s)	<p>Measured immediately after reading the essay/comic.</p> <p>Perceived importance of studying viruses (6 statements to choose from, eg “People are healthier because of science.”) “there was no difference between the comic and essay groups on the scale measuring the perceived importance of viruses”</p> <p>Knowledge about viruses (8 true/false statements) “no differences between the two formats in knowledge about viruses”</p> <p>Interest in studying and working with viruses (6 statements to choose from, eg “Viruses can be interesting”) “there was no difference between the comic and essay groups on teenagers’ interest in viruses or studying viruses and”</p> <p>Desire to read more science materials [comics or essays depending on group] (% saying yes)</p> <p>a) [Low science identity participants]: 37% b) [Low science identity participants]: 7%</p> <p>a) [Moderate science identity participants]: 42% b) [Moderate science identity participants]: 10%</p> <p>a) [Moderate-high science identity participants]: 52% b) [Moderate-high science identity participants]: 25%</p> <p>a) [High science identity participants]: 62% b) [High science identity participants]: 37%</p>
Funding	Science Educational Partnership Awards from NIH NIH National Institute of General Medical Sciences
Comic details	Length: 10-20 pages Access: Physical copies Language: English  URL link: https://www.worldofviruses.unl.edu Sample pages included in (Spiegel, 2013).
Notes	Both (Diamond, 2013) and (Spiegel, 2013) report the same study. Some data extracted from graphs and therefore imprecise. Statements used to measure outcomes can have multiple meanings.



[\[Back to top\]](#)

Population	Convenience sample of students at three adult night schools in Los Angeles (US ) that offer a variety of classes to a predominantly Latino population. 185 participants.
Intervention	<p>Participants received a sealed envelope containing a pre-test survey and either a fotonovela or a brochure and a post-test survey. Pre-test surveys were collected after 25 minutes. After another 30 minutes participants were asked to put the materials aside and had 20 minutes to complete the post-test survey.</p> <p>a) Fotonovela about depression and stigmatized attitudes/misconceptions towards depression called “Secret Feelings”</p>
Comparison(s)	b) “Standard” depression brochure, 26-pages long
Outcome(s)	<p>Measured immediately before and after reading the brochure/fotonovela and 1 month afterwards.</p> <p>“At baseline no significant differences on the outcomes measured were noted between the groups”</p> <p>Knowledge of depression symptoms (list of 10 symptoms, 5 of which are linked with depression, 1 point for each correct answer, range 0 to 10, higher scores mean higher knowledge)</p> <p>a) Pre-test mean score: 7.18, SD = 1.54 Post-test mean score: 7.61, SD = 1.52 1-month mean score: 7.21, SD = 1.32</p> <p>b) Pre-test mean score: 7.23, SD = 1.43 Post-test mean score: 7.12, SD = 1.51 1-month mean score: 7.24, SD = 1.44</p> <p>Knowledge of depression treatment (7 items, true/false/don’t know options, 1 point for each correct answer, range 0 to 7, higher scores mean higher knowledge)</p> <p>a) Pre-test mean score: 3.69, SD = 1.63 Post-test mean score: 6.09, SD = 1.32 1-month mean score: 5.40, SD = 1.61</p> <p>b) Pre-test mean score: 3.67, SD = 1.40 Post-test mean score: 4.78, SD = 1.57 1-month mean score: 4.54, SD = 1.66</p> <p>Stigma via “desire for social distance” (=if participants believe they would be friends with people with depression, range 0 to 3, higher scores means stronger desire for social distance)</p> <p>a) Pre-test mean score: 0.66, SD = 0.91 Post-test mean score: 0.50, SD = 0.79 1-month mean score: 0.71, SD = 0.48</p> <p>b) Pre-test mean score: 0.67, SD = 0.86 Post-test mean score: 0.58, SD = 0.72 1-month mean score: 0.49, SD = 0.71</p> <p>Stigma via “perception of dangerousness” (=if participants think people with depression are dangerous, true/false question)</p> <p>a) Participants feeling people with depression are dangerous at pre-test: 21 (35%) Participants feeling people with depression are dangerous at post-test: 15 (24%) Participants feeling people with depression are dangerous at 1-month: 18 (28%)</p> <p>b) Participants feeling people with depression are dangerous at pre-test: 24 (41%) Participants feeling people with depression are dangerous at post-test: 24 (39%) Participants feeling people with depression are dangerous at 1-month: 29 (44%)</p> <p>Attitudes ?</p> <p>Behavioral intentions ?</p>
Funding	New York State Office of Mental Health grant National Institutes of Health (NIH) grant
Comic details	<p>Length: 30 pages</p> <p>Access: Physical copies</p> <p>Language: English  and Spanish </p> <p>URL link: Not provided.</p>
Notes	<p>Attitudes and behavioral intentions were also measured but aren’t reported in this article.</p> <p>No fotonovela samples included in study report.</p>



Population	147 Hispanic or Latino adults (mostly women) age 21+ referred by service providers or which had heard of the study from family or community members who were the primary caregivers for a family member with dementia and memory problems. 13 excluded due to data problems, 13 due to not being the primary caregiver, 11 dropped out. Therefore 55 participants in each condition. (US )
Intervention	Research assistants met the caregivers at home and gave them reading materials which they could discuss with family members over the next months. Reminder calls were made at the end of months 1, 2, 3. Both participants could also participate in a group meeting at the end of month 1 in which caregiver problems were discussed. a) Fotonovela called "Together We Can! Facing memory loss as a family" illustrating key skills to manage difficult behaviors and manage stress
Comparison(s)	b) Text pamphlet entitled « Take Care of Yourself: 10 ways to be a healthier CG”, developed by the Alzheimer’s Association including basic information on how to manage stress
Outcome(s)	Measured at baseline and at 4 months and 6 months after receiving the reading materials. Level of depressive symptoms (measured with CES-D scale, 20-items, range 0 to 60, higher scores means more depressive symptoms) a) Baseline mean = 19.66, SD = 11.85 Month 4 mean = 15.37, SD = 11.30 Month 6 mean = 10.01, SD = 9.82 b) Baseline mean = 16.81, SD = 13.74 Month 4 mean = 14.47, SD = 12.01 Month 6 mean = 12.51, SD = 10.34 Level of stress due to inappropriate memory ? Behavioral problems (measured with RMBPC scale, 24-items, scored 0 to 4, higher scores means more behavior problems) a) Baseline mean = 1.26, SD = 0.92 Month 4 mean = 1.08, SD = 0.85 Month 6 mean = 0.88, SD = 0.81 b) Baseline mean = 1.31, SD = 1.08 Month 4 mean = 0.95, SD = 0.81 Month 6 mean = 0.75, SD = 0.71 Materials read in last time period (self-reports, yes/no, %yes) a) Month 1 = 65.5% yes Month 3 = 41.8% yes Month 4 = 52.7% yes b) Month 1 = 47.3% yes Month 3 = 25.5% yes Month 4 = 36.4% yes Number of times materials were read in the past month a) Month 2 mean = 2.29, SD = 1.23 Month 3 mean = 2.20, SD = 2.98 Month 4 mean = 1.84, SD = 1.15 b) Month 2 mean = 1.95, SD = 1.65 Month 3 mean = 1.36, SD = 0.87 Month 4 mean = 1.75, SD = 1.21 Helpfulness of materials in dealing with the stress of caregiving (5 point scale, range 1 to 5, higher scores means more helpful) a) Month 2 mean = 4.13, SD = 1.23 Month 3 mean = 3.82, SD = 1.40 Month 4 mean = 4.22, SD = 0.88 b) Month 2 mean = 3.31, SD = 1.44 Month 3 mean = 3.33, SD = 1.26 Month 4 mean = 3.44, SD = 1.39
Funding	National Office of the Alzheimer’s Association grant Alzheimer’s Disease Center at University of California, Davis
Comic details	Length: 16 pages Access: Physical copies

	Language: Spanish  and English  URL link: http://www.alz.org/espanol/downloads/Novella_english_081213.pdf
Notes	No fotonovela samples included in study report.


[\[Back to top\]](#)

Population	27 children aged 7 to 14 years followed at St Christopher's Hospital for Children in Philadelphia (US ) and undergoing elective colonoscopy. 4 participants didn't complete the study. There were 12 children in the control group and 11 in the cartoon group.
Intervention	After consent patients received written and verbal bowel preparation instructions, with or without a cartoon which they could bring back home. a) Written bowel preparation instructions + informational cartoon explaining colonoscopy preparation explained by a research coordinator
Comparison(s)	b) Written bowel preparation instructions
Outcome(s)	Measured on the day of the colonoscopy. Quality of bowel preparation (measured with adapted Ottawa scale, score range 0 to 14, higher scores means unprepared bowels with solid stools inside) a) Mean score = 3.33 b) Mean score = 3.73 Parental understanding of bowel preparation importance (%yes) a) 100% yes b) 100% yes Parental understanding of bowel preparation guidance "Twenty-two of 23 patients (96%) responded that they understood all the directions regarding how to complete the bowel preparation." Bowel preparation "Twenty of 23 parents (87%) responded that their child took more than 90% of the preparation, and 100% of the parents responded that their child took at least 50% of the preparation." Satisfaction with the experience of preparing for the colonoscopy "Twenty-one of 23 patients (91%) reported that they were very satisfied with the experience of preparing for the colonoscopy. One parent reported being somewhat satisfied and one parent reported being not satisfied (both in the control group)."
Funding	NASPGHAN In-Office Member Grant Drexel University College of Medicine PHEC Grant
Comic details	Length: 1 page (7 panels) Access: Physical copies Language: English  URL link: Not provided. Cartoon included in study report.
Notes	

[\[Back to top\]](#)

Population	Outpatient children (2-14 years of age) scheduled for voiding cystourethrogram. 116 storybooks were mailed to parents. 103 parents completed the questionnaire, 3 of which were excluded (didn't indicate if they had read the storybook or technologist didn't rate the child's tolerance). 50 children had read the storybook and 50 hadn't. (US )
Intervention	5-10 days before the cystourethrogram the storybook was mailed to parents of the intervention group with the suggestion to use it to prepare themselves and the child for the operation. There were no instructions on how or when to read the storybook. a) Storybook titled "VCUG" with cartoon characters on photographic backgrounds from the hospital explaining what to expect during this operation
Comparison(s)	b) No storybook
Outcome(s)	Measured at the conclusion of the cystourethrogram Child's exam tolerance (measured by parents on 5-items VCUG scale) "The rating of the child's tolerance by technologist and parent/guardian was concordant within one grade in 79% (76/96)," Child's exam tolerance (measured by technologists on 5-items VCUG scale) a) Crying and difficult to restrain or combative: 1 Crying and needed restraint: 2 Crying and needed reminding to hold still but some cooperation: 5 Few tears but cooperative: 18 Not scared, no crying, very cooperative: 24 b) Crying and difficult to restrain or combative: 1 Crying and needed restraint: 8 Crying and needed reminding to hold still but some cooperation: 14 Few tears but cooperative: 11 Not scared, no crying, very cooperative: 16 Child's exam tolerance (measured by blinded technologist on modified Groningen distress scale, 1-5, higher scores means better tolerance) a) Mean score = 4.24 b) Mean score = 3.66 Book rating according to parents ? Suggestions on the book ?
Funding	Not reported.
Comic details	Length: Not reported Access: Physical copies Language: English  URL link: http://www.med.umich.edu/rad/VCUG_Book.pdf (dead URL). Sample pages included in study report.
Notes	"most people did not indicate in what time frame they had read the book" Assessments subjective to an extent (eg. difference between "few tears" and "crying")

[\[Back to top\]](#)


Population	458 households of Mexican-American adults living in Houston, Texas (US ) , were invited to participate. 91 were eligible and interested. 47 households received standard care and 44 received fotonovelas and a comic book.
Intervention	Participants were given either the fotonovelas or the booklets at home by study personnel a) 2x fotonovelas for adults and 1x comic book for children promoting tobacco-free indoor air environment, with basic facts on second-hand smoke (SHS) and quit-smoking tips
Comparison(s)	b) Booklet from American Cancer Society entitled "Set Yourself Free: Deciding to Quit: A Smoker's Guide" containing no information on second-hand smoke
Outcome(s)	<p>Measured at baseline, 6 months and 12 months.</p> <p>Primary: Levels of nicotine in the air (measured with air sampling monitors in $\mu\text{g}/\text{m}^3$)</p> <p>a) Baseline: 47 6 months: 41 12 months: 39.5</p> <p>b) Baseline: 43 6 months: 36 12 months: 35.5</p> <p>Secondary: Knowledge and attitudes of second-hand smoke hazards (measured with 24 items, 5-point Likert scales, higher scores means better knowledge)</p> <p>a) Mean score at baseline: 2.5 Mean score at 6 months: 2.68 Mean score at 12 months: 2.61</p> <p>b) Mean score at baseline: 2.58 Mean score at 6 months: 2.57 Mean score at 12 months: 2.68</p> <p>Secondary: Percentage of households that banned smoking inside the home (%)</p> <p>a) Baseline: 0% 6 months: 58% 12 months: 66%</p> <p>b) Baseline: 0% 6 months: 47% 12 months: 55%</p> <p>Secondary: Perceived health vulnerability (=if participants believe continuing to smoke will negatively affect their health, measured with 1 multiple-choice question, lower scores means higher perceived vulnerability)</p> <p>a) Baseline: 0.38 6 months: 0.22 12 months: 0.17</p> <p>b) Baseline: 0.23 6 months: 0.72 12 months: 0.47</p> <p>Secondary: Self-reported smoking status (number of smokers)</p> <p>a) Baseline: 40 out of (?) participants 12 months: 36 out of (?) participants</p> <p>b) Baseline: 39 out of (?) participants 12 months: 35 out of (?) participants</p>
Funding	Flight Attendant Medical Research Institute Intramural Research Program of the National Human Genome Research Institute at the NIH Comprehensive Tobacco Settlement of 1998 CarolineW Law Fund for Cancer Prevention Dan Duncan Family Institute for Risk Assessment and Cancer Prevention
Comic details	Length: Not reported Access: Physical copies Language: Not reported URL link: http://www.mdanderson.org/toep
Notes	Cluster randomized controlled trial



Population	205 patients age 20+ undergoing a screening colonoscopy in a health examination center who could read and understand the instructions. 103 in written text group, 102 in cartoon group. (South Korea)
Intervention	Participants were given verbal explanations and either a cartoon or written text a day before the colonoscopy. a) Cartoon illustrations explaining how to prepare for a colonoscopy
Comparison(s)	b) Written text explaining how to prepare for a colonoscopy, without illustrations
Outcome(s)	<p>Measured on the day of the colonoscopy.</p> <p>Primary: Bowel preparation (measured with BBPS scale by 2 endoscopists, range 0 to 9, higher scores means well prepared bowels)</p> <p>a) Mean BBPS score: 7.4, SD = 1.9 Median BBPS score: 9.0, SD = 0.0</p> <p>b) Mean BBPS score: 6.1, SD = 2.2 Median BBPS score: 6.0, SD = 0.0</p> <p>Secondary: Bowel preparation (measured with UPAS scale by 2 endoscopists, range 0 to 4, lower scores means well prepared bowels)</p> <p>a) Mean UPAS score: 0.7, SD = 0.9 Median UPAS score: 1.0, SD = 0.0</p> <p>b) Mean UPAS score: 1.0, SD = 0.0 Median UPAS score: 2.0, SD = 0.0</p> <p>Secondary: Insertion, withdrawal and workup times (minutes)</p> <p>a) Insertion: 7.7, SD = 4.2 Withdrawal: 9.0, SD = 4.8 Workup: 16.7, SD = 6.0</p> <p>b) Insertion: 7.1, SD = 4.4 Withdrawal: 11.1, SD = 4.4 Workup: 18.3, SD = 5.6</p> <p>Secondary: Percentage of patients with polyps (n (%))</p> <p>a) 55 (53.9%) b) 53 (54.1%)</p> <p>Secondary: Number of polyps per patient at first colonoscopy (mean)</p> <p>a) Mean: 1.3, SD = 1.8 b) Mean: 1.0, SD = 1.2</p> <p>Secondary: (subgroup) Number of polyps per patient who underwent a 2nd colonoscopy at 1st colonoscopy (mean)</p> <p>a) Mean: 2.7, SD = 2.3 b) Mean: 2.1, SD = 2.0</p> <p>Secondary: (subgroup) Number of polyps per patient who underwent a 2nd colonoscopy at 2nd colonoscopy (mean)</p> <p>c) Mean: 3.3, SD = 2.6 d) Mean: 2.8, SD = 1.4</p>
Funding	Non profit (according to UMIN-CTR register)
Comic details	<p>Length: 4 pages (16 illustrations)</p> <p>Access: Physical copies</p> <p>Language: Korean and English</p> <p>URL link: Not provided. Sample page included in study report.</p>
Notes	Registry ID: UMIN000007888

[\[Back to top\]](#)



Population	120 3- to 6-year-old children who lived in a low socio-economic status (SES) area in The Hague (Netherlands) and were starting occlusion therapy for the first time. 96 remaining after exclusions and withdrawals. 8 had no data due to technical issues.
Intervention	Children who were starting occlusion therapy for the first time were offered standard care and received the intervention or control materials which they could take back home. a) Educational cartoon story without words explaining why occluding was needed
Comparison(s)	b) Calendar with reward stickers c) Information leaflet on amblyopia for parents d) A picture to color
Outcome(s)	Measured over a week after receiving the study materials. Primary: Compliance with occlusion therapy (actual occlusion time measured with monitor taped to the patches divided by occlusion time prescribed by orthoptist, %) a) 89%, SD = 25% b) 67%, SD = 33% c) 73%, SD = 40% d) 55%, SD = 40% Secondary: Actual number of occlusion hours per day (actual occlusion time measured with monitor taped to the patches) a) 2.33, SD = 1.18 Prescribed: 2.54, SD = 1.09 b) 1.59, SD = 1.13 Prescribed: 2.57, SD = 1.02 c) 2.18, SD = 1.13 Prescribed: 3.27, SD = 1.19 d) 1.46, SD = 1.19 Prescribed: 3.20, SD = 0.59
Funding	None, but supported by ZonMW (Netherlands Organization for Health Research and Development)
Comic details	Length: Not reported Access: Physical copies Language: Dutch URL link: Not reported. No samples in study report.
Notes	

[\[Back to top\]](#)


Population	Hispanic/Latino adult students at community adult schools in Los Angeles (US ). Students in all classes were invited to participate, except for classes related to medical education (e.g., medical assistant). 185 students answered the surveys. 157 completed the 1-month follow-up, of which 18 were excluded (not Hispanic/Latino, didn't answer the question).
Intervention	Each participant was given either a fotonovela or a pamphlet in his classroom by a data collector. They had 30 minutes to read the study materials. a) Fotonovela called "Secret Feelings" (Sentimientos Secretos) telling the story of a Hispanic wife and mother with depression who eventually decides to obtain counselling and medication with a question/answer page and coupons to a local pharmacy
Comparison(s)	b) NIMH 26 pages text pamphlet about depression with similar contents as the fotonovela
Outcome(s)	<p>Measured before reading the materials, immediately afterwards and 1 month later.</p> <p>Depression knowledge – Symptoms and treatment (measured with list of 10 symptoms + 7 true/false questions on treatments, score range 0 to 17, higher scores means better knowledge)</p> <p>a) Pre-test mean: 10 Post-test mean: 12.5 1-month mean: 11</p> <p>b) Pre-test mean: 10 Post-test mean: 10.5 1-month mean: 10.5</p> <p>Antidepressant stigma (=negative perceptions of people with depression, measured with adapted LSAS scale, 5 items rated on 3 point scale, higher scores means more negative attitude)</p> <p>a) Pre-test mean: 1.9 Post-test mean: 1.75 1-month mean: 1.80</p> <p>b) Pre-test mean: 2.0 Post-test mean: 1.95 1-month mean: 1.90</p> <p>Stigma about mental health (=not wanting treatment due to what others may think, measured with SCAMHC scale, 3 items rated on 2 points scale, higher scores means more stigma)</p> <p>a) Pre-test mean: 1.19 Post-test mean: 1.13 1-month mean: 1.08</p> <p>b) Pre-test mean: 1.21 Post-test mean: 1.17 1-month mean: 1.19</p> <p>Self-efficacy to identify depression (=feeling confident to identify being depressed, measured with 2 items rated on 5 points scale, higher scores means feeling more confident)</p> <p>a) Pre-test mean: 6.10 Post-test mean: 7.10 1-month mean: 6.90</p> <p>b) Pre-test mean: 6.00 Post-test mean: 6.50 1-month mean: 6.80</p> <p>Intentions to seek help for depression (measured with 4 items on 2 points scale, higher scores means stronger intentions to seek help)</p> <p>"There were no significant differences between the fotonovela group and the text pamphlet group in willingness to seek help for depression at baseline, posttest, or follow-up, and neither group changed significantly on this variable. This appears to be due to a ceiling effect; 76 % of the respondents already answered "yes" to all of the questions in this scale at baseline, and although this increased to 83 % at posttest and 86 % at 1-month follow-up, the change did not attain statistical significance in either group."</p> <p>Dissemination of fotonovela/pamphlet (measured with 2 multiple choice questions)</p> <p>a) Threw it away: 0 Kept it: 30 Gave it to someone/left it for someone: 55 Other: 15</p> <p>b) Threw it away: 9 Kept it: 48 Gave it to someone/left it for someone: 36</p>

	Other: 5 Fotonovela/pamphlet sharing (measured with self-reported amount of people it was shared with) a) Fotonovela shared with a mean of: 1.53 people b) Pamphlet shared with a mean of: 1.16 people
Funding	Not reported
Comic details	Length: 30 pages Access: Physical copies Language: English  and Spanish  URL link: Not reported. No samples in study report.
Notes	Some data extracted from graphs and therefore imprecise.

[\[Back to top\]](#)

Population	3 rd and 4 th grade boys (age 7 to 11) from a large urban public elementary school. 116 gave assent and were present on the day of testing. 20 were excluded from analysis (not African-American). (US )
Intervention	Participants were given either illustrated or “standard” vignette measures to complete. a) Cartoon illustrations vignette depicting relationally provocative social situations
Comparison(s)	b) Standard written vignette
Outcome(s)	Measured immediately after reading the vignettes. Hostile attributional bias and Feelings of distress (=whether children believe provocative social situations are intentional or not, measured with HAB tool, score range 0 to 10, higher scores means stronger belief it was intentional, distress score range 10 to 30, higher scores means more distress) a) Physical situations HAB mean: 3.48, SD = 2.51 Provocative situations HAB mean: 5.08, SD = 2.37 Physical situations feelings of distress mean: 23.11, SD = 4.43 Provocative situations feelings of distress mean: 18.03, SD = 3.78 b) Physical situations HAB mean: 3.38, SD = 2.45 Provocative situations HAB mean: 5.50, SD = 2.08 Physical situations feelings of distress mean: 22.85, SD = 4.03 Provocative situations feelings of distress mean: 19.0, SD = 4.18
Funding	2x NIMH grants Centers for Disease Control and Prevention
Comic details	Length: Not reported (15 minutes) Access: Physical copies Language: English  URL link: Sample vignettes included in study report.
Notes	Goal of study was to adapt a measure of attributional bias to include cartoon vignettes. 2 nd experiment included measure of test-retest reliability but beyond the scope of this review. The focus is study 2. Exclusion could be considered as cartoons not meant as an intervention?



[\[Back to top\]](#)

Population	198 Children without previous experience of either medical or dental general anesthesia in Scotland volunteered to participate.
Intervention	Immediately prior to general anesthesia children received verbal instructions to prepare for dental general anesthesia and either a) received cartoon strips, b) could play an interactive computer program or c) received no further intervention. a) Cartoon strips depicting scenes with a child having dental general anesthesia read by nurse
Comparison(s)	b) Computer program with 8 screens (cartoon illustrations) relating a child's view of dental general anesthesia played with nurse c) Control group with verbal preparation offered by nurse only
Outcome(s)	Measured before the intervention and immediately after being offered the intervention(s) (?). Dental Anxiety (measured by parents with MCDAS, score range 0 to 40, higher scores means more anxiety) Note: Dichotomized as number participants with scores equal or higher to 31/40* Not extracted due to potential incoherence in Table 1 with apparently contradictory information. Dental Anxiety (measured by children self-reports with 0 to 10 scale, higher scores means more anxiety) a) Preoperative median score: 1 b) Preoperative median score: 1 c) Preoperative median score: 2 Child coping behaviors (=distress, measured by blinded observers with 0 to 10 scale, higher scores means more distress) a) Preoperative median score: 1 Post-operative median score: 4 b) Preoperative median score: 1 Post-operative median score: 0 c) Preoperative median score: 3 Post-operative median score: 2.5
Funding	Not reported
Comic details	Length: Not reported (12 scenes) Access: Physical copies / Computer access Language: English  URL link: Not provided. Computer cartoons and cartoon strips samples included in study report.
Notes	198 children randomized yet table 1 shows 66+63+63 = 192 participants in groups. Preoperative anxiety levels were collected for 191 children so this is not the explanation. *Table 1 also has unusual percentages, n=58 isn't 26% of 66 and neither is it 26% of 192.



[\[Back to top\]](#)

Population	659 Women aged 35-65 years living in Khayelitsha, close to Cape Town (South Africa).
Intervention	The comics were given to participants, 1 month later a radio drama which had inspired the intervention comic was broadcast over community radio 10 times over 1 month. a) Photo-comic modeled on "Soul City" discussing fear of cancer, cervical smear misconceptions, etc. Called "Nokwhezi's story".
Comparison(s)	b) Control "placebo" comic from Soul City series with educational messages on personal finance only
Outcome(s)	Measured at baseline and at 6-months post-intervention. Primary: Cervical screening uptake (measured with self-reports, participants had to say where they had their cervical smear) a) Ever had cervical smear in the past at baseline: 122/269 (45.4%) Had cervical smear at 6 months: 18/269 (6.7%)* b) Ever had cervical smear in the past at baseline: 174/389 (44.7%) Had cervical smear at 6 months: 25/389 (6.4%)* Knowledge about cervical screening (measured with self-reports, 5 questions) Only reported at baseline. Recall of photo-comic/comic (measured with interview questions, participants had to describe the storyline) Recall photo-comic alone: 142 out of 658 participants Recall radio drama alone: 53 out of 658 participants Recall both photo-comic and radio drama: 34 out of 658 participants No recall: 429 out of 658 participants
Funding	EngenderHealth Soul City Royal Netherlands Embassy ABSA Bank Bosman & Johnson Advertising Agency South African Cancer Association
Comic details	Length: 20 pages (5-9 frames per page) Access: Physical copies Language: Xhosa (English version available) URL link: Not reported. No samples in study report.
Notes	*Table III in the study report seems to show inverted results for control and intervention group.



[\[Back to top\]](#)

Population	117 introductory psychology students at a college in western New York state, US  .
Intervention	Participants were given comic books to read and then had to complete a questionnaire. a) 2x "Extremely violent comic books" such as "Cremator", "Dark Realm" and "Homicide" containing violent acts and/or aggressive themes
Comparison(s)	b) 1.25x "Nonviolent comic books" such as "Archie", "Dexter's Laboratory" and "Pocohontas" with "mildly" violent acts
Outcome(s)	Timing of outcome measurement unclear, likely immediately after reading the comics. Predispositional anger (=propensity to respond with anger in variety of situations, measured with BDHI inventory, 75 true/false questions, higher scores means more quickly angry) ? Trait level of hostility (measured with BDHI inventory) ? Relational provocation stories task (=if participants believed 5 scenario/stories contained negative intentions/emotions/risk of retaliation, measured with 6 questions with written answers, score range 0 to 20, higher scores means more negative/aggressive answers) a) Intent mean: 7.8, SD = 0.3 Retaliation mean: 7.1, SD = 0.5 Emotion mean: 10.1, SD = 0.3 b) Intent mean: 6.3, SD = 0.3 Retaliation mean: 4.7, SD = 0.5 Emotion mean: 8.0, SD = 0.3 Comic book rating task: Aggression, Humor, Interest, Likeability (=how funny/interesting/etc. the comics were, measured with 7 point scales, higher scores means more interest/likeability/etc.) a) Mean likeability score: 2.5, SD = 1.7 Mean Interest score: 3.4, SD = 1.7 Mean humor score: 1.8, SD = 1.1 Mean aggression score: 6.8, SD = 0.7 b) Mean likeability score: 3.9, SD = 1.3 Mean Interest score: 3.7, SD = 1.4 Mean humor score: 3.5, SD = 1.3 Mean aggression score: 2.0, SD = 1.2
Funding	Not reported.
Comic details	Length: Not reported (it took approximately 20 minutes to read the comic books in both conditions) Access: Physical copies Language: English  URL link: Not reported. No samples in study report.
Notes	Interpretation and assessment of answers to relational provocation task seems highly subjective, although the 2 assessors said to be blinded had inter-rater reliability of kappa = 0.90. Participants may have answered what they thought they were expected to, e.g. "didn't like comic book because it included violence". Very similar to (Kirsh, 2000) Only 7% of participant had read a comic book in the last 6 months.

[\[Back to top\]](#)

Population	181 white collar employees drawn from UK  worksite
Intervention	Physical activity tailored “campaigns” (posters) based on the English HEA Active for Life campaign were printed on black and white A4 pages and sent to employees. a) “It’s fun by foot” campaign promoting walking based on transtheoretical model of change with 3 humorous drawings conveying a “walking is fun” message
Comparison(s)	b) “Walking makes you look good ” campaign with 3 drawings emphasizing that walking can help weight loss and is not only for old people c) “Don’t need a dog to enjoy a walk” campaign with 4 drawings emphasizing that walking is compatible with any lifestyle and is enjoyable d) “Walking works ” campaign with 3 posters including words shaped from footprints emphasizing walking has indirect benefits beyond fitness and health e) “Control” HEA campaign with 3 written messages conveying “Do half an hour’s physical activity daily”
Outcome(s)	Measured one week after sending the campaigns. Knowledge about physical exercise (measured with 2 questions and 8-point scale) ? Attitude towards physical exercise (measured with 7-point scale) ? Agreement or disagreement with statements about the relevance and worth of exercise and walking (measured with 8-point scale) ? Attitude towards walking (measured with 7-point scale) ? Self-efficacy for regular walking (=how much one thinks he can overcome barriers to physical exercise, measured with 8-point scale) ? Outcome expectancy (measured with 8-point scale) ? Transtheoretical model of change stage progression (measured with 29 point scale) ?
Funding	Not reported
Comic details	Length: 3-4x single drawings Access: Physical copies Language: English  URL link: Not reported. Drawings included in the study report.
Notes	I have a hard time understanding and extracting the results due to the way they were reported, some are shown for subgroups only (or all campaigns aggregated) and others have been dichotomized. It’s not clear what lower/higher scores on some measures mean. Authors conclude “Based on our new questionnaire, which achieved good reliability figures and demonstrated content validity, no campaign significantly affected what may be seen as the main behavioural outcome, change in stage. No campaign was significantly more or less effective, although each had a unique effects profile.”

[\[Back to top\]](#)


Population	234 consecutive patients who presented to the emergency department of a community teaching hospital (Butterworth, US ) with lacerations. 29 excluded from analysis (didn't read instructions; 2 in cartoon group, 27 in text-only group).
Intervention	At release from emergency department patients were offered wound care instructions with or without cartoon illustrations (identical text). a) Wound care instructions with cartoon illustrations
Comparison(s)	b) Wound care instructions (text only)
Outcome(s)	Measured 3 days after release from the emergency department. Wound care knowledge (measured with 4 open-ended questions based on wound care materials) a) 0 or 1 correct answer: 3 (3%) 2 or 3 correct answers: 53 (51%) 4 correct answers: 47 (46%) b) 0 or 1 correct answer: 34 (33%) 2 or 3 correct answers: 62 (61%) 4 correct answers: 6 (6%) Satisfaction with emergency department visit a) Very satisfied: 91 (88%) Somewhat satisfied: 7 (7%) Not satisfied: 5 (5%) b) Very satisfied: 88 (86%) Somewhat satisfied: 10 (10%) Not satisfied: 4 (4%) Satisfaction and compliance with wound care instructions a) Very satisfied: 100 (97%) Somewhat satisfied: 3 (3%) Not satisfied: 0 (0%) a) Very satisfied: 67 (66%) Somewhat satisfied: 33 (32%) Not satisfied: 2 (2%) Compliance with wound care instructions (self-reported) a) Compliance with daily wound care: 79 (77%) b) Compliance with daily wound care: 55 (54%) Readability of instructions a) Very easy to read: 101 (98%) Somewhat easy to read: 2 (2%) Not easy to read: 0 (0%) b) Very easy to read: 65 (64%) Somewhat easy to read: 32 (31%) Not easy to read: 5 (5%)
Funding	Not reported
Comic details	Length: 1 page (recto/verso) Access: Physical copies Language: English  URL link: Not reported. Cartoon illustrations included in study report.
Notes	

[\[Back to top\]](#)



Population	115 university students without heart disease (19 to 20 per group) (Canada)
Intervention	Subjects were seated in a quiet room and assigned to the different conditions. a) Participants told they would have a stress test then asked to read stress-irrelevant book containing Herman cartoons for 20 minutes
Comparison(s)	b) Participants asked to read stress-irrelevant book containing Herman cartoons for 20 minutes c) Participants told to rest quietly for 20 minutes (control group) d) Participants told they would have a stress test then asked to rest quietly for 20 minutes e) Participants told they would have a stress test then asked to read stress-relevant questionnaires and psychological scales for 20 minutes f) Participants asked to read stress-relevant questionnaires and psychological scales for 20 minutes
Outcome(s)	Measured 1 minute before the intervention and immediately after the intervention. Mood (measured with two 10-point scales, 0 = calm/loosy mood, 10 = excited/great mood) See article Systolic and diastolic blood pressure (mmHg) See article Heart rate (beats per minute) See article
Funding	Natural Sciences and Engineering Research Council of Canada grant
Comic details	Length: Access: Language: URL link:
Notes	Data not extracted due to too high amount of study conditions. Authors conclusions: No effect of expectancy at 20 minutes on heart rate and blood pressure. Increased feelings of relaxation and better mood in cartoon conditions relative to the stress questionnaire (but mood change for the sample as a whole minimal).

[\[Back to top\]](#)



Fernandez, 2017

Population	1004 parents of unvaccinated Hispanic girls ages 11 to 17. (US )
Intervention	Lay health workers delivered the educational interventions in thirty health clinics. a) Fotonovela focusing on HPV vaccine
Comparison(s)	b) Multimedia intervention (iPad application) + fotonovela on HPV vaccine c) Control group (no multimedia intervention, no fotonovela)
Outcome(s)	Measured “at first follow-up” (undefined). Vaccine uptake (measured with “self-reports or medical record review”) a) 47% uptake c) 39% uptake
Funding	Not reported
Comic details	Length: Not reported Access: Not reported (likely physical copies) Language: Not reported URL link: None provided. Small picture of fotonovela cover included in study report.
Notes	Full study report needed for more details, data extraction based on abstract May actually fit exclusion criteria due to comics + education. Cluster-RCT



[\[Back to top\]](#)

Population	57 (?) youth attending 2 after-school programs in New York City, US  .
Intervention	Participants read their media in a classroom specifically assigned to their group a) Manga comic "Fight for your right to fruit" + 1 page describing the benefits of eating fruits
Comparison(s)	b) 5-page newsletter and word puzzle search on ancient Greece and Greek mythology
Outcome(s)	<p>Measured at Day 1 and immediately after reading the medias (4-6 days after Day 1).</p> <p>Primary: Selection of healthy or unhealthy snacks (participants had to choose a snack in a special room)</p> <p>a) Chose healthy snack: 21/30 (61%) b) Chose healthy snack: 9/26 (39%)</p> <p>Secondary: Knowledge on healthy eating (measured with 7 items)</p> <p>a) Mean change from pre to post-test: 0.24, SD = 0.65 b) Mean change from pre to post-test: 0.20, SD = 0.69</p> <p>Secondary: Self-efficacy (=feeling capable of eating fruits daily, measured with 2 items, score range 2 to 10, higher scores means feeling more capable)</p> <p>a) Mean change from pre to post-test: 0.38, SD = 0.92 b) Mean change from pre to post-test: 0.06, SD = 0.96</p> <p>Secondary: Outcome expectations (=believing eating fruits will lead to health benefits, measured with 2 items, score range 2 to 10, higher scores means stronger belief fruits will lead to benefits)</p> <p>a) Mean change from pre to post-test: 0.02, SD = 0.85 b) Mean change from pre to post-test: 0.04, SD = 0.79</p> <p>Secondary: Transportation (=feeling immersed in the story, measured with 12 items, score range 12 to 60, higher scores means more immersed)</p> <p>a) Mean score at post-test: 3.36, SD = 0.1 b) Mean score at post-test: 2.79, SD = 0.1</p>
Funding	Professional Staff Congress-City University of New York Award
Comic details	<p>Length: 30 pages + 1 page on the benefits of comics (reading it took on average 15 minutes)</p> <p>Access: Physical copies</p> <p>Language: English </p> <p>URL link: Not provided. No comic samples in study report.</p>
Notes	Unclear number of participants, could be 56, 57 or 59 depending on different tables.

[\[Back to top\]](#)

Population	115 children ages 6 to 17 who were to undergo surgery in Lyon (France). 
Intervention	Both groups received verbal information on surgery and the intervention group was also sent a comic information leaflet a few days before hospitalization. a) Comic information leaflet on surgery + verbal information
Comparison(s)	b) Verbal information on fasting, hospitalization, surgical procedures, etc.
Outcome(s)	<p>Measured at pre-anesthetic visit and on the day of hospitalization (a couple days later).</p> <p>Primary: Anxiety (measured with STAIC-S, score range 20 to 60, higher scores means more anxiety)</p> <p>a) Mean score pre-anesthetic visit: 32.09, SD = 5.1 Mean score on hospitalization day: 30.07, SD = 4.23</p> <p>b) Mean score pre-anesthetic visit: 30.40, SD = 5.0 Mean score on hospitalization day: 31.30, SD = 4.97</p> <p>Secondary: Difference in anxiety (measured with STAIC-S, score range 20 to 60, higher scores means more anxiety)</p> <p>a) Mean difference between pre-anesthetic visit and hospitalization day: +0.39, SD = 4.0</p> <p>b) Mean difference between pre-anesthetic visit and hospitalization day: +5.14, SD = 6.0</p> <p>Secondary: Children evaluation of the comic and information given (measured with questionnaire)</p> <p>a) Read the leaflet: 48/50 (96%) Found leaflet comforting: 43/50 (86%) Found leaflet stressful: 4/50 (8%) Found leaflet complicated: 2/50 (4%) Found leaflet useful: 45/50 (90%) Leaflet included information which was ignored: 36/50 (70%)</p> <p>Secondary: Parent's evaluation of the comic and information given (measured with questionnaire)</p> <p>a) Read the leaflet: 44/51 (86.3%) Found leaflet comforting: 42/46 (91.3%) Found leaflet stressful: 1/47 (2.1%) Found leaflet complicated: 1/45 (2.2%) Found leaflet useful: 43/46 (93.5%) Leaflet included information which was ignored: 16/46 (34.8%)</p>
Funding	French Ministry of Health Programme Hospitalier de Recherche Clinique Régional Programme de Recherche en Qualité Hospitalière
Comic details	Length: 20 pages Access: Physical copies Language: French  URL link: Not provided. Sample pages included in study report.
Notes	

[\[Back to top\]](#)


Population	587 8-year old children from 12 schools in Majorca, Spain  .
Intervention	Children in the intervention group were given a comic book by their teachers a) "Comic book of the back" with messages on back pain such as "if back pain occurs, bed rest should be avoided and the highest possible degree of activity should be maintained"
Comparison(s)	b) No intervention, assessments only
Outcome(s)	Measured 1 week before the intervention, 1 week afterwards (day 15) and 3 months afterwards (day 98). Knowledge on ways to manage back pain (measured with 10 true/false statements, score range 0 to 10, higher scores means better knowledge) a) Total baseline median IQR score (individual level): 7.0 Total day 15 median IQR score (individual level): 9.0 Total day 98 median IQR score (individual level): 9.0 Total baseline median IQR score (cluster level): 7.5 Total day 15 median IQR score (cluster level): 9.0 Total day 98 median IQR score (cluster level): 9.0 b) Total baseline median IQR score (individual level): 8.0 Total day 15 median IQR score (individual level): 8.0 Total day 98 median IQR score (individual level): 9.0 Total baseline median IQR score (cluster level): 7.8 Total day 15 median IQR score (cluster level): 8.0 Total day 98 median IQR score (cluster level): 8.5
Funding	Kovacs Foundation, non-profit
Comic details	Length: Not reported Access: Physical copies and available online Language: Spanish  , English or Majorcan URL link: Not provided. No comic samples included in study report.
Notes	Table 1 shows % out of 231 controls, even if only 229 participants answered the question, I am not sure if this is appropriate. This doesn't meaningfully change the conclusions. Cluster-RCT


[\[Back to top\]](#)

Population	Taiwanese children aged 3 to 7 years undergoing venipuncture. 326 eligible children, 32 didn't meet inclusion criteria, 18 withdrew (=276 left, 92 in each group). (Taiwan)
Intervention	Children and their parents/guardians were informed about the procedure and had opportunities to discuss their problems and concerns. The children were then distracted with 3 strategies during the procedure. a) Picture storybook of a bear going to the hospital and having venipuncture, which was shown by the nurse/parent (and commenced again until the procedure was completed)
Comparison(s)	b) Animated cartoon of a cartoon tiger going to the hospital shown by nurse/parent on iPad, which was replayed until the procedure was completed c) "Routine" oral instructions provided by the nurse (control), which explained the procedure while doing it
Outcome(s)	Measured at 3 points during the procedure. Children distress (measured with OSBD-R scale, score range 0 to 50, higher scores means more distress) a) Mean score between tourniquet application and needle insertion: 28.4, SD = 7.4 Mean score between needle insertion and successful cannulation: 28.6, SD = 7.2 Mean score between cannula fixation and IV set protection: 25.1, SD = 4.7 c) Mean score between tourniquet application and needle insertion: 38.2, SD = 14.9 Mean score between needle insertion and successful cannulation: 42.6, SD = 17.4 Mean score between cannula fixation and IV set protection: 34.3, SD = 15.5
Funding	None received
Comic details	Length: 12 pages Access: Physical copies Language: Chinese URL link: None provided. No storybook samples included in study report.
Notes	




[\[Back to top\]](#)

Population	60 healthy 4 to 6 year old pediatric dental patients with no previous dental experience living in Egypt.
Intervention	Ten intervention or control images were shown for 10-15 minutes while waiting for treatment. a) "Neutral" cartoon images depicting non-dental cartoon characters
Comparison(s)	b) Positive images of dental treatment selected from the internet
Outcome(s)	<p>Measured some minutes before, during and immediately after the procedure.</p> <p>Children dental anxiety (measured with VPT scale, score range 0 to 8, higher scores means more anxiety)</p> <p>a) Mean score before procedure: 2.2, SD = 1.7 Mean score after procedure: 2.2, SD = 2.1</p> <p>b) Mean score before procedure: 2.4, SD = 2.1 Mean score after procedure: 2.4, SD = 2.0</p> <p>Child behavior (measured with Frankl behavior scale)</p> <p>a) While seating Definitely negative: 1 Negative: 4 Positive: 14 Definitely positive: 11</p> <p>During administration of local anesthesia Definitely negative: 2 Negative: 5 Positive: 20 Definitely positive: 3</p> <p>During treatment Definitely negative: 2 Negative: 3 Positive: 9 Definitely positive: 16</p> <p>Overall rating Definitely negative: 2 Negative: 2 Positive: 15 Definitely positive: 11</p> <p>b) While seating Definitely negative: 0 Negative: 1 Positive: 13 Definitely positive: 16</p> <p>During administration of local anesthesia Definitely negative: 1 Negative: 8 Positive: 11 Definitely positive: 10</p> <p>During treatment Definitely negative: 1 Negative: 5 Positive: 11 Definitely positive: 13</p> <p>Overall rating Definitely negative: 0 Negative: 5 Positive: 11 Definitely positive: 14</p>
Funding	Not reported
Comic details	<p>Length: 10x "cartoon images"</p> <p>Access: Not reported</p> <p>Language: Not reported</p> <p>URL link: None provided. No cartoon image samples included in study report.</p>
Notes	Quasi-RCT, allocation by day of the week



Population	152 US  students enrolled in a general education course at a southern university.
Intervention	Subjects in bogus pipelines conditions were first asked to supply a sample of saliva and informed their drug use could be verified, they were given either a protocol or a cartoon. a) Printed cartoon bogus pipeline: Subjects were given a cartoon version describing the procedure and explaining that their drug use could be verified
Comparison(s)	b) Verbal bogus pipeline: Subjects were read a standardized protocol of the procedure explaining that their drug use could be verified c) Questionnaire-only control
Outcome(s)	Measured immediately after the interventions. Self-reported quantity of drug use () a) Alcohol, light use: 31/50 Alcohol, heavy use: 19/50 Cigarettes, light use: 48/50 Cigarettes, heavy use: 2/50 Smokeless tobacco, light use: 47/50 Smokeless tobacco, heavy use: 2/50 Caffeine, light use: 33/50 Caffeine, heavy use: 17/50 Marijuana, light use: 50/50 Marijuana, heavy use: 0/50 b) Alcohol, light use: 31/50 Alcohol, heavy use: 18/50 Cigarettes, light use: 43/50 Cigarettes, heavy use: 6/50 Smokeless tobacco, light use: 48/50 Smokeless tobacco, heavy use: 1/50 Caffeine, light use: 37/50 Caffeine, heavy use: 12/50 Marijuana, light use: 48/50 Marijuana, heavy use: 1/50 c) Alcohol, light use: 31/52 Alcohol, heavy use: 21/52 Cigarettes, light use: 52/52 Cigarettes, heavy use: 0/52 Smokeless tobacco, light use: 51/52 Smokeless tobacco, heavy use: 0/52 Caffeine, light use: 36/52 Caffeine, heavy use: 16/52 Marijuana, light use: 51/52 Marijuana, heavy use: 1/52 Self-reported frequency of drug use () a) Alcohol users: 27/50 Cigarette users: 3/50 Smokeless tobacco users: 4/50 Caffeine users: 47/50 Marijuana users: 4/50 Prescription drugs users: 3/50 b) Alcohol users: 22/50 Cigarette users: 7/50 Smokeless tobacco users: 2/50 Caffeine users: 46/50 Marijuana users: 6/50 Prescription drugs users: 2/50 c) Alcohol users: 28/52 Cigarette users: 5/52 Smokeless tobacco users: 0/52 Caffeine users: 51/52 Marijuana users: 4/52

	<p>Prescription drugs users: 6/52</p> <p>Self-reported drug-related life problems ()</p> <p>a) Mean score: 24.04</p> <p>b) Mean score: 23.26</p> <p>c) Mean score: 23.69</p> <p>Self-reported attitudes toward drugs and their use ()</p> <p>a) Mean score: 19.02</p> <p>b) Mean score: 18.62</p> <p>c) Mean score: 18.76</p>
Funding	University of Arkansas, College of Education
Comic details	<p>Length: Not reported</p> <p>Access: Physical copies</p> <p>Language: English </p> <p>URL link: None provided. No samples included in study report.</p>
Notes	<p>Unclear what higher or lower scores mean</p> <p>Similar to (Botvin, 1984) but not measuring the same outcomes.</p>

[\[Back to top\]](#)

Population	Mothers of children under 8 years old attending the Ripley Health clinic, Houston, Texas (US ). 149 invited to participate, 18 refused, 8 didn't finish questionnaire, 25 excluded (no control over water heater) (=98 remaining).
Intervention	Mothers attending the clinic received either a) an informational cartoon which they could read alone for a couple minutes followed by a questionnaire or b) a questionnaire. a) Informational cartoon showing two Hispanic characters discussing the potential harms of hot tap water
Comparison(s)	b) Questionnaire-only
Outcome(s)	Measured after reading the informational cartoon in group a). Knowledge on hot tap water burn prevention (measured with 4 questions) a) Correct answers: 169/184 Incorrect answers: 15/184 b) Correct answers: 125/176 Incorrect answers: 51/176 Self-efficacy (=feeling able to adjust the water heater, measured with 4 questions) a) Favorable answers: 152/196 Unfavorable answers: 44/196 b) Favorable answers: 109/196 Unfavorable answers: 87/196 Intentions to adjust water heater to safe temperatures (measured with 2 questions) a) Favorable answers: 90/98 Unfavorable answers: 8/98 b) Favorable answers: 68/98 Unfavorable answers: 38/98 Attitude () a) Favorable answers: 242/245 Unfavorable answers: 3/245 b) Favorable answers: 213/225 Unfavorable answers: 12/225 Social desirability (measured with 3 questions) ?
Funding	Not reported
Comic details	Length: Not reported (can be read in 5 minutes) Access: Physical copies Language: Spanish  and English  URL link: None provided. Sample pages included in study report.
Notes	Quasi-randomised trial, allocation using control and intervention days Attitude and social desirability may be the same outcome Meaning of some outcomes not clear

[\[Back to top\]](#)

Population	783 adult smokers and 510 youth in the US  .
Intervention	Respondents viewed a series of cigarette health warning images. a) "Comic book style" warnings
Comparison(s)	b) Health warnings using similar "real" images
Outcome(s)	Measured immediately after watching/reading the health warnings. Health warning effectiveness (=effect on self-reported concerns about health risks, motivation to quit, preventing effect on youth, measured with 1-10 scale, higher results means more effective) a) Adjusted mean score: 5.52 b) Adjusted mean score: 6.25
Funding	National Institutes of Health U.S. National Cancer Institute Propel Centre for Population Health Impact Canadian Institutes of Health Research New Investigator Award Canadian Cancer Society Research Institute Junior Investigator Award
Comic details	Length: 3x single drawings Access: Online Language: English  URL link: Not provided. All health warnings included in study report (small size).
Notes	Health warnings likely available on the internet Technical flaw prevented fully random assignment to health warning sets "Comic book style" versus "real images" is a subgroup analysis

[\[Back to top\]](#)

Population	146 Santiago university students (Chile)
Intervention	The stimuli were sent to participants via WhatsApp. a) Political cartoons sent via WhatsApp twice a day for 1 week, selected from image databases
Comparison(s)	b) Non-political cartoons sent via WhatsApp twice a day for 1 week c) Newspaper headlines regarding political topics sent via WhatsApp twice a day for 1 week
Outcome(s)	Measured at baseline, immediately after the intervention and a week after the intervention. Trust in politicians (measured with modified General Trust scale, score range 1 to 100, higher scores means more trust) a) At baseline: 28.97, SD = 16.79 Immediately post-intervention: 29.20, SD = 16.79 1 week post-intervention: 29.93, SD = 16.39 b) At baseline: 27.32, SD = 16.98 Immediately post-intervention: 28.59, SD = 15.79 1 week post-intervention: 29.70, SD = 16.53 c) At baseline: 26.40, SD = 18.06 Immediately post-intervention: 27.42, SD = 17.12 1 week post-intervention: 27.96, SD = 17.47 Attention paid to stimuli (measured with single question, score range 1 to 100, higher scores means more attention given) a) Immediately post-intervention: 81.73, SD = 31.08 b) Immediately post-intervention: 80.07, SD = 23.09 c) Immediately post-intervention: 73.92, SD = 27.44 Disposition toward politicians (measured with single question, score range 1 to 100, higher scores means more attention given) “no effects”
Funding	Chilean Comisión Nacional de Investigación Científica y Tecnológica Chilean Fondo Nacional de Desarrollo Científico y Tecnológico
Comic details	Length: Single panel cartoons Access: Online (via WhatsApp) Language: Not reported (sample cartoon is in English) URL link: Not provided. Sample cartoon (1x) included in study report.
Notes	The study report describes 2 experiments; only the second one “study 2” is included and relevant to this rapid review.

[\[Back to top\]](#)

Population	22 Tanzanian livestock keepers from Morogoro (7 in cartoon group, 8 in photo group, 7 in written document group). (Tanzania)
Intervention	Trained facilitators explained a research project involving sampling blood and milk from cattle to participants using three different communication tools. a) Poster with 6 cartoons + explanations describing a research project
Comparison(s)	b) Written document describing the research project c) Poster with 6 pictures + explanations describing the research project
Outcome(s)	Measured immediately after the interventions. Comprehension of information received or “knowledge” (measured with 8 open-ended questions, score range 0 to 12, higher scores means better comprehension) a) Median score: 8 (range 6 to 11) b) Median score: 7 (range 6 to 8) c) Median score: 6.3 (range 6 to 10) Engagement score (=summary of comprehension score + time spent with tools + number of questions asked, score range 0 to 22, higher scores means more engagement) a) Minutes spent: 10.3 Number of questions: 1 Median engagement score: 21 b) Minutes spent: 7.2 Number of questions: 0 Median engagement score: 14.4 c) Minutes spent: 7.2 Number of questions: 1.5 Median engagement score: 16.5 Hypothetical consent (measured with single question) “All participants said they would consent to the study if requested.”
Funding	German Federal Ministry of International Cooperation Ministry for Foreign Affairs of Finland Japan-CGIAR Fellowship Program Japan International Research Center for Agricultural Sciences CGIAR Research Program on Agriculture for Nutrition and Health
Comic details	Length: A4 poster (6 panels) Access: Physical copies Language: Kiswahili URL link: Not provided. Full cartoon poster included in study report.
Notes	Quasi-RCT, allocation by alternation

[\[Back to top\]](#)

Population	1168 learners in 19 schools in KwaZulu-Natal (South Africa) (10 in control group, 9 in intervention group).
Intervention	Learners in the intervention schools received a photo-novella which they could read and then had to give back. a) Photo-novella called "Laduma" focusing on sexually transmitted infections (STI) with a question/answer section at its back
Comparison(s)	b) No "Laduma" photo-novella
Outcome(s)	<p>Measured immediately after the intervention (T1), 3 weeks after T1 (T2) and 6 weeks after T2 (T3 = 9 weeks post-intervention).</p> <p>Knowledge regarding spread of STI (measured with 4 items, higher scores means better knowledge)</p> <p>a) Baseline mean score: 0.66 3-weeks mean score: 0.75 9-weeks mean score: 0.75</p> <p>b) Baseline mean score: 0.71 3-weeks mean score: 0.71 9-weeks mean score: 0.68</p> <p>Knowledge regarding causes of STI (measured with 3 items, higher scores means better knowledge)</p> <p>a) Baseline mean score: 0.54 3-weeks mean score: 0.60 9-weeks mean score: 0.64</p> <p>b) Baseline mean score: 0.55 3-weeks mean score: 0.65 9-weeks mean score: 0.63</p> <p>Attitude towards condom use (=if participants think condom use is a positive behaviour, measured with 7 items)</p> <p>a) Baseline mean score: 0.55 3-weeks mean score: 0.64 9-weeks mean score: 0.62</p> <p>b) Baseline mean score: 0.57 3-weeks mean score: 0.57 9-weeks mean score: 0.56</p> <p>Attitude towards females with STI (=if participants think negatively of females with STIs, measured with 6 items)</p> <p>a) Baseline mean score: 0.46 3-weeks mean score: 0.51 9-weeks mean score: 0.49</p> <p>b) Baseline mean score: 0.46 3-weeks mean score: 0.46 9-weeks mean score: 0.49</p> <p>Attitude towards males with STI (=if participants think negatively of males with STIs, measured with 6 items)</p> <p>a) Baseline mean score: 0.38 3-weeks mean score: 0.44 9-weeks mean score: 0.52</p> <p>b) Baseline mean score: 0.44 3-weeks mean score: 0.47 9-weeks mean score: 0.44</p> <p>Communication about STI with parents (=if people communicate about STIs, measured with 5 items)</p> <p>a) Baseline mean score: -0.14 3-weeks mean score: -0.29 9-weeks mean score: -0.28</p> <p>b) Baseline mean score: -0.14 3-weeks mean score: -0.21 9-weeks mean score: -0.25</p> <p>Communication about STI with friends (=if people communicate about STIs, measured with 5 items)</p> <p>a) Baseline mean score: 0.40 3-weeks mean score: 0.46 9-weeks mean score: 0.48</p> <p>b) Baseline mean score: 0.45</p>



	<p>3-weeks mean score: 0.50 9-weeks mean score: 0.51</p> <p>Communication about STI with boyfriends/girlfriends (=if people communicate about STIs, measured with 5 items)</p> <p>a) Baseline mean score: 0.30 3-weeks mean score: 0.34 9-weeks mean score: 0.32</p> <p>b) Baseline mean score: 0.32 3-weeks mean score: 0.31 9-weeks mean score: 0.39</p> <p>Sexual behaviour (=if one had sex and used condoms prior to the survey, measured with single multiple-choice question)</p> <p>?</p> <p>“The intervention (reading Laduma once) had thus no significant effect on consistent condom use”</p> <p>Intention to use condoms in the future (measured with single multiple-choice question at 9 weeks)</p> <p>a) Doesn't plan to have sex: 28.1% Plan to have sex with a condom: 65.1% Plans to have sex without a condom: 6.8%</p> <p>b) Doesn't plan to have sex: 41.9% Plan to have sex with a condom: 52.3% Plans to have sex without a condom: 5.8%</p>
Funding	NACOSA
Comic details	<p>Length: Not reported (reading it takes 1 hour)</p> <p>Access: Physical copies</p> <p>Language: English</p> <p>URL link: Not reported. No photo-novella samples in study report.</p>
Notes	<p>A 23% absolute increase in participants intending to have sex with a condom between groups (even if this doesn't lead to actual behaviour differences) seems like a unusually big effect from the photo-novella which leads me to wonder if groups were similar at baseline on this outcome</p> <p>Cluster randomized controlled trial</p>

[\[Back to top\]](#)

Muzumdar, 2015

Population	170 third-year pharmacy US students age ≥ 18 years. (91 in comic group, 79 in standard flyer group)
Intervention	Study participants were either given a comic flyer or a “standard” flyer. a) 1 page CDC comic flyer on adult immunization then completed questionnaire (took about 10 minutes)
Comparison(s)	b) 1 page CDC “standard” flyer on adult immunization then completed questionnaire (took about 10 minutes)
Outcome(s)	Measured immediately after reading the flyers. Attitude towards education flyer (= if the flyer was deemed attractive/pleasant/eye-catching, measured with 6 items, score range 0 to 7, higher scores means more positive attitude) a) Mean score: 6.14, SD = 0.62 b) Mean score: 4.93, SD = 1.20
Funding	College of Pharmacy and Health Sciences at St John’s University
Comic details	Length: 1 page (10 minutes to read) Access: Physical copies Language: English URL link: Comic is included in the study report (full-size)
Notes	Same comic as in (Muzumdar, 2017)


[\[Back to top\]](#)

Population	646 seventh graders from two suburban New York City (US ) schools.
Intervention	Subjects in bogus pipeline conditions were first asked to supply a sample of saliva and informed their drug use could be verified, they were then either shown a video or given a cartoon a) Cartoon bogus pipeline explaining the study protocol
Comparison(s)	b) Verbal bogus pipeline, with study protocol explained verbally c) Questionnaire-only d) Video bogus pipeline explaining the study protocol
Outcome(s)	Measured immediately post-intervention Smoking use (measured with multiple response question) a) Non-smoker: 121 (70%) Ex-smoker: 5 (3%) Current smoker: 48 (27%) b) Non-smoker: 121 (79%) Ex-smoker: 2 (1%) Current smoker: 30 (20%) c) Non-smoker: 117 (74%) Ex-smoker: 4 (3%) Current smoker: 38 (24%) Alcohol use (measured with multiple response question) a) Non-drinker: 133 (77%) Current drinker: 40 (23%) b) Non-drinker: 133 (88%) Current drinker: 19 (12%) c) Non-drinker: 135 (83%) Current drinker: 27 (17%) Marijuana use (measured with multiple response question) a) Non-marijuana user: 169 (97%) Current user: 5 (3%) b) Non-marijuana user: 150 (98%) Current user: 3 (2%) c) Non-marijuana user: 153 (94%) Current user: 9 (6%)
Funding	Not reported
Comic details	Length: Not reported. Access: Physical copies Language: English  URL link: Not reported. No samples in study report.
Notes	Results dichotomized from “never user/yearly user/monthly user/weekly user/daily user” to user/non-user



[\[Back to top\]](#)

Population	103 female undergraduate psychology students at University of Western Ontario (Canada).
Intervention	A female experimenter offered participants cartoons which they then rated on a funniness scale. a) 15 Disparaging cartoons portraying men as being lazy/incompetent or without referring to a specific trait
Comparison(s)	b) 15 Non-disparaging cartoons all from "the book of women's humor", not specific to men
Outcome(s)	Measured immediately after rating the cartoons. Stereotype accessibility (=how quickly stereotypical ideas come to mind when thinking about a group, measured with computer task) "This first experiment yielded no evidence that disparaging humor makes stereotypes more extreme or accessible. Indeed, the only significant effect went in the direction opposite to predictions." Stereotype extremity (=stereotypical views on men, measured with 0 to 8 scale, higher scores mean more stereotypical views) (mean scores) a) Men are lazy: 3.25 Men are inactive: 1.92 Men are idle: 3.18 Men are sluggish: 2.75 Men are assertive: 5.67 Men are forceful: 5.45 Men are aggressive: 5.96 Men are outspoken: 5.00 b) Men are lazy: 3.42 Men are inactive: 2.10 Men are idle: 2.88 Men are sluggish: 3.29 Men are assertive: 5.79 Men are forceful: 5.64 Men are aggressive: 6.04 Men are outspoken: 5.44
Funding	Social Sciences and Humanities Research Council of Canada James McKeen Cattell Sabbatical Award
Comic details	Length: Not reported. Access: Physical copies Language: English URL link: None provided. No cartoon samples in study report.
Notes	Only the first experiment is about cartoons



[\[Back to top\]](#)

Population	20 young children scheduled or planned for major surgeries (Spain ).
Intervention	24 hours before the scheduled surgical procedures nurses administered the interventions. a) 3-D storybook entitled "Jared's Hospital adventure" describing preoperative and postoperative information delivered by two study authors (nurses)
Comparison(s)	b) Verbal "traditional" teaching on surgery for 10 to 15 minutes by a single study author (nurse)
Outcome(s)	Measured 10 to 15 minutes after the interventions. Surgical knowledge (measured with 10 yes/no questions, score range 0 to 10, higher scores means better knowledge) a) Post-test mean score: 8.67, SD = 1.16 b) Post-test mean score: 7.13, SD = 0.64 Child anxiety (measured with m-YPAS scale, 22 items, score range 23.40 to 100, higher scores means more anxiety) a) Post-test mean anxiety: 28.73, SD = 7.67 b) Post-test mean anxiety: 39.16, SD = 6.44
Funding	Not reported
Comic details	Length: Not reported (can be read in 15-20 minutes) Access: Physical copies Language: Filipino and English URL link: Not provided. No storybook samples in study report.
Notes	Different number of nurses may have also contributed to the observed differences Baseline imbalances may have affected the results, especially with such a small sample



[\[Back to top\]](#)

Population	373 patients with osteoarthritis (UK) 
Intervention	Participants were offered booklets. 1. Experimental booklets on the subject of osteoarthritis providing a range of illustrations in different styles (matchstick, cartoon, photographic, representational, symbolic) (12 formats)
Comparison(s)	2. Experimental booklets on the subject of osteoarthritis providing a range of illustrations in different styles (matchstick, cartoon, photographic, representational, symbolic) (12 formats)
Outcome(s)	Measured 2 to 4 weeks after receiving the booklets. Knowledge (measured with 24 multiple-choice questions) “Exposure to illustrated booklets led to higher questionnaire scores than exposure to unillustrated booklets, but the difference was not statistically significant” “Exposure to certain types of booklet, such as the cartoon and matchstick-illustrated booklets (associated with standard text) led to significantly higher questionnaire scores ($p < 0.05$, Students' t test) when compared with subjects exposed to unillustrated booklets with comparable text.” Preference (?) “70% of subjects preferred reading material with rather than without illustrations”
Funding	Arthritis and Rheumatism Council
Comic details	Length: 30 pages Access: Physical copies Language: English  URL link: Not provided. No samples in study report.
Notes	Author produced the line illustrations It appears that some scores and outcomes aren't quantitatively described in the study report, data extraction is therefore difficult. The comparison group with 31 participants appears to have been selected non-randomly.

[\[Back to top\]](#)

Population	119 introductory psychology students in Western New York State (US )
Intervention	Participants were given comic books to read and then had to answer questionnaires. a) 2x Very violent comic books called "Curse of the Spawn"
Comparison(s)	b) 1.25x Non-violent comic book called "Archie & Friends" with humorous adventures
Outcome(s)	<p>Measured at beginning of semester (6-10 weeks before the comics were handed to participants) and immediately after reading the comic books.</p> <p>Predispositional anger (=propensity to respond with anger in variety of situations, measured with BDHI inventory, 75 true/false questions) ?</p> <p>Trait level of hostility (measured with BDHI inventory) ?</p> <p>Ambiguous provocation stories task (=if participants believed 6 scenario/stories contained negative intentions/emotions/risk of retaliation, measured with 6 questions with written answers, score range 0 to 20, higher scores means more negative/aggressive answers)</p> <p>a) Intent mean (Male): 6.5, SD = 0.53 Intent mean (Female): 5.3, SD = 0.34 Retaliation mean (Male): 8.1, SD = 0.52 Retaliation mean (Female): 7.3, SD = 0.33 Emotion mean (Male): 6.5, SD = 0.50 Emotion mean (Female): 5.2, SD = 0.32</p> <p>b) Intent mean (Male): 4.4, SD = 0.62 Intent mean (Female): 5.6, SD = 0.35 Retaliation mean (Male): 6.5, SD = 0.61 Retaliation mean (Female): 6.9, SD = 0.34 Emotion mean (Male): 4.0, SD = 0.59 Emotion mean (Female): 5.1, SD = 0.33</p> <p>Comic book rating task: Aggression, Humor, Interest, Likeability (=how funny/interesting/etc. the comics were, measured with 7 point scales, higher scores means more interest/likeability/etc.)</p> <p>a) Mean likeability score (Male): 4.2, SD = 1.8 Mean likeability score (Female): 2.2, SD = 1.6 Mean Interest score (Male): 4.6, SD = 1.4 Mean Interest score (Female): 3.3, SD = 1.7 Mean humor score (Male): 2.4, SD = 1.5 Mean humor score (Female): 1.8, SD = 1.0 Mean aggression score (Male): 6.8, SD = 0.4 Mean aggression score (Female): 6.8, SD = 0.4</p> <p>b) Mean likeability score (Male): 2.9, SD = 1.3 Mean likeability score (Female): 4.2, SD = 1.1 Mean Interest score (Male): 2.8, SD = 1.4 Mean Interest score (Female): 4.2, SD = 1.1 Mean humor score (Male): 2.9, SD = 1.3 Mean humor score (Female): 3.7, SD = 1.3 Mean aggression score (Male): 1.7, SD = 0.8 Mean aggression score (Female): 2.4, SD = 1.5</p>
Funding	Not reported
Comic details	<p>Length: Not reported (books took approximately 20 minutes to read)</p> <p>Access: Physical copies</p> <p>Language: English </p> <p>URL link: Not provided. No samples in study report.</p>
Notes	<p>Very similar to (Kirsh, 2002)</p> <p>Only 9% of participant had read a comic book in the last 6 months.</p>



[\[Back to top\]](#)

Population	50 patients with gout (UK )
Intervention	Patients were given the booklets and simply asked to read them, taking as much time as needed. a) Illustrated booklet with 89 cartoons explaining gout
Comparison(s)	b) Unillustrated booklet with identical textual contents as the illustrated booklet
Outcome(s)	Measured immediately after reading the booklets. Knowledge on gout (measured with 14 multiple-choice questions, score range 0 to 100% correct) a) Correct answers overall: 65.5% b) Correct answers overall: 67.0% (individual scores also described in the study report)
Funding	Arthritis and Rheumatism Council West Riding Medical Trust grant
Comic details	Length: 89 cartoon drawings Access: Physical copies Language: English  URL link: Not provided. 6 cartoons included in study report.
Notes	Illustrations drawn by study author

[\[Back to top\]](#)

Population	303 participants recruited in rural towns of Western Cape and Northern Cape provinces of South Africa. (110 in fotonovela group, 107 in traditional brochure group, 86 in control group)
Intervention	Participants were given the study materials and asked to take their time to read them. They then handed the study materials back and answered questionnaires. a) Fotonovela called "Spyt kom te laat" [Regret comes later] narrating the story of an upstanding citizen not using methamphetamine (tik) which is also the best friend of a tik user
Comparison(s)	b) Traditional brochure on methamphetamine with similar contents c) No message, questionnaire-only
Outcome(s)	Measured at baseline and immediately after reading the study materials. Knowledge related to tik (measured with 7 true/false questions, score range 0 to 7, higher scores means better knowledge) a) Mean knowledge score: 5.83, SD = 1.20 b) Mean knowledge score: 5.81, SD = 1.07 c) Mean knowledge score: 5.59, SD = 0.92 Attitude towards tik (=how important NOT using tik is, measured with 5 point scale, higher scores means more important) a) Mean attitude score: 4.27, SD = 1.29 b) Mean attitude score: 4.03, SD = 1.52 c) Mean attitude score: 4.34, SD = 1.08 Intention NOT to use tik (measured with 5 point scale, higher scores means stronger intention NOT to use tik) a) Mean intention score: 4.28, SD = 1.27 b) Mean intention score: 4.11, SD = 1.39 c) Mean intention score: 4.17, SD = 1.37 Attitude towards speaking with family member involved with tik about their drug habit (=how important speaking with family member is, measured with 5 point scale, higher scores means more important) a) Mean attitude score: 3.92, SD = 1.31 b) Mean attitude score: 3.98, SD = 1.16 c) Mean attitude score: 4.21, SD = 1.05 Intention to speak with family member involved with tik about their drug habit (measured with 5 point scale, higher scores means stronger intention to speak) a) Mean intention score: 4.24, SD = 0.76 b) Mean intention score: 3.75, SD = 1.26 c) Mean intention score: 3.99, SD = 1.16 Health message preference (=which document the participants prefer once shown all of them) Preferred fotonovela: 120 (60.6%) Preferred traditional brochure: 62 (31.3%) Neutral: 16 (8.1%)
Funding	Faculty of Economic and Management Sciences at Stellenbosch University
Comic details	Length: 24 pages Access: Physical copies Language: Dutch and Afrikaans with English words URL link: Not provided. Fotonovela included in thesis (pages 2 and 3 can be found on thesis page 100)
Notes	This thesis also includes a summary of the literature on fotonovelas and full details of the development of this fotonovela The study author wrote the fotonovela script and helped produce/create it



[\[Back to top\]](#)

Population	120 children age 6-12 visiting outpatient clinics who required blood withdrawals. (Germany ) (60 participants in picture book group, 60 in control group)
Intervention	Before the medical procedure children were either given a picture book or waited. a) Picture book depicting the blood withdrawal procedure which could be used for 4 minutes 30 seconds
Comparison(s)	b) Control group waiting for 4 minutes without distractions
Outcome(s)	Measured immediately before the intervention, after the intervention and after or during blood withdrawal. Primary: Child pain expectation and pain experienced (measured with FPS-R scale, score range 0 to 10, higher scores mean more pain) a) Pain expected at baseline (mean score): 3.4, SD = 2.9 (95% CI, 2.7 to 4.2) Pain expected before blood withdrawal (mean score): 1.9, SD = 2.1 (95% CI, 1.3 to 2.4) Pain experienced during blood withdrawal (mean score): 2.1, SD = 2.8 (95% CI, 1.4 to 2.8) b) Pain expected at baseline (mean score): 3.3, SD = 2.6 (95% CI, 2.6 to 4.0) Pain expected before blood withdrawal (mean score): 3.3, SD = 2.5 (95% CI, 2.7 to 3.9) Pain experienced during blood withdrawal (mean score): 2.6, SD = 2.7 (95% CI, 1.9 to 3.3) Secondary: Child pain behavior (measured with FLACC scale, score range 0 to 10, higher scores mean more pain) a) Pain behavior during blood withdrawal (mean score): 2.3, SD = 2.9 (95% CI, 1.6 to 3.1) b) Pain behavior during blood withdrawal (mean score): 2.1, SD = 2.6 (95% CI, 1.4 to 2.7)
Funding	CSL Behring
Comic details	Length: Not reported Access: Physical copies Language: German  URL link: Not provided. No picture book samples in study report.
Notes	



[\[Back to top\]](#)

Population	291 students from Cibinong and Bojong Gede Bogor (Indonesia). (60 in group A, 57 in group B, 60 in group C, 57 in group D and 57 in control group)
Intervention	Methods unclear (?) a) Manga with "positive" information on how to prevent dengue b) Manga with "negative" information on the risks associated with dengue
Comparison(s)	c) Infographic with "positive" information on how to prevent dengue d) Infographic with "negative" information on the risks associated with dengue e) Control group without visual media (no manga, no infographic)
Outcome(s)	Measured before and immediately after the intervention. Information comprehension (?) a) Pre-test mean score: 18.47 Post-test mean score: 26.67 b) Pre-test mean score: 18.82 Post-test mean score: 27.33 c) Pre-test mean score: 20.60 Post-test mean score: 28.70 d) Pre-test mean score: 17.16 Post-test mean score: 27.61 e) Pre-test mean score: 19.30 Post-test mean score: 19.47 Risk perception (?) a) Pre-test mean score: 28.14 Post-test mean score: 33.82 b) Pre-test mean score: 29.18 Post-test mean score: 33.19 c) Pre-test mean score: 28.74 Post-test mean score: 32.52 d) Pre-test mean score: 28.45 Post-test mean score: 30.67 e) Pre-test mean score: 28.14 Post-test mean score: 29.33 Prevention attitude towards dengue (?) a) Pre-test mean score: 30.88 Post-test mean score: 41.90 b) Pre-test mean score: 33.70 Post-test mean score: 38.32 c) Pre-test mean score: 33.23 Post-test mean score: 39.42 d) Pre-test mean score: 32.93 Post-test mean score: 38.84 e) Pre-test mean score: 29.98 Post-test mean score: 30.07
Funding	Not reported (?)
Comic details	Length: Not reported (?) Access: Physical copies (?) Language: Unclear (?) URL link: Not provided. No samples in study report.
Notes	Data extracted using Google Scholar translator (which wasn't optimal), may therefore contain inaccuracies



[\[Back to top\]](#)

Population	139 senior undergraduate business students enrolled in strategic management course (US  .
Intervention	Participants were given 10 minutes to read their study materials. a) Excerpt from graphic novel on the basics of reinforcement theory
Comparison(s)	b) Excerpt from traditional textbook on the same theme, with similar textual contents
Outcome(s)	Measured immediately after reading the study materials. Recall and transfer, “knowledge” (=if participants can remember and apply what they learned, measured with 6 questions, score range 0 to 22, higher scores means better recall/transfer) “no significant relationship was found between textbook format and recall and transfer ability” Verbatim recognition (=if participants could identify sentences directly quoted from the materials they read, measured with 5 pairs of sentences, score range 0 to 5, higher scores means better recognition) “students using the graphic novel textbook performed better on verbatim recognition of passages than those using a traditional textbook”
Funding	None received
Comic details	Length: Excerpt from 200 pages graphic novel Access: Physical copies Language: English  URL link: None provided. Some graphic novel sample pages included in study report.
Notes	Outcome measures aren’t exactly the same for intervention and control group Couldn’t identify mean scores of control and intervention groups from study report nor how many participants were in each group Only study 2 is relevant to this rapid review. The study authors report no conflicts of interest but the graphic novel used in the study was made by the principal investigator.

[\[Back to top\]](#)



Population	237 young adults from youth training centers in Nottingham (UK ). (173 in intervention group, 164 in control group)
Intervention	The comic was provided to participants in the intervention group. a) Comic called "Streetwise UK" providing information on HIV and AIDS accompanied with a facilitator's guide which encourages group discussions
Comparison(s)	b) Control group without comic
Outcome(s)	<p>Measured with self-completed questionnaires at pre-test and 2 weeks after the intervention.</p> <p>Knowledge on HIV/AIDS (measured with 33 true/false questions)</p> <p>a) Correct answers at pre-test: 23.89, SD = 5.22 Correct answers at post-test: 27.40, SD = 5.11</p> <p>b) Correct answers at pre-test: 24.76, SD = 4.43 Correct answers at post-test: 25.53, SD = 4.58</p> <p>Attitude towards people with HIV/AIDS (?)</p> <p>"No statistically significant differences were observed in attitudes between groups at pre- or post-testing". Only post-test results are shown.</p> <p>a) Believe people with HIV/AIDS should be quarantined: 30 (25%) Believe people with HIV/AIDS only have themselves to blame: 39 (33%) Do not feel sorry for people with HIV/AIDS as it is their fault: 53 (44%)</p> <p>b) Believe people with HIV/AIDS should be quarantined: 24 (21%) Believe people with HIV/AIDS only have themselves to blame: 30 (27%) Do not feel sorry for people with HIV/AIDS as it is their fault: 46 (40%)</p> <p>Behavioral intentions (?)</p> <p>a) Intend to use a condom in next sexual intercourse at pre-test: 82 (77%) Intend to use a condom in next sexual intercourse at post-test: 85 (77%)</p> <p>b) Intend to use a condom in next sexual intercourse at pre-test: 97 (87%) Intend to use a condom in next sexual intercourse at post-test: 93 (89%)</p> <p>Sexual behavior (?)</p> <p>a) Sexually active in past year, pre-test: 78 (65%) Sexually active in past year, post-test: 83 (69%) 0 sexual partner(s) at post-test: 37 (31%) 1 sexual partner(s) at post-test: 49 (41%) 2+ sexual partner(s) at post-test: 34 (28%) Used condom during last sexual intercourse, pre-test: 51 (59%) Used condom during last sexual intercourse, post-test: 50 (58%) Talked about HIV with partner before sexual intercourse, post-test: 40 (42%)</p> <p>b) Sexually active in past year, pre-test: 74 (69%) Sexually active in past year, post-test: 78 (68%) 0 sexual partner(s) at post-test: 37 (32%) 1 sexual partner(s) at post-test: 48 (42%) 2+ sexual partner(s) at post-test: 30 (26%) Used condom during last sexual intercourse, pre-test: 49 (64%) Used condom during last sexual intercourse, post-test: 55 (70%) Talked about HIV with partner before sexual intercourse, post-test: 30 (36%)</p>
Funding	Nottingham Health Authority
Comic details	<p>Length: Not reported</p> <p>Access: Physical copies</p> <p>Language: English </p> <p>URL link: None provided. No comic samples in study report</p>
Notes	Cluster-RCT

[\[Back to top\]](#)

Population	107 Adult students from a US  university. (13 or 14 students in each group)
Intervention	Students were given the study materials to read and then had to give them back and complete a questionnaire. a) Simple text (250 words) with comic strip b) Complex text (300 words) with comic strip
Comparison(s)	c) Simple text included in the comic strip only d) Complex text included in the comic strip only
Outcome(s)	Measured immediately after reading the study materials. Recall among “high-level” participants, “knowledge” (subjective assessments of written recall texts) a) Correct answers: 57% c) Correct answers: 62% b) Correct answers: 35% d) Correct answers: 38% Recall among “low-level” participants (subjective assessments of written recall texts) a) Correct answers: 42% c) Correct answers: 38% b) Correct answers: 37% d) Correct answers: 27%
Funding	Grant from University of Arizona
Comic details	Length: Not reported Access: Physical copies Language: English  URL link: None provided. Comic strip included in study report.
Notes	Results extracted from graphic, may therefore be inaccurate

[\[Back to top\]](#)

Mengoni, 2016


Population	40 Adults with a confirmed diagnosis of a learning disability and epilepsy recruited from 7 epilepsy clinics in the UK 
Intervention	a) Participants met the researcher, were introduced and received the book "Beyond Words: Getting on with epilepsy" which they could read at their own pace + phone call 2 weeks later to discuss issues with the booklet
Comparison(s)	b) Participants received routine information about epilepsy
Outcome(s)	Measured at baseline, 4 weeks after receiving the book, 12 weeks after receiving the book and 20 weeks after receiving the book. Feasibility study, outcomes were about feasibility and are therefore not reported here If you think they should be, please send a message to the authors of COLLECCTORS.
Funding	National Institute for Health Research (NIHR)
Comic details	Length: Not reported Access: Physical copies Language(s): English  URL link: No samples in study report. http://booksbeyondwords.co.uk/about/
Notes Protocol	Registry entry: ISRCTN80067039 Protocol: 10.1186/1745-6215-15-455

[\[Back to top\]](#)




Population	326 cancer survivors going to oncology care outpatient clinics in Seoul, (South Korea).
Intervention	a) Photo-novel meant to increase knowledge about cancer screening depicting the story of a breast cancer survivor getting routine cancer screening tests
Comparison(s)	b) Educational material of "almost the same design, format and graphics" as the photo-novel but with a story on health supplements for people with cancer
Outcome(s)	<p>Measured before reading the study materials, two weeks after receiving the study materials and a year after the initial contact.</p> <p>Primary: Completion of (breast cancer, stomach cancer, colorectal cancer, cervical cancer) screening within past 2 years</p> <p>a) Baseline completion of all appropriate screening: 64 participants out of 164 (39.00%) a) At 1 year completion of all appropriate screening: 67 participants out of 142 (47.2%) b) Baseline completion of all appropriate screening: 59 participants out of 162 (36.4%) b) At 1 year completion of all appropriate screening: 68 participants out of 144 (47.2%)</p> <p>a) Baseline completion of gastric cancer screening: 80 participants (60.2%) a) At 1 year completion of gastric cancer screening: 77 participants (67.5%) b) Baseline completion of gastric cancer screening: 87 participants (65.9%) b) At 1 year completion of gastric cancer screening: 80 participants (67.2%)</p> <p>a) Baseline completion of breast cancer screening: 46 participants (72.0%) a) At 1 year completion of breast cancer screening: 32 participants (72.7%) b) Baseline completion of breast cancer screening: 32 participants (54.2%) b) At 1 year completion of breast cancer screening: 28 participants (56%)</p> <p>a) Baseline completion of colon cancer screening: 35 participants (33.7%) a) At 1 year completion of colon cancer screening: 42 participants (47.2%) b) Baseline completion of colon cancer screening: 37 participants (36.3%) b) At 1 year completion of colon cancer screening: 45 participants (49.5%)</p> <p>a) Baseline completion of cervical cancer screening: 58 participants (64.1%) a) At 1 year completion of cervical cancer screening: 52 participants (66.7%) b) Baseline completion of cervical cancer screening: 68 participants (66.7%) b) At 1 year completion of cervical cancer screening: 60 participants (66.7%)</p> <p>Secondary: Knowledge regarding secondary cancer screening (5 true/false questions, score range 0 to 5, higher scores means better knowledge)</p> <p>a) Baseline mean score: 0.75, SD = 0.19 a) 2 weeks mean score: 0.81, SD = 0.18 b) Baseline mean score: 0.74, SD = 0.22 b) 2 weeks mean score: 0.75, SD = 0.22</p> <p>Secondary: Attitudes towards secondary cancer screening (6 questions, 4-point scale, score range 0 to 18, higher scores means stronger intentions to get screened or more positive attitude towards)</p> <p>a) Baseline mean score: 2.68, SD = 0.43 a) 2 weeks mean score: 2.64, SD = 0.38 b) Baseline mean score: 2.67, SD = 0.40 b) 2 weeks mean score: 2.57, SD = 0.46</p> <p>Secondary: Exposure to the intervention at 2 weeks (=if participants looked at the study materials)</p> <p>a) "Not looked at at all": 19 out of 134 (14.2%) b) "Not looked at at all": 21 out of 127 (16.5%)</p> <p>a) "Browsed quickly": 3 out of 134 (2.2%) b) "Browsed quickly": 2 out of 127 (1.6%)</p> <p>a) "Read it through": 52 out of 134 (38.8%) b) "Read it through": 48 out of 127 (37.8%)</p> <p>a) "Read it carefully in detail": 60 out of 134 (44.7%) b) "Read it carefully in detail": 56 out of 127 (44.1%)</p>
Funding	National Cancer Center

Comic details	Length: 21 pages Access: Printed physical copies Language(s): Korean URL link: Not provided but full photo-novel can be found in the protocol study appendix.
Notes Protocol	“Per-protocol analysis limited to patients who had read the material through or carefully generated similar results (data not shown).” Registry entry: NCT00948337

[\[Back to top\]](#)

Population	330 French speaking Canadian students age 9 to 12 living near Montréal (Canada). The students were then separated into 3 groups (excellent readers, average readers or poor readers) of 110 students.
Intervention	a) 3 different comics (= illustrated)
Comparison(s)	b) Identical texts extracted from the 3 comics (=not illustrated)
Outcome(s)	<p>Measured as the student was reading the study materials.</p> <p>Number of identical answers (=if the students wrote the right words in spaces left blank; every 5th word was removed and replaced with a blank space, score range 0 to 32, higher scores means more correct answers)</p> <p>Philémon comic</p> <ul style="list-style-type: none"> a) Mean number of correct words (overall): 9.52, SD = 4.33 b) Mean number of correct words (overall): 8.61, SD = 3.53 a) Mean number of correct words (poor readers): 6.53, SD = 3.05 b) Mean number of correct words (poor readers): 6.24, SD = 2.89 a) Mean number of correct words (average readers): 9.13, SD = 3.00 b) Mean number of correct words (average readers): 8.49, SD = 2.41 a) Mean number of correct words (excellent readers): 13.16, SD = 3.75 b) Mean number of correct words (excellent readers): 11.09, SD = 3.42 <p>Le carré arabe comic</p> <ul style="list-style-type: none"> a) Mean number of correct words (overall): 16.07, SD = 6.00 b) Mean number of correct words (overall): 14.16, SD = 5.41 a) Mean number of correct words (poor readers): 11.16, SD = 5.21 b) Mean number of correct words (poor readers): 10.78, SD = 4.16 a) Mean number of correct words (average readers): 16.76, SD = 4.86 b) Mean number of correct words (average readers): 13.69, SD = 4.61 a) Mean number of correct words (excellent readers): 20.27, SD = 3.95 b) Mean number of correct words (excellent readers): 18.02, SD = 4.83 <p>Tintin comic</p> <ul style="list-style-type: none"> a) Mean number of correct words (overall): 10.85, SD = 5.84 b) Mean number of correct words (overall): 10.28, SD = 4.84 a) Mean number of correct words (poor readers): 6.35, SD = 4.27 b) Mean number of correct words (poor readers): 6.75, SD = 3.48 a) Mean number of correct words (average readers): 10.85, SD = 4.52 b) Mean number of correct words (average readers): 10.00, SD = 4.32 a) Mean number of correct words (excellent readers): 15.35, SD = 4.87 b) Mean number of correct words (excellent readers): 14.11, SD = 3.56
Funding	Not reported
Comic details	<p>Length: Philémon (3 pages), Le carré arabe (8 pages) and Tintin (2 pages)</p> <p>Access: Printed photocopies</p> <p>Language(s): French </p> <p>URL link: Not provided. These comics can be found in French libraries in 2019.</p>
Notes Protocol	X



[\[Back to top\]](#)

Population	98 US  restaurants employing over 220 food handlers.
Intervention	a) Comic book designed to target knowledge gaps in restaurant food handlers relevant to the prevention of foodborne illness outbreaks. With “test yourself” questions.
Comparison(s)	b) Brochure with similar contents as the comic book. With “test yourself” questions. c) No intervention
Outcome(s)	<p>Measured before being sent the study materials and 1 month afterwards.</p> <p>Knowledge on food safety (40 questions on the baseline tests, 42 questions on the 1-month test, score range 0 to 40 or 0 to 42, higher scores means better knowledge)</p> <p>a) Baseline mean score: 29 b) Baseline mean score: 30 c) Baseline mean score: 30</p> <p>a) 1-month mean score: 35 b) 1-month mean score: 34 c) 1-month mean score: 31</p> <p>(% correct answers to each individual question available in study report)</p>
Funding	US National Institute of Food and Agriculture
Comic details	<p>Length: 26 pages</p> <p>Access: Physical copies</p> <p>Language(s): English  and Spanish </p> <p>URL link: Not provided. Two sample pages included in the study report.</p>
Notes Protocol	<p>Cluster-RCT</p> <p>“A random restaurant effect was used to account for the potential correlations between food handlers from the same restaurant.”</p>



[\[Back to top\]](#)

Population	167 students enrolled at Anadolu University School of Foreign Languages (Turkey). Participants were then separated into 5 different subgroups depending on a placement test. Only 2 subgroups participated in the study. Mean age was 19.5 years.
Intervention	a) Simple text (250 words) with comic strip b) Complex text (300 words) with comic strip
Comparison(s)	c) Simple text included in the comic strip only d) Complex text included in the comic strip only
Outcome(s)	Measured immediately after reading the study materials. Text recall (=how much participants correctly remembered the texts, score range 0% to 100%, higher scores means better recall) a) Upper-intermediate [good readers] mean score: 63% c) Upper-intermediate [good readers] mean score: 57% b) Upper-intermediate [good readers] mean score: 62% d) Upper-intermediate [good readers] mean score: 44% a) Lower-intermediate [poor readers] mean score: 45% c) Lower-intermediate [poor readers] mean score: 39% b) Lower-intermediate [poor readers] mean score: 42% d) Lower-intermediate [poor readers] mean score: 27%
Funding	Not reported
Comic details	Length: Not reported Access: Physical copies Language(s): English URL link: None provided. Comic strip included in (Liu, 2004)
Notes Protocol	Replication of (Liu, 2004). Different paper colors were used for the different groups.




[\[Back to top\]](#)

Population	60 people entering the US  University of North Carolina, its library or its campus. Most participants were 18-27 years old.
Intervention	a) Comic illustrating summarized terms of service agreement (ToS)
Comparison(s)	b) Text summary of terms of service agreement with bold titles and a couple pictures c) Text summary of terms of service agreement ("simple")
Outcome(s)	<p>Measured immediately after registering at the second website.</p> <p>Exposure time (= how long participants looked at the ToS page)</p> <p>a) Mean time: 37.31 seconds, SD = 23.78 b) Mean time: 25.28 seconds, SD = 17.78 c) Mean time: 21.62 seconds, SD = 15.82</p> <p>Attention (= number of areas where the gaze focused for over 100ms)</p> <p>a) Mean number of fixations: 30.42, SD = 17.88 b) Mean number of fixations: 19.35, SD = 14.74 c) Mean number of fixations: 17.56, SD = 14.43</p> <p>Comprehension (measured with 4 questions per website, score range 0 to 4, higher scores means better comprehension)</p> <p>a) Mean score: 2.23, SD = 1.26 b) Mean score: 2.05, SD = 1.05 c) Mean score: 2.14, SD = 1.02</p>
Funding	National Science Foundation
Comic details	<p>Length: Comic could be fully seen without scrolling</p> <p>Access: Online webpage</p> <p>Language(s): English </p> <p>URL link: Comic included in the study report.</p>
Notes Protocol	Participants went through 2 different study conditions



[\[Back to top\]](#)



Population	268 women of low socio-economic status diagnosed with early stage breast cancer in the US  . Most of the participants were between 45-74 years old.
Intervention	a) Comic decision aid tool based on the same information as condition b) explaining the pros, cons and details of lumpectomy versus mastectomy
Comparison(s)	b) Traditional decision aid tool (Option Grid) c) Pictorial decision aid tool
Outcome(s)	<p>Measured immediately after viewing the study materials.</p> <p>Tool rating (how good the tool is deemed to be, score range 1 to 5, higher scores means better tool)</p> <p>a) 3.7, SE = 0.14 b) 4.1, SE = 0.13 c) 4.2, SE = 0.13</p> <p>Understood all the information provided (yes/no, %yes)</p> <p>a) 81% b) 79% c) 82.2%</p> <p>Found the tool helpful (yes/no, % yes)</p> <p>a) "most respondents found the tool helpful" b) 57% c) 75.8%</p> <p>Liked the tool layout and design (yes/no, %yes)</p> <p>a) 52.8% b) >69% c) >65%</p> <p>Preferred decision aid (which decision aid participants preferred)</p> <p>a) 21% b) 23% c) 34%</p>
Funding	No funding
Comic details	<p>Length: 1-3 pages</p> <p>Access: Physical copies</p> <p>Language(s): English </p> <p>URL link: Comic included in study report.</p>
Notes Protocol	

[\[Back to top\]](#)

Population	160 latino women coming from the Lower Yakima Valley of Washington (US  State.
Intervention	a) A fotonovela on HPV testing/Pap tests. Trained study assistants could be asked to read it aloud.
Comparison(s)	b) A radionovela with the same contents as the fotonovela c) A 3-min video based on the fotonovela d) Attention control group receiving a fact sheet on the need for the flu vaccine. Trained study assistants could be asked to read it aloud
Outcome(s)	Measured before and immediately after receiving the study intervention. Knowledge of cervical cancer (measured with ? true/false questions) a) Mean % correct answers at baseline: ? Mean % correct answers post-intervention: 97.1%, SD = 1.9 d) Mean % correct answers at baseline: ? Mean % correct answers post-intervention: 85.5%, SD = 4.2 Knowledge of cervical cancer screening (measured with ? true/false questions) a) Mean % correct answers at baseline: ? Mean % correct answers post-intervention: 36.4%, SD = 4.3 d) Mean % correct answers at baseline: ? Mean % correct answers post-intervention: 13.7%, SD = 3.3 Knowledge of HPV risk (measured with ? true/false questions) a) Mean % correct answers at baseline: ? Mean % correct answers post-intervention: 81.7%, SD = 2.6 d) Mean % correct answers at baseline: ? Mean % correct answers post-intervention: 56.5%, SD = 2.4 Intention to receive pap test (measured with question “Do you intend to have a pap test?”) a) Mean % correct answers at baseline: ? Mean % YES post-intervention: 92.5%, SD = 4.0 d) Mean % correct answers at baseline: ? Mean % YES post-intervention: 98.5%, SD = 1.7
Funding	National Cancer Institute Institute of Translational Health Science National Center for Research Resources National Institute of Health
Comic details	Length: Not described Access: Physical copies or online (digital story) Language(s): Spanish  and English  URL link: Not provided
Notes Protocol	No protocol mentioned

[\[Back to top\]](#)

Population	320 American adults recruited through the Amazon Mechanical Turk website. (US )
Intervention	a) Text on depression
Comparison(s)	b) Text on depression with pictures of students c) Text on depression with cartoon illustrations, emotions, thought bubbles based on the pictures taken for group b) d) Text on bipolar disorder e) Text on bipolar disorder with pictures f) Text on bipolar disorder with cartoons illustrations, emotions, thought bubbles based on the pictures taken for group e)
Outcome(s)	<p>Measured immediately after reading the study materials</p> <p>Message credibility (=if participants found the stories accurate, authentic and reliable, measured by rating these three aspects on 1 to 7 scale, score range 3 to 21, higher scores mean more credible)</p> a) Mean score post-intervention: 17.34, SD = 2.91 b) Mean score post-intervention: 18.63, SD = 2.56 c) Mean score post-intervention: 18.56, SD = 2.15 d) Mean score post-intervention: 18.42, SD = 2.88 e) Mean score post-intervention: 18.33, SD = 2.24 f) Mean score post-intervention: 18.10, SD = 2.36 <p>Identification (=if participants felt like they could feel the story as if they were the characters from the story, measured by rating five statements on 1 to 7 scale, score range 5 to 35, higher scores means stronger identification)</p> a) Mean score post-intervention: 24.02, SD = 7.10 b) Mean score post-intervention: 27.58, SD = 5.06 c) Mean score post-intervention: 26.27, SD = 5.31 d) Mean score post-intervention: 25.56, SD = 4.54 e) Mean score post-intervention: 24.60, SD = 5.73 f) Mean score post-intervention: 25.12, SD = 4.84 <p>Prejudicial feelings, Pity, Connectedness, Perceived severity, Perceived response efficacy, Personal responsibility beliefs, Social distance, Coercion-segregation, Mental-health policy support Not reported here for brevity</p> <p>Dissemination likelihood (=how likely participants think they would share the study materials, unclear measurement scale)</p> a) Mean score post-intervention: 9.07, SD = 4.15 b) Mean score post-intervention: 11.25, SD = 3.46 c) Mean score post-intervention: 10.29, SD = 4.14 d) Mean score post-intervention: 10.24, SD = 3.52 e) Mean score post-intervention: 10.19, SD = 3.66 f) Mean score post-intervention: 9.86, SD = 4.08 <p>Donation (=how likely participants think they would donate their survey earnings to fund mental health services, unclear measurement scale) "there was no significant difference between the text vs. photo groups or the text vs. cartoon groups with regard to donation behavior. However, there was a marginally significant difference between the cartoon and photo conditions, such that those in the cartoon condition were more likely to donate than those in the photo condition."</p> <p>Story recall (measured with 4 multiple choices questions) "there was no significant difference among the groups with regard to recall question"</p>
Funding	Paul Synor Fellowship Program
Comic details	Length: 22 pictures Access: Online Language(s): English  URL link: Not provided. No samples in thesis report.
Notes Protocol	Not mentioned.



Population	2000 adult residents of the state of Iowa (US ) invited to participate. 226 participants.
Intervention	a) Cartoon + text on wind energy shown online
Comparison(s)	b) Photos + text on wind energy shown online
Outcome(s)	<p>Measured immediately after reading the study materials.</p> <p>Knowledge about wind energy (measured with 6 true/false questions/I don't know, score range -6 to 6, higher scores means better knowledge)</p> <p>a) Mean scores post-intervention: 3.04, SD = 2.20</p> <p>b) Mean scores post-intervention: 2.88, SD = 2.24</p> <p>(scores for individual questions available in study report)</p> <p>Attitudes toward wind energy (measured with 10 statements which participants could rate on 1 to 5 scale, higher scores means more positive attitude)</p> <p>a) Mean scores post-intervention: 0.79, SD = 0.53</p> <p>b) Mean scores post-intervention: 0.69, SD = 0.55</p> <p>(scores for individual questions available in study report)</p> <p>Behavioral intentions toward wind energy (measured with 7 statements which participants could rate on 1 to 5 scale, higher scores means stronger intentions to support wind energy)</p> <p>a) Mean scores post-intervention: 3.57, SD = 0.54</p> <p>b) Mean scores post-intervention: 3.39, SD = 0.60</p> <p>(scores for individual questions available in study report)</p> <p>Evaluation of the brochure (=if the brochure was deemed credible, interesting, etc., measured with 5 items which participants could rate on 1 to 5 scale, higher scores means more positive evaluation)</p> <p>a) Mean scores post-intervention: 3.57, SD = 0.54</p> <p>b) Mean scores post-intervention: 3.52, SD = 0.47</p> <p>(scores for individual questions available in study report)</p>
Funding	Not reported
Comic details	<p>Length: Not reported</p> <p>Access: Online</p> <p>Language(s): English </p> <p>URL link: https://lib.dr.iastate.edu/cgi/viewcontent.cgi?article=4269&context=etd "Wind Power – Myths vs. Facts". Comic said to be in appendix, but no appendix.</p>
Notes	No protocol mentioned
Protocol	(Lin, 2013) is the original thesis from which (Rodriguez, 2016) emerged. Both report the same study.

[\[Back to top\]](#)


Population	350 adult citizens from central Taiwan were invited to participate. 303 returned pre-test questionnaires. 291 participants randomized. 194 returned post-test questionnaires.
Intervention	a) Comic book on nanotechnology mailed to participants
Comparison(s)	b) "traditional" text booklet with the same focus and content as the comic book
Outcome(s)	<p>Measured some time before and two weeks after receiving the study materials.</p> <p>Nanotechnology knowledge (measured with 26 multiple choice questions, score range ? to ?, higher scores means better knowledge)</p> <p>a) Pretest mean score: 6.70, SD = 4.89 Post-test mean score: 15.49, SD = 4.68</p> <p>b) Pretest mean score: 7.15, SD = 5.34 Post-test mean score: 15.95, SD = 5.66</p> <p>Attitude towards nanotechnology (measured with 4-point Likert scale, score range ? to ?, higher scores means more positive attitude)</p> <p>a) Pretest mean score: 53.49, SD = 5.08 Post-test mean score: 54.68, SD = 4.46</p> <p>b) Pretest mean score: 53.50, SD = 4.49 Post-test mean score: 54.79, SD = 4.67</p> <p>Emotional perceptions of learning science (=if participants felt they enjoyed and were interested by science, measured with 4-point Likert scale, score range ? to ?, higher scores means more enjoyment/interest)</p> <p>a) Pretest mean score: 33.56, SD = 5.01 Post-test mean score: 33.74, SD = 3.95</p> <p>b) Pretest mean score: 34.19, SD = 5.64 Post-test mean score: 33.77, SD = 1.96</p>
Funding	National Research Council (Taiwan)
Comic details	<p>Length: 109 pages</p> <p>Access: Physical copies</p> <p>Language(s): Not reported, likely taiwanese</p> <p>URL link: "Knowing Nanotechnology via Comics" Comic sample included as appendix.</p>
Notes Protocol	No protocol mentioned


[\[Back to top\]](#)

Population	720 10 th grade students aged 15-16 coming from 8 schools in central Taiwan.
Intervention	a) Comic book on nanotechnology handed to participants by the first author
Comparison(s)	b) "traditional" text booklet with the same focus and content as the comic book
Outcome(s)	<p>Measured some time before receiving the study materials and 1 week afterwards.</p> <p>Nanotechnology knowledge (measured with 26 multiple choice questions, score range ? to ?, higher scores means better knowledge)</p> <p>a) "High-achiever" pretest mean score: 9.45, SD = 3.63 "High-achiever" post-test mean score: 13.62, SD = 4.65</p> <p>"Medium-achiever" pretest mean score: 9.26, SD = 3.67 "Medium-achiever" post-test mean score: 14.18, SD = 4.01</p> <p>"Low-achiever" pretest mean score: 5.73, SD = 3.26 "Low-achiever" post-test mean score: 8.07, SD = 3.91</p> <p>b) "High-achiever" pretest mean score: 9.09, SD = 4.16 "High-achiever" post-test mean score: 14.95, SD = 4.62</p> <p>"Medium-achiever" pretest mean score: 10.15, SD = 3.91 "Medium-achiever" post-test mean score: 13.19, SD = 3.95</p> <p>"Low-achiever" pretest mean score: 5.18, SD = 3.26 "Low-achiever" post-test mean score: 7.67, SD = 4.64</p> <p>Emotional perceptions of learning science (=if participants felt they enjoyed and were interested by science, measured with 4-point Likert scale, score range ? to ?, higher scores means more enjoyment/interest)</p> <p>a) "High-achiever" pretest mean score: 31.69, SD = 5.73 "High-achiever" post-test mean score: 31.85, SD = 5.17</p> <p>"Medium-achiever" pretest mean score: 32.59, SD = 5.87 "Medium-achiever" post-test mean score: 33.13, SD = 5.50</p> <p>"Low-achiever" pretest mean score: 31.31, SD = 6.23 "Low-achiever" post-test mean score: 30.79, SD = 5.98</p> <p>b) "High-achiever" pretest mean score: 30.80, SD = 6.11 "High-achiever" post-test mean score: 30.57, SD = 5.46</p> <p>"Medium-achiever" pretest mean score: 31.19, SD = 6.83 "Medium-achiever" post-test mean score: 30.95, SD = 6.53</p> <p>"Low-achiever" pretest mean score: 30.69, SD = 6.83 "Low-achiever" post-test mean score: 30.37, SD = 5.64</p> <p>Reasons for interest or disinterest, Learning difficulties, Ideas regarding strengths and weaknesses Not reported here for brevity</p> <p>Choice of medium (=which medium participants prefer)</p> <p>"High-achievers" preferring comics: 84% "Medium-achiever" preferring comics: 87.4% "Low-achiever" preferring comics: 90.5%</p>
Funding	Ministry of Science and Technology
Comic details	Length: 109 pages Access: Physical copies Language(s): Taiwanese URL link: "Knowing Nanotechnology via Comics" Comic sample included as appendix.
Notes Protocol	Same comic as in (Lin, 2015). Attitude towards nanotechnology measured in (Lin, 2015) but not in this replication. Cluster RCT

Population	330 black individuals without colorectal cancer symptoms living in Tampa Bay (US  - Florida).
Intervention	a) Photonovella on colorectal cancer screening + annual fecal test kit + written and verbal instructions
Comparison(s)	b) "Standard" CDC brochure on colorectal cancer screening + annual fecal test kit + written and verbal instructions
Outcome(s)	<p>Measured at baseline and up to 180 days after being given the study materials depending on the outcome.</p> <p>Colorectal cancer screening uptake (measured by receipt of completed fecal tests)</p> <p>a) Fecal tests kits returned within 6 months: 81.90%</p> <p>b) Fecal tests kits returned within 6 months: 90.30%</p> <p>Preventive health model (=if participants thought screening is helpful, if they feel at risk of cancer and able to go and get screened, measured with PHM questionnaire, score range ? to ?)</p> <p>Not reported for brevity. Only measured at baseline.</p> <p>Health literacy (=if participants knew how to pronounce health terms, measured with 8-items scale, score range 0 to 8, higher scores means better literacy)</p> <p>a) Mean score at baseline: 4.8, SD = 2.8</p> <p>b) Mean score at baseline: 5.9, SD = 2.5</p> <p>Cancer screening tests awareness and knowledge (measured with 13 questions, score range 0 to 13, higher scores means better knowledge)</p> <p>a) Mean score at baseline: 6.8, SD = 2.4</p> <p>b) Mean score at baseline: 7.1, SD = 2.0</p> <p>Cancer fatalism (=if participants think death due to cancer is inevitable, measured with 15 items scale, score range 0 to 15, higher scores means stronger belief death due to cancer is inevitable)</p> <p>a) Mean score at baseline: 3.8, SD = 3.2</p> <p>b) Mean score at baseline: 4.0, SD = 3.2</p>
Funding	American Cancer Society National Cancer Institute Biostatistics Core Survey Methods Core
Comic details	<p>Length: Not reported</p> <p>Access: Physical copies</p> <p>Language(s): English </p> <p>URL link: No samples included in study report. No links to the photonovella.</p>
Notes Protocol	<p>No study protocol mentioned</p> <p>Technically a cluster study with 2 clusters only, which some authors would therefore not consider a valid comparison due to potential differences at baseline.</p>

[\[Back to top\]](#)

Population	416 patients aged 50 to 75 years receiving care at health clinics or health centers (US  – Florida). 270 participants at 12-months follow-up (137 in a), 133 in b)
Intervention	a) Photonovella on colorectal cancer screening + annual fecal test kit + written and verbal instructions
Comparison(s)	b) “Standard” CDC brochure on colorectal cancer screening + annual fecal test kit + written and verbal instructions
Outcome(s)	<p>Measured at baseline and up to 180 days after being given the study materials depending on the outcome. Also measured at 12-months.</p> <p>Colorectal cancer screening uptake (measured by receipt of completed fecal tests)</p> <p>a) Fecal tests kits returned within 6 months: 78.10%</p> <p>b) Fecal tests kits returned within 6 months: 83.50%</p> <p>Preventive health model (measured with PHM questionnaire, score range 1 to 5, higher scores means stronger agreement with statement)</p> <p>PHM perceived salience (“Screening makes sense and benefits my health”)</p> <p>a) 12-months mean difference from baseline: +0.36, SD = 2.11</p> <p>b) 12-months mean difference from baseline: +0.22, SD = 2.26</p> <p>PHM perceived susceptibility (“I am likely to develop cancer”)</p> <p>a) 12-months mean difference from baseline: +0.06, SD = 3.44</p> <p>b) 12-months mean difference from baseline: +0.36, SD = 3.34</p> <p>PHM response efficacy (“Colorectal cancer can be detected early”)</p> <p>a) 12-months mean difference from baseline: +0.10, SD = 1.57</p> <p>b) 12-months mean difference from baseline: +0.42, SD = 1.57</p> <p>PHM cancer worry (“I worry about having a positive screening test”)</p> <p>a) 12-months mean difference from baseline: +0.08, SD = 3.13</p> <p>b) 12-months mean difference from baseline: -0.33, SD = 3.04</p> <p>PHM social influence (“I get support from family to have screening”)</p> <p>a) 12-months mean difference from baseline: +1.69, SD = 3.90</p> <p>b) 12-months mean difference from baseline: +1.23, SD = 3.91</p> <p>PHM religious beliefs (“My religious beliefs affect my health behaviors”)</p> <p>a) 12-months mean difference from baseline: +0.47, SD = 4.81</p> <p>b) 12-months mean difference from baseline: -0.02, SD = 4.74</p> <p>PHM self-efficacy (“I can use a fecal test kit”)</p> <p>a) 12-months mean difference from baseline: +0.28, SD = 3.12</p> <p>b) 12-months mean difference from baseline: +0.89, SD = 2.38</p> <p>Decisional conflict (=how difficult participants feel it is to decide to get screened, measured with 9 item scale, score range 1 to 5, higher scores means more difficult)</p> <p>a) 12-months mean difference from baseline: -0.05, SD = 5.79</p> <p>b) 12-months mean difference from baseline: +0.43, SD = 6.55</p> <p>Cancer fatalism (=how strongly participants believe cancer death is inevitable, measure with 15-items scale, score range 0 to 15; higher scores means stronger belief death is inevitable)</p> <p>a) 12-months mean difference from baseline: +0.22, SD = 2.89</p> <p>b) 12-months mean difference from baseline: +0.33, SD = 2.40</p> <p>Health literacy (=if participants knew how to pronounce health terms, measured with 8-items scale, score range 0 to 8, higher scores means better literacy)</p> <p>a) Mean score at baseline: 6.2, SD = 2.5</p> <p>b) Mean score at baseline: 6.0, SD = 2.6</p> <p>Cancer screening tests awareness and knowledge (measured with 13 questions, score range 0 to 13, higher scores means better knowledge)</p> <p>a) Mean score at baseline: 6.2, SD = 2.2 12-months mean difference from baseline: +1.34, SD = 1.74</p> <p>b) Mean score at baseline: 6.3, SD = 2.1 12-months mean difference from baseline: +1.39, SD = 1.95</p> <p>Trust in health care system (measured with 10 items to rate on 1 to 5 Likert scale, score range 10 to 50, higher scores means more trust)</p> <p>a) Mean score at baseline: 23.4, SD = 6.2 12-months mean difference from baseline: +6.48, SD = 6.07</p> <p>b) Mean score at baseline: 25.0, SD = 7.0 12-months mean difference from baseline: +5.44, SD = 6.55</p>
Funding	National Cancer Institute

	Biostatistics Core Survey Methods Core
Comic details	Length: Not reported Access: Physical copies Language(s): English  URL link: No samples included in study report. No links to the photonovella.
Notes Protocol	ClinicalTrials.gov registry entry mentioned but without links or registry number. I cannot find it. 12-months follow-up results reported in (Christy, 2017)

[\[Back to top\]](#)

Population	100 young children (4 to 6 years old) enrolled in 13 classes at 4 public kindergartens in the Erzurum province of Turkey.
Intervention	a) "Behave yourself" story read in the classroom by a research assistant. A month later a story about a boy called Onur with inappropriate behavior who wanted to find a playmate (realistic story) was also read to the children.
Comparison(s)	b) "Behave yourself" story read in the classroom by a research assistant. A month later a story about a rabbit called Bambi with inappropriate behavior who wanted to find a playmate (non-realistic story) was also read to the children.
Outcome(s)	<p>Measured after reading "Behave yourself" (pre-test), then one month later, immediately after reading the study materials (post-test) and a further week-later (follow-up).</p> <p>"Behave yourself" story comprehension and recall (measured with 13 open-ended questions; 1 point for somewhat correct answers and 2 points for correct answers; score range 0 to 19; higher scores means better comprehension, recall and reasoning)</p> <p>a) Pre-test mean score: 3.5, SD = 1.43</p> <p>b) Pre-test mean score: 3.48, SD = 1.89</p> <p>"Onur/Bambi" story comprehension and recall (measured with 11 open-ended questions; 1 point for somewhat correct answers and 2 points for correct answers; score range 0 to 20; higher scores means better comprehension, recall and reasoning)</p> <p>a) Post-test mean score: 4.8, SD = 1.97 1 week follow-up mean score: 4.3, SD = 1.9</p> <p>b) Post-test mean score: 5.1, SD = 2.11 1 week follow-up mean score: 4.22, SD = 2.17</p>
Funding	Not reported
Comic details	<p>Length: It took 10 minutes to read the stories to the children. Both stories had 400+ words and 11 illustrations.</p> <p>Access: Physical copies</p> <p>Language(s): Turkish</p> <p>URL link: Not provided. No samples in the study report.</p>
Notes Protocol	<p>Replication of (Kotaman, 2017)</p> <p>Authors created the storybook.</p>

[\[Back to top\]](#)

Population	103 young children (4 to 6 years old) enrolled in 10 classes at 3 public kindergartens in the Sanliurfa province of Turkey.
Intervention	a) A story about a boy called Onur with inappropriate behavior who wanted to find a playmate (realistic story) was read to the children by a classroom assistant.
Comparison(s)	b) A story about a rabbit called Bambi with inappropriate behavior who wanted to find a playmate (non-realistic story) was read to the children by a classroom assistant.
Outcome(s)	Measured immediately after reading the study materials (post-test) and a further week-later (follow-up). “Onur/Bambi” story comprehension and recall (measured with 9 open-ended questions; score range 0 to 15; higher scores means better comprehension, recall and reasoning) a) Post-test mean score: 7.82, SD = 2.82 1 week follow-up mean score: 7.81, SD = 2.65 b) Post-test mean score: 5.61, SD = 3.01 1 week follow-up mean score: 5.47, SD = 3.16
Funding	Not reported
Comic details	Length: It took 10 minutes to read the stories to the children. Both stories judged to be similar by teachers. Access: Physical copies Language(s): Turkish URL link: Not provided. No samples in the study report.
Notes Protocol	Later reproduced by (Kotaman, 2019) Authors created the storybook.

[\[Back to top\]](#)

Population	51 Chinese elementary school children aged 7-8 who were learning English. (Hong Kong, China)
Intervention	a) English graphic novel story focusing on food, culture, jobs and family offered to participants, which they had to read individually
Comparison(s)	b) English story with illustrations (same story as a)) c) English text (same story as a))
Outcome(s)	<p>After reading the story children were asked to retell what they recalled (= measurement immediately post-intervention) and their answers audio-recorded.</p> <p>Receptive knowledge (=vocabulary knowledge, measured with PPVT instrument, 24 items, score range 0 to 24, higher scores means better knowledge)</p> <p>a) Mean score post-intervention: 17.88, SD = 2.61 b) Mean score post-intervention: 18.53, SD = 2.40 c) Mean score post-intervention: 17.82, SD = 2.60</p> <p>Story retelling (=if their summaries were rich, organized and fluently told, measured with author-made scoring rubric, score range 1 to 36, higher scores means better at summarizing the story)</p> <p>a) Mean score post-intervention: 24.36, SD = 8.46 b) Mean score post-intervention: 17.83, SD = 8.58 c) Mean score post-intervention: 19.80, SD = 11.25</p>
Funding	General Research Fund from the Research Grants Council of Hong Kong
Comic details	<p>Length: 7-pages graphic novel. Participants had 15 minutes to read the study materials</p> <p>Access: Physical copies</p> <p>Language(s): English</p> <p>URL link: Not provided. Sample pages included in the study report.</p>
Notes Protocol	<p>The story was created by the study authors, drawn by independent artist.</p> <p>Story with illustrations could be deemed to be a graphic novel.</p>

[\[Back to top\]](#)



Population	2000 residents living within the city of Knox (Australia).
Intervention	a) Survey including an educational comic explaining how weeds can spread from gardens to bushland
Comparison(s)	b) Survey alone
Outcome(s)	<p>Participants could send the completed survey within _____ (?) months after receiving it.</p> <p>Response rate</p> <p>a) 89 responses (8.9%)</p> <p>b) 92 responses (9.2%)</p> <p>Intentions to acquire non-native plants in the future (% saying yes)</p> <p>a) 6%</p> <p>b) 6.2%</p> <p>Intentions to acquire native plants in the future (% saying yes)</p> <p>a) 39.8%</p> <p>b) 18.5%</p> <p>Intentions to acquire both native and non-native plants in the future (% saying yes)</p> <p>a) 33.7%</p> <p>b) 58%</p> <p>Views and attitudes on plants and the environment (measured with 15 closed-ended questions along with 5-point Likert scales)</p> <p>Residential gardens are important for urban areas (% saying yes)</p> <p>a) 92%</p> <p>b) 98%</p> <p>Gardeners have a responsibility to the environment (% saying yes)</p> <p>a) 88%</p> <p>b) 89%</p> <p>I would not buy a plant if it is known to be invasive (% saying yes)</p> <p>a) 82%</p> <p>b) 84%</p> <p>I think environmental weeds need to be stopped (% saying yes)</p> <p>a) 84%</p> <p>b) 83%</p> <p>I would remove a plant from my garden if I knew it was an environmental weed (% saying yes)</p> <p>a) 78%</p> <p>b) 76%</p> <p>I would put a plant that can become an environmental weed in my garden (% saying yes)</p> <p>a) 10%</p> <p>b) 7%</p> <p>I think garden plants can become environmental weeds (% saying yes)</p> <p>a) 73%</p> <p>b) 72%</p> <p>Environmental weeds are an important issue in Australia (% saying yes)</p> <p>a) 74%</p> <p>b) 75%</p> <p>Australian gardeners need to support wildlife by planting native plants (% saying yes)</p> <p>a) 71%</p> <p>b) 74%</p> <p>More information should be provided about a plant's country of origin before it is sold (% saying yes)</p> <p>a) 73%</p> <p>b) 66%</p> <p>Plants cannot cause damage to the environment (% saying yes)</p> <p>a) 20%</p> <p>b) 19%</p> <p>I check whether my garden plants are invasive (% saying yes)</p> <p>a) 55%</p> <p>b) 60%</p> <p>I think my garden and the bushland interact (% saying yes)</p> <p>a) 54%</p>

	b) 55% I should be allowed to purchase any plants I desire (% saying yes) a) 49% b) 56% My garden choices do not affect the environment (% saying yes) a) 33% b) 23%
Funding	Not reported
Comic details	Length: 3-panels Access: Physical copies Language(s): English URL link: Comic-strip included in the study report.
Notes Protocol	Comic developed by the researchers Individual results not all shown for brevity

[\[Back to top\]](#)

Population	215 online volunteers recruited using the Amazon Mechanical Turk website. (International)
Intervention	a) Single story from the graphic novel called "Psychiatric Tales: Eleven Graphic Stories About Mental Illness"
Comparison(s)	b) Single story from the graphic novel called "Psychiatric Tales: Eleven Graphic Stories About Mental Illness" shown as text-only, without illustrations
Outcome(s)	<p>Measured immediately after reading the study materials.</p> <p>Image fluency (= how easy participants felt they could imagine what happens in the story, measured with adapted Imagery Fluency scale and 7-point Likert statements; higher scores means more ease) ?</p> <p>Narrative engagement (= how much participants felt engaged by the story, measured with 12-items rated on 1 to 7 scale; higher scores means more engaged) ?</p> <p>Counterarguing (= how much participants disagreed with how mental illness was depicted, measured with 4-items rated on 1 to 7 scale; higher scores means stronger disagreement) ?</p> <p>Negative stereotypes of schizophrenia (= how much participants believed negative stereotypes against people with schizophrenia, measured with 7-items rated on 1 to 7 scale; higher scores means more negative stereotypes) ?</p>
Funding	Not reported
Comic details	<p>Length: 12 pages</p> <p>Access: Online</p> <p>Language(s): English</p> <p>URL link: Sample page included in the study report.</p> <p>ISBN: 9781608192786</p>
Notes Protocol	No protocol mentioned.



[\[Back to top\]](#)

Population	90 adults recruited from a University Campus, a local public house and by advertising on social media (UK  .
Intervention	a) Comic book called "Biological Psychology, an Illustrated Survival Guide"
Comparison(s)	b) Text-only version of the comic book c) Identical comic book as a) but with random images replacing the original images
Outcome(s)	Measured immediately after reading the study materials. Recall of factual information from the story (measured with 10 multiple choices questions, score range 0 to 10; higher scores means better recall) a) Mean score: 8.20, SD = 1.03 b) Mean score: 6.97, SD = 1.20 c) Mean score: 5.37, SD = 1.75 Attitudes towards comic books (measured with author-made scale including 40 statements, score range 37 to 185; higher scores means more positive attitude towards comic books) a) Mean score: 131.23, SD = 26.91 b) Mean score: 129.03, SD = 25.76 c) Mean score: 135.43, SD = 27.13
Funding	Not reported
Comic details	Length: Pages 177-184 (= 9 pages) Access: Physical copies Language(s): English  URL link: http://www.brainm.com/software/pubs/brain/berd/Biological%20Psychology%20-%20an%20Illustrated%20Survival%20Guide.pdf Sample pages included in the study report. ISBN: 9780470871003.
Notes Protocol	Study author is author of the comic book. Slightly contradictory statements (scale range 35 to 175 then said to be 37 to 185)



[\[Back to top\]](#)

Population	90 students aged 14-15 coming from 4 different schools (Republic of Malta).
Intervention	a) Adapted comic-strip version of book called "Vella's Storja ta' Malta"
Comparison(s)	b) Text version of "Vella's Storja ta' Malta" along with black and white lines, captions c) Text-only version of "Vella's Storja ta' Malta"
Outcome(s)	Measured immediately after reading the study materials. Story short-term recall (measured with 26 questions of various types [multiple-choice, text with blanks to fill, open-ended]; score range 0 to 26, higher scores means better recall) "most differences in scores among all three treatments were minimal." "numeric differences did give a clear enough indication that the comics treatment competed well with the more accepted media of instruction." "Recall of content of the comics treatment was very close to that of the illustrated text treatment, and both fared better than the text-only treatment." Ability to make speculations based on the text (measured with 2 open questions) ?
Funding	Not reported
Comic details	Length: 3x A4 pages with 36 panels Access: Physical copies Language(s): Maltese URL link: Comic included in study report. http://imagnettext.english.ufl.edu/archives/v3_3/mallia/
Notes Protocol	Study author made the comic (or a family member). Mean scores for each group and standard deviations not reported in the study article or another publication although they might be in the future (Personal communications, April 2019).

[\[Back to top\]](#)

Population	121 hospitalized patients who were having coronary angiography at a Berlin hospital (Germany ).
Intervention	a) Informed consent sought using a standard consent form and a comic
Comparison(s)	b) Informed consent sought using a standard consent form
Outcome(s)	<p>Measured some time before (comprehension, anxiety) and after the medical procedure (satisfaction, anxiety).</p> <p>Medical procedure comprehension (measured with 13 multiple choice questions score true/false, score range 0 to 13, higher scores means better comprehension/knowledge)</p> <p>a) Total mean score: 11.5, SD = 1.8 b) Total mean score: 9.1, SD = 2.4</p> <p>Procedure-related anxiety (measured with STAI scale, score range 20 to 80, higher scores mean more anxiety)</p> <p>a) Mean score before the procedure: 43.7, SD = 10.7 Mean score after the procedure: 40.6, SD = 9.7 b) Mean score before the procedure: 43.9, SD = 11.7 Mean score after the procedure: 46.0, SD = 11.5</p> <p>Satisfaction with the procedure (measured with CSQ-8 scale, score range 8 to 32, higher scores means more satisfied)</p> <p>a) Mean score after consent was sought: 27.7, SD = 3.1 Mean score after surgical procedure: 27.9, SD = 3.1 b) Mean score after consent was sought: 25.2, SD = 4.2 Mean score after surgical procedure: 25.3, SD = 4.1</p>
Funding	Friede Springer Herz Stiftung, Berlin
Comic details	<p>Length: 16 A4 pages (?)</p> <p>Access: Physical copies</p> <p>Language(s): Likely German  although the online comic is in English</p> <p>URL link: http://www.annals.org/aim/article/doi/10.7326/G19-0008 (appendix)</p>
Notes Protocol	<p>Registry entry ID: DRKS00012493</p> <p>(https://drks.de/drks_web/navigate.do?navigationId=trial.HTML&TRIAL_ID=DRKS00012493)</p> <p>Study protocol also included in study appendix but not timestamped.</p>

[\[Back to top\]](#)

Population	126 adults aged 50 years and older going to senior day care, rehabilitation centers or sports club (Germany ).
Intervention	a) Photo story in paper format describing interactions between a doctor and a patient
Comparison(s)	b) Photo story shown on a tablet c) Traditional paper brochure containing health information d) Traditional brochure shown on a tablet
Outcome(s)	<p>Measured immediately before and after reading the study materials.</p> <p>Perceived health (= ?, measured with ?, score range ? to ?, higher scores means ?)</p> <p>a) Mean score post-intervention: 3.35, SD = 0.85 b) Mean score post-intervention: 3.57, SD = 0.86 c) Mean score post-intervention: 3.28, SD = 0.96 d) Mean score post-intervention: 3.60, SD = 0.93</p> <p>Frequency of doctor consultations (?)</p> <p>a) Mean number of visits per ?: 4.38, SD = 0.99 b) Mean number of visits per ?: 4.77, SD = 0.94 c) Mean number of visits per ?: 4.34, SD = 0.97 d) Mean number of visits per ?: 4.60, SD = 1.13</p> <p>Communicative self-efficacy (= ?, measured with AURA tool, score range ? to ?, higher scores means ?)</p> <p>a) Mean score post-intervention: 3.94, SD = 0.91 b) Mean score post-intervention: 4.08, SD = 0.79 c) Mean score post-intervention: 4.06, SD = 0.73 d) Mean score post-intervention: 4.06, SD = 0.67</p> <p>Brochure/photo story assessments</p> <p>Not reported here for brevity</p> <p>Self-efficacy (= ?, measured with ?, score range ? to ?, higher scores means ?)</p> <p>a) Mean score post-intervention: 3.97, SD = 0.76 b) Mean score post-intervention: 3.88, SD = 0.85 c) Mean score post-intervention: 3.98, SD = 0.68 d) Mean score post-intervention: 3.90, SD = 0.75</p> <p>Behavioral intention (= ?, measured with ?, score range ? to ?, higher scores means ?)</p> <p>a) Mean score post-intervention: 4.32, SD = 0.62 b) Mean score post-intervention: 4.21, SD = 0.75 c) Mean score post-intervention: 4.34, SD = 0.53 d) Mean score post-intervention: 4.14, SD = 0.65</p> <p>Self-referencing (= if participants reflected on their own conversation with the doctor, measured with 3-items, score range ? to ?, higher scores means ?)</p> <p>a) Mean score post-intervention: 3.05, SD = 1.14 b) Mean score post-intervention: 2.84, SD = 1.05 c) Mean score post-intervention: 3.63, SD = 1.01 d) Mean score post-intervention: 2.90, SD = 1.12</p> <p>Identification (= ?, measured with ?, score range ? to ?, higher scores means ?)</p> <p>a) Mean score post-intervention: 3.61, SD = 0.93 b) Mean score post-intervention: 3.49, SD = 0.85 c) Mean score post-intervention: 3.56, SD = 0.72 d) Mean score post-intervention: 3.31, SD = 0.53</p> <p>Transportation (= ?, measured with ?, score range ? to ?, higher scores means ?)</p> <p>a) Mean score post-intervention: 2.68, SD = 0.76 b) Mean score post-intervention: 2.70, SD = 0.58 c) Mean score post-intervention: 2.84, SD = 0.78 d) Mean score post-intervention: 2.67, SD = 0.72</p>
Funding	European Union's Seventh Framework Programme grant Wilhelm-Stiftung für Rehabilitationsforschung European Union, Erasmus+ grant
Comic details	<p>Length: Not reported.</p> <p>Access: Physical copies or Digital (PDF)</p> <p>Language(s): German </p> <p>URL link: Not provided. No samples in study report.</p>

Notes Protocol	Registry entry: NCT02502292 (https://clinicaltrials.gov/ct2/show/NCT02502292) Participants could ask questions about the study materials.
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[\[Back to top\]](#)

Population	67 students aged 14 years old coming from two secondary schools in Malaysia
Intervention	a) 6 online webcomics based on two textbooks on recycling and organic farming
Comparison(s)	b) Text passages with the contents of the two textbooks read online
Outcome(s)	<p>Measured immediately before and after reading the study materials.</p> <p>Text comprehension (measured with ?, score range ? to ?, higher scores means better comprehension)</p> <p>a) Mean score at baseline: 69.50, SD = 5.20 Mean score post-intervention: 86.19, SD = 5.11</p> <p>b) Mean score at baseline: 65.71, SD = 5.98 Mean score post-intervention: 68.12, SD = 7.04</p>
Funding	Not reported
Comic details	<p>Length: Not reported</p> <p>Access: Online</p> <p>Language(s): English</p> <p>URL link: Provided, not working. No samples in study report.</p>
Notes Protocol	<p>The webcomics were made by the researchers</p> <p>No mentions of a study protocol</p> <p>To what extent are the study materials comparable in contents?</p>



[\[Back to top\]](#)

Population	40 adolescents who have graduated from secondary schools in Hong Kong (China/Republic of China).
Intervention	a) 1 hour English lesson + set of comic strips explaining 20 words
Comparison(s)	b) 1 hour English lesson + set of pictures illustrating 20 words
Outcome(s)	<p>Measured immediately before and a day after the intervention.</p> <p>English vocabulary knowledge (measured with 40 questions knowledge test, score range 0 to 40, higher scores means better knowledge and understanding)</p> <p>a) Mean score at baseline: 12.80, SD = 2.61 Mean score post-intervention: 18.15, SD = 1.18</p> <p>b) Mean score at baseline: 12.25, SD = 2.97 Mean score post-intervention: 15.90, SD = 1.48</p>
Funding	Not reported
Comic details	<p>Length: 20 A4 pages</p> <p>Access: Physical copies</p> <p>Language(s): English</p> <p>URL link: Sample comics included in study report.</p>
Notes Protocol	<p>Participants are friends of the study author, family members</p> <p>No registry or protocol mentioned</p> <p>Well-detailed thesis with materials included</p>


[\[Back to top\]](#)

Population	403 Hispanic adults living in Los Angeles (US  .
Intervention	a) Fotonovela called "Marta on a Mission", a story about a woman bothered by the effects of smoke
Comparison(s)	b) Bilingual pamphlet on secondhand and thirdhand tobacco smoke c) No intervention, no study materials received
Outcome(s)	<p>Measured 6 months after receiving the study materials.</p> <p>Knowledge about secondhand and thirdhand tobacco smoke (measured with 21 true/false questions, score range 0 to 21, higher scores means better knowledge)</p> <p>a) Mean score 6 months post-intervention: 8.31 b) Mean score 6 months post-intervention: 8.18 c) Mean score 6 months post-intervention: 8.15</p> <p>Attitude towards secondhand and thirdhand tobacco smoke</p> <p>Favouring rules (= if the participant is in favour of smoke bans, measured with 3 questions, score range 1 to 4, higher scores means more in favour of smoking rules/bans)</p> <p>a) Mean score 6 months post-intervention: 1.68 b) Mean score 6 months post-intervention: 1.52 c) Mean score 6 months post-intervention: 1.60</p> <p>Self-efficacy to protect family from smoke (= if the participant feels able to protect his family from smoke, measured with 2 questions, score range 1 to 4, higher scores means feeling more capable to protect family)</p> <p>a) Mean score 6 months post-intervention: 2.10 b) Mean score 6 months post-intervention: 2.01 c) Mean score 6 months post-intervention: 2.05</p> <p>Self-efficacy to talk to others about smoke (= if the participant feels able to speak to others about smoke, measured with 4 questions, score range 1 to 4, higher scores means feeling more capable to speak about smoke)</p> <p>a) Mean score 6 months post-intervention: 2.12 b) Mean score 6 months post-intervention: 1.91 c) Mean score 6 months post-intervention: 2.00</p> <p>Community efficacy (= if the participant feels able to collaborate with neighbours to convince the landlord to ban smoking, measured with 3 questions, score range 1 to 4, higher scores means feeling more capable)</p> <p>a) Mean score 6 months post-intervention: 2.50 b) Mean score 6 months post-intervention: 2.17 c) Mean score 6 months post-intervention: 2.31</p> <p>Advocacy attitudes (= if the participant believes it is appropriate to confront smokers, measured with 3 questions, score range 1 to 4, higher scores means in favour of confronting)</p> <p>a) Mean score 6 months post-intervention: 2.06 b) Mean score 6 months post-intervention: 1.94 c) Mean score 6 months post-intervention: 2.01</p> <p>Taking action (= if the participant talked to neighbours or the landlord about not smoking in the past 6 months, measured with 2 questions)</p> <p>a) Mean score 6 months post-intervention: Not reported b) Mean score 6 months post-intervention: Not reported c) Mean score 6 months post-intervention: Not reported</p> <p>Use of the study materials (= if participants say they read the fotonovela or pamphlet)</p> <p>a) Read the fotonovela: 29% Read part of the fotonovela: 48% b) Read the pamphlet: 19% Read part of the pamphlet: 52%</p>
Funding	Not reported
Comic details	<p>Length: Not reported</p> <p>Access: Physical copies</p> <p>Language(s): English  and Spanish </p> <p>URL link: Available on request from the study authors</p>
Notes Protocol	No protocol or registry entry mentioned Cluster trial (households as units)



[\[Back to top\]](#)

Population	9 classes of 3 to 5 years old children (118 participants) living in the US  .
Intervention	a) A graduate student read aloud a modified storybook (Oliver's vegetables) containing positive messages about vegetables (kohlrabi) to the classes on days 2 and 3
Comparison(s)	b) A graduate student read aloud a modified storybook (Oliver's vegetables) containing negative messages about vegetables (kohlrabi) to the classes on days 2 and 3 c) A graduate student read aloud a storybook (Max found two sticks) that did not mention food to the classes on days 2 and 3
Outcome(s)	<p>Measured one day before the intervention (day 1) and then on day 2 and 3.</p> <p>Attitude towards vegetables in general (measured with a general question) Mean % children saying they like vegetables at pre-test (day 1): 67% Mean % children saying they like vegetables on day 2: 58% Mean % children saying they like vegetables on day 3: 64% Note: It is unclear to which group(s) these percentages refer to</p> <p>Attitude towards kohlrabi (measured with happy and sad faces, score range 1 to 4, higher scores means ?) Not reported in the study report due to apparently contradictory choices (for instance some children said they liked kohlrabi yet pointed towards an unhappy face)</p> <p>Attitude towards kohlrabi (measured with question "Do you like it?", yes/no) Results only reported on aggregate for all groups</p> <p>Knowledge and understanding Ability to recognize kohlrabi (measured through interview question "Do you know what this is?", yes/no, followed by "What is it?", answers were considered correct if the children said something "roughly approximate to the name kohlrabi") Note: At pretest, none of the children could tell what kohlrabi is. a) Mean % children able to recognize kohlrabi on day 2: 17% Mean % children able to recognize kohlrabi on day 3: 62% b) Mean % children able to recognize kohlrabi on day 2: 14% Mean % children able to recognize kohlrabi on day 3: 34% c) Mean % children able to recognize kohlrabi on day 2: 0% Mean % children able to recognize kohlrabi on day 3: 14%</p> <p>Behavior change Willingness to taste kohlrabi (measured through direct observation) a) Mean % children who did taste kohlrabi on pretest: 26 (90%) Mean % children who did taste kohlrabi on day 2: 24 (83%) Mean % children who did taste kohlrabi on day 3: 26 (90%) b) Mean % children who did taste kohlrabi on pretest: 18 (62%) Mean % children who did taste kohlrabi on day 2: 18 (62%) Mean % children who did taste kohlrabi on day 3: 20 (69%) c) Mean % children who did taste kohlrabi on pretest: 21 (75%) Mean % children who did taste kohlrabi on day 2: 16 (57%) Mean % children who did taste kohlrabi on day 3: 17 (61%)</p>
Funding	College of Agricultural and Life Sciences (University of Wisconsin-Madison)
Comic details	Length: Not reported Access: Physical copies Language(s): English  URL link: Not provided. No samples in the study report.
Notes Protocol	No study protocol or registry entry mentioned "9 classes were assigned" means this is a cluster-RCT. No mention of intracluster-correlation. Based on pilot study with 81 children → It is not clear if this pilot study was published The authors report contamination by the interviewers who spoke about kohlrabi to the control group

[\[Back to top\]](#)

Population	80 children aged 5 to 11 soon to undergo tonsillectomy and adenoidectomy in a Northern Ireland hospital.
Intervention	a) When attending the pre-assessment clinic each child received a blank A4 page, crayons and a copy of a storybook (The Tale of Woody's Tonsils) explaining the steps involved in this surgical operation
Comparison(s)	b) When attending the pre-assessment clinic each child received a blank A4 page and crayons
Outcome(s)	<p>Measured on the day of the pre-assessment and at an unknown time point after reading the storybook (or receiving the crayons for the control group) and before the hospital admission.</p> <p>Hospitalization anxiety levels (measured with CD:H scale which involves a drawing exercise, score range 15 to 215, higher scores means more anxiety)</p> <p>a) Mean score at pre-test: 79.35, SD = 23.82 Mean score at post-test: 70.58, SD = 24.82</p> <p>b) Mean score at pre-test: 84.93, SD = 21.01 Mean score at post-test: 82.35, SD = 20.96</p> <p>Hospitalization anxiety levels (measured with HFRS scores, score range 25 to 75, higher scores means more anxiety)</p> <p>a) Mean score at pre-test: 30.03, SD = 12.99 Mean score at post-test: 25.13, SD = 12.63</p> <p>b) Mean score at pre-test: 29.15, SD = 11.72 Mean score at post-test: 28.95, SD = 14.38</p>
Funding	Not reported
Comic details	<p>Length: Not reported</p> <p>Access: Physical copies</p> <p>Language(s): English </p> <p>URL link: Not provided. No samples in study report.</p>
Notes Protocol	<p>No study protocol or registry entry mentioned</p> <p>Personal calculations suggest CD:H could lead to scores higher than 220 (?)</p> <p>Slight differences between Table 1 and Table 2 on pre-test scores. Rounding errors?</p>

[\[Back to top\]](#)

Population	249 introductory psychology students from New York State (US  .
Intervention	a) Participants read 2 extremely violent comic books such as Cremator, Curse of the Spawn, Dark Realm, Evil Ernie, Homicide, Purgatory and Undertaker (20 minutes to read)
Comparison(s)	b) Participants read 1 or 2 non-violent comic books such as Archie, Cherry Blossom, Dexter's Laboratory, Pocohontas, Rugrats, and Sabrina (20 minutes to read)
Outcome(s)	<p>Measured immediately after reading the study materials.</p> <p>Predispositional anger (=propensity to respond with anger in variety of situations, measured with BDHI inventory, 75 true/false questions, higher scores means more quickly angry)</p> <p>a) Not extracted, results table not understood</p> <p>b) Not extracted, results table not understood</p> <p>Ambiguous provocation task (=to what extent participants felt hypothetical scenarios involved aggressive intentions, measured with 3 scenarios and 6 open-ended questions, score range 0 to 12, higher scores means situations appeared more aggressive)</p> <p>a) Not extracted, results table not understood</p> <p>b) Not extracted, results table not understood</p>
Funding	Not reported
Comic details	<p>Length: Variable</p> <p>Access: Physical copies</p> <p>Language(s): English </p> <p>URL link: Not provided. No samples in study report</p>
Notes Protocol	<p>No study protocol or registry entry mentioned</p> <p>Very similar to (Kirsh, 2002)</p>

[\[Back to top\]](#)

Population	255 parents of children with croup attending emergency services (Canada)
Intervention	a) Three story booklets (A late night trip to the emergency department, Things we take for granted & Managing croup at home) about children attending emergency services were given to parents as early as possible during their hospital visit
Comparison(s)	b) A standard information sheet on croup was given to parents as early as possible during their hospital visit
Outcome(s)	<p>Measured during the initial emergency services visit, on leaving the hospital, 24 hours after the initial visit, 3 days after the initial visit and also at day 5, 7 and 9 if the child still had symptoms.</p> <p>Primary: Parental anxiety (measured with STAI-S tool, score range 20 to 80, higher scores mean more anxiety)</p> <p>a) Mean score at baseline: 37.2, SD = 12.3 Mean score at discharge: 32.2, SD = 11.1</p> <p>b) Mean score at baseline: 38.8, SD = 12.3 Mean score at discharge: 32.8, SD = 9.72</p> <p>Secondary: Expected future anxiety (=how the parent would feel about a new episode of croup, measured with STAIC-S tool, score range 20 to 60, higher scores means more anxiety)</p> <p>a) Mean score at 1 or 3 day(s) post-visit: 42.0, SD = 12.7</p> <p>b) Mean score at 1 or 3 day(s) post-visit: 42.6, SD = 11.9</p> <p>Secondary: Event impact (=to what extent the child's illness is negatively affecting every day life, measured with 15 items scale, score range 15 to 60, higher scores mean more negatively affected)</p> <p>a) Total median IQR score at last follow-up: 9 (3, 18.5)</p> <p>b) Total median IQR score at last follow-up: 9 (3.75, 20)</p> <p>Secondary: Parental knowledge of croup (measured with 10 true/false questions)</p> <p>a) Mean score 3 days post-visit: 8.57, SD = 1.59</p> <p>b) Mean score 3 days post-visit: 8.44, SD = 1.30</p> <p>Secondary: Parental concerns (=if parents were concerned about their child and what concerned them most, measured with = questions, score range 0 to 10, higher scores means more concern) Not reported here for brevity</p> <p>Secondary: Healthcare utilization (=if parents sought further medical help for this episode of croup, measured with follow-up interviews)</p> <p>a) % parents who contacted a health professional: 32.8%</p> <p>b) % parents who contacted a health professional: 26.4%</p> <p>Secondary: Resource utilization (=how much time and money parents spent due to their child's croup, measured with follow-up interviews)</p> <p>a) 1 child was hospitalized 10 participants received prescription medications post-discharge</p> <p>b) No children were hospitalized 13 participants received prescription medications post-discharge</p> <p>Secondary: Incidence of return to be assessed by a health professional (measured with follow-up interviews)</p> <p>a) % children who returned to a physician: 30.3%</p> <p>b) % children who returned to a physician: 24.8%</p> <p>Secondary: Ongoing croup symptoms (measured with TOP score and 13 questions)</p> <p>a) Median IQR number of days until no symptoms: 3 (3.5, 0.154)</p> <p>b) Median IQR number of days until no symptoms: 5 (3.5, 0.186)</p> <p>Secondary: Parental decisional regret (=if parents regret going to the emergency services, measured with 5 items scale, score range</p> <p>a) Mean score at 1 or 3 day(s) post-visit: 1.26, SD = 0.45</p> <p>b) Mean score at 1 or 3 day(s) post-visit: 1.15, SD = 0.27</p> <p>Secondary: Parental satisfaction about treatment and care</p> <p>a) % Very satisfied at 1 or 3 day(s) post-visit: 83 (68%) % Somewhat satisfied at 1 or 3 day(s) post-visit: 25 (20%)</p> <p>b) % Very satisfied at 1 or 3 day(s) post-visit: 86 (72%) % Somewhat satisfied at 1 or 3 day(s) post-visit: 29 (24%)</p> <p>Secondary: Parental satisfaction about informations provided</p> <p>a) % Very satisfied at 1 or 3 day(s) post-visit: 97 (80%) % Somewhat satisfied at 1 or 3 day(s) post-visit: 21 (17%)</p> <p>b) % Very satisfied at 1 or 3 day(s) post-visit: 89 (74%)</p>

	<p>% Somewhat satisfied at 1 or 3 day(s) post-visit: 27 (23%)</p> <p>Secondary: Use of the study materials (measured with self-reports)</p> <p>a) % saying they read the study materials: 68 (52.7%) % saying they read other materials: 31 (24%)</p> <p>b) % saying they read the study materials: 83 (65.9%) % saying they read other materials: 19 (15.1%)</p>
Funding	Canadian Institutes of Health Research
Comic details	<p>Length: 12 pages, 12 pages and 12 pages</p> <p>Access: Physical copies</p> <p>Language(s): English</p> <p>URL link: Full storybooklets included in report.</p>
Notes Protocol	<p>No protocol or registry entry mentioned</p> <p>20% increased sample size meant to mitigate contamination.</p> <p>Well-detailed thesis, could be practical for reproduction purposes</p>



[\[Back to top\]](#)

Population	80 student teachers selected from a teacher training institute in Malaysia.
Intervention	a) Participants were given an 18-pages document on survey research in education, which included 9 humorous cartoons
Comparison(s)	b) Participants were given an 18-pages document on survey research in education (same content as in a))
Outcome(s)	<p>Measured before the study materials were given and at the end of the 3-days course.</p> <p>Reading comprehension (measured with 10 essay questions on research and interviews, score range 0 to 100, higher scores means better comprehension)</p> <p>a) Mean comprehension score at pre-test: 53.2, SD = 6.7 Mean comprehension score at post-test: 63.3, SD = 8.5</p> <p>b) Mean comprehension score at pre-test: 54.5, SD = 6.6 Mean comprehension score at post-test: 58.2, SD = 6.7</p> <p>Reading motivation (measured with adapted RMQ tool, 54 items scored 1 to 5, score ranges 54 to 270, higher scores means stronger motivation to read)</p> <p>a) Mean motivation score at pre-test: 126.6, SD = 17.7 Mean motivation score at post-test: 154.4, SD = 11.5</p> <p>b) Mean motivation score at pre-test: 116.3, SD = 19.4 Mean motivation score at post-test: 120.7, SD = 12.7</p> <p>Use of the study materials (measured with single question)</p> <p>a) % of study materials read: 83.23%, SD = 8.26</p> <p>b) % of study materials read: 65.31%, SD = 10.08</p> <p>Response to the cartoons (measured with open-ended question on the impact of the cartoons)</p> <p>a) 97% of responses from participants in the cartoon group suggested adding cartoons was a positive idea.</p>
Funding	Not reported
Comic details	<p>Length: 18 A4 pages including 9 cartoons</p> <p>Access: Physical copies</p> <p>Language(s): Not reported, likely English</p> <p>URL link: Sample cartoons included in the study report.</p>
Notes Protocol	<p>No protocol or registry entry mentioned</p> <p>Pilot study was done before this study. It is not clear if the pilot results are reported somewhere.</p>



[\[Back to top\]](#)

Population	91 Turkish teenage students (5 th to 9 th grade) attending a school in Erzurum (Turkey)
Intervention	a) Students attended a 10-session / 10-weeks course involving reading exercises. A comic was used in each session.
Comparison(s)	b) Students attended a 10-session / 10-weeks course involving reading exercises. A text was used in each session (which was identical to the one in the comic).
Outcome(s)	<p>Measured at the end of 8 sessions and at the end of the 10-weeks reading course.</p> <p>Reading comprehension (measured with 8 sets of questions, score range ? to ?, higher scores means better comprehension)</p> <p>a) Mean score at post-test: 10.31, SD = 2.95</p> <p>b) Mean score at post-test: 8.22, SD = 3.06</p> <p>Reading comprehension (measured with 2 final reading comprehension tests, score range ? to ?, higher scores means better comprehension)</p> <p>a) Mean score at post-test: 10.36, SD = 3.90</p> <p>b) Mean score at post-test: 9.49, SD = 4.56</p>
Funding	Not reported
Comic details	<p>Length: Not reported</p> <p>Access: Not reported</p> <p>Language(s): English</p> <p>URL link: Not reported. No samples in study report.</p>
Notes Protocol	<p>No protocol or registry entry mentioned</p> <p>Some doubts remain about whether this really is a RCT.</p>



[\[Back to top\]](#)

Population	91 introductory psychology students from New York State (US  .
Intervention	a) Participants read 2x extremely violent comic books such as Cremator, Curse of the Spawn, Dark Realm, Evil Ernie, Homicide, Purgatory and Undertaker (20 minutes to read)
Comparison(s)	b) Participants read 1x or 1.5x non-violent comic books such as Archie, Cherry Blossom, Dexter's Laboratory, Pocohontas, Rugrats, and Sabrina (20 minutes to read)
Outcome(s)	<p>Measured immediately after reading the study materials.</p> <p>Predispositional anger (=propensity to respond with anger in variety of situations, measured with BDHI inventory, 75 true/false questions, higher scores means more quickly angry)</p> <p>a) Not extracted, results table not understood b) Not extracted, results table not understood</p> <p>Vengeance (=if participants think they would want revenge, measured with 6 hypothetical scenarios, score range 6 to 36, higher scores means stronger intention to get revenge)</p> <p>a) Mean score at post-test: 35.1, SE = 1.0 b) Mean score at post-test: 31.6, SE = 1.1</p>
Funding	Not reported
Comic details	<p>Length: Variable</p> <p>Access: Physical copies</p> <p>Language(s): English </p> <p>URL link: Not provided. No samples in study report</p>
Notes Protocol	<p>No protocol or registry entry mentioned</p> <p>Very similar to (Kirsh, 2002) and (Kirsh, 2002b). Reproduction</p>

[\[Back to top\]](#)

Population	265 students from a public high school in Northern California (US ). 238 left at last follow-up.
Intervention	a) Students were given a Shakespear (either A Midsummer Night's Dream or The Tempest) play in graphic novel format to read. A couple days later they were given a second one in text format.
Comparison(s)	b) Students were given a Shakespear play in text format to read. A couple days later they were given a second one in graphic novel format. (same plays as for a))
Outcome(s)	<p>Measured on day 1/2 (pre-test), on day 3 (post first intervention) and day 6/7/8 (post second intervention).</p> <p>Vocabulary learning (measured with TVM scale, Not clear which results to report and how</p> <p>Targeted vocabulary learning (measured with Not clear which results to report and how</p> <p>Ability to recognize authors (measured with ART scale, score range Not clear which results to report and how</p> <p>Reading motivation (measured with AMTR scale, score range Not clear which results to report and how</p> <p>Reading engagement (measured with IMR scale, score range Not clear which results to report and how</p> <p>General reading comprehension (measured with Not clear which results to report and how</p> <p>Specific reading comprehension (measured with 6 multiple choice questions Not clear which results to report and how</p> <p>Transportation (=if the students felt "carried away" by the stories, measured with 17 items scale, score range 1 to 6, higher scores means more transported) Not clear which results to report and how</p>
Funding	American Educational Research Association UC Berkeley Graduate Division
Comic details	<p>Length: Only parts of the graphic novels were used in the study</p> <p>Access: Physical copies</p> <p>Language(s): English </p> <p>URL link: Sample pages included in report.</p>
Notes Protocol	<p>No protocol or registry entry mentioned</p> <p>Not all outcomes measured are reported in the thesis due to "its narrow scope".</p> <p>Should this trial be excluded? Results on day 3 do make it possible to compare text vs graphic novel but it is mainly the results at day 6/7/8 which are shown.</p>

[\[Back to top\]](#)

Population	24 intermediate Japanese university students aged 18 to 22 (UK )
Intervention	a) Students read 8 visual sequences (panels extracted from a graphic novel, Macbeth: The Graphic Novel's")
Comparison(s)	b) Students read 8 textual sequences (identical text as from a) with some explanations/context)
Outcome(s)	<p>Measured immediately after an individual text was read.</p> <p>Reading comprehension (subjectively measured depending on if the student got “the gist” of what happened in the panels, score range = understood/did not understand)</p> <p>a) Overall number of sequences understood by students: 53 b) Overall number of sequences understood by students: 45</p> <p>a) Number of students who understood sequence 1: 11 b) Number of students who understood sequence 1: 12</p> <p>a) Number of students who understood sequence 2: 6 b) Number of students who understood sequence 2: 8</p> <p>a) Number of students who understood sequence 3: 9 b) Number of students who understood sequence 3: 10</p> <p>a) Number of students who understood sequence 4: 9 b) Number of students who understood sequence 4: 3</p> <p>a) Number of students who understood sequence 5: 12 b) Number of students who understood sequence 5: 12</p> <p>a) Number of students who understood sequence 6: 3 b) Number of students who understood sequence 6: 0</p> <p>a) Number of students who understood sequence 7: 2 b) Number of students who understood sequence 7: 0</p> <p>a) Number of students who understood sequence 8: 1 b) Number of students who understood sequence 8: 0</p>
Funding	Not reported
Comic details	<p>Length: 10 panels (8 sequences)</p> <p>Access: Physical copies</p> <p>Language(s): English </p> <p>URL link: Sequences included in the report.</p>
Notes Protocol	<p>No protocol or registry entry mentioned.</p> <p>Modified reproduction of (Liu, 2004)</p> <p>Study was piloted on 12 students, results not reported in the thesis.</p>

[\[Back to top\]](#)

Population	42 children from two third grade public school classrooms (Canada).
Intervention	a) Children could chose from 125 comics to read (among which Spidey Super Stories, Classics Illustrated, Marvel Classic Comics, Treasure Chest, Walt Disney) and read for 20 minutes each school day for 10 weeks
Comparison(s)	b) Children could chose from 130 books to read and read for 20 minutes each school day for 10 weeks
Outcome(s)	<p>Measured prior to the intervention(s) and "immediately after the treatment".</p> <p>Time spent on task (=if the children were reading the study materials or getting another, measured by direct observation for 5 seconds, higher scores means more time spent on task)</p> <p>a) Mean % time spent on task: 69%, SD = 25%</p> <p>b) Mean % time spent on task: 74%, SD = 14%</p> <p>Attitude towards reading (=if children are interested in reading, measured with Arlin-Hills tool, score range ? to ?, higher scores mean ?)</p> <p>a) Mean pre-intervention score: 3.37, SD = 0.60</p> <p>b) Mean pre-intervention score: 3.28, SD = 0.68</p> <p>Time spent reading (measured by direct observation for 5 seconds, higher scores means more time spent on task)</p> <p>a) Mean % time spent on task: 41%, SD = 29%</p> <p>b) Mean % time spent on task: 64%, SD = 22%</p> <p>Reading comprehension (measured with GMGRT tool, score range ? to ?, higher scores mean ?)</p> <p>a) Mean pre-intervention score: 1.75, SD = 1.1 Mean post-intervention score: 2.20, SD = 1.4</p> <p>b) Mean pre-intervention score: 2.03, SD = 0.99 Mean post-intervention score: 2.84, SD = 0.99</p>
Funding	Not reported
Comic details	<p>Length: Variable (multiple comics)</p> <p>Access: Physical copies</p> <p>Language(s): Likely English although French could be plausible in Canada</p> <p>URL link: Not provided.</p>
Notes Protocol	<p>No protocol or registry entry mentioned.</p> <p>Flipping pages quickly, going through the pages too fast could lead to being assessed as "not reading".</p>



[\[Back to top\]](#)

Population	915 adults aged 18 to 64 recruited from online Qualtrics panel. (International)
Intervention	a) Participants read the "Wisconsin Collaborative for Healthcare Quality" cartoon describing the story of a patient with diabetes who becomes aware of physician quality variation
Comparison(s)	b) Participants read a short paragraph of text highlighting physician quality variation c) No information received, no text to read
Outcome(s)	<p>Measured immediately after reading the study materials or accepting to participate (for group c))</p> <p>Selection of highest quality physician (=if participants selected the physician offering the best diabetes care, measured with a selection test after participants had seen tables describing characteristics [distance, cost, etc.] of 4 physicians)</p> <p>a) Mean % of participants choosing the highest quality physician: 59.4%</p> <p>b) Mean % of participants choosing the highest quality physician: 54.9%</p> <p>c) Mean % of participants choosing the highest quality physician: 54.5%</p> <p>Belief that primary care doctors provide care of the same quality (measured with statement to rate on 4 point scale, score range 1 to 4, higher scores means stronger agreement primary care providers provide care of the same quality)</p> <p>a) Mean score post-intervention: 2.8</p> <p>b) Mean score post-intervention: 2.8</p> <p>c) Mean score post-intervention: 2.6</p> <p>Willingness to change to a higher quality health provider (measured with statement to rate on 4 point scale, score range 1 to 4, higher scores means stronger willingness to change to a higher quality primary care provider)</p> <p>a) Mean score post-intervention: 1.7</p> <p>b) Mean score post-intervention: 1.7</p> <p>c) Mean score post-intervention: 1.8</p>
Funding	Jayne Koskinas Ted Giovanis Foundation for Health and Policy
Comic details	<p>Length: 5 panels</p> <p>Access: Online</p> <p>Language(s): English</p> <p>URL link: The first panel is included in the study report.</p> <p>http://myhealthwi.org/Resources/GettingGoodCare/Stories.aspx</p>
Notes Protocol	No protocol or registry entry mentioned

[\[Back to top\]](#)

Population	72 first-year students from an English language teaching department of a state university (Turkey).
Intervention	a) The students were taught 40 idioms using an author-made graphic novel over 4 weeks. The study author taught the lessons
Comparison(s)	b) The students were taught 40 idioms over 4 weeks without use of a graphic novel. The study author taught the lessons
Outcome(s)	<p>Measured before the intervention (pre-test) and after the 4 weeks (post-intervention).</p> <p>Knowledge of figurative idioms (measured with 50 fill-in-the-blanks questions, score range 0 to 50?, higher scores mean better knowledge)</p> <p>a) Mean score at pre-test: 11.97, SD = 6.62 Mean score at post-intervention: 27.68, SD = 6.36</p> <p>b) Mean score at pre-test: 12.89, SD = 7.66 Mean score at post-intervention: 21.47, SD = 6.84</p>
Funding	Yildiz Technical University Scientifics Research Projects Coordination Department
Comic details	<p>Length: Not reported (40 idioms in a single graphic novel)</p> <p>Access: Physical copies</p> <p>Language(s): English</p> <p>URL link: Sample pages from the graphic novel included in the study report.</p>
Notes Protocol	<p>No protocol or registry entry mentioned</p> <p>40 or 50 idioms?</p> <p>A key question is also to what extent the graphic novel intervention involved co-interventions and differed from the control group. This could lead to exclusion from this register.</p>


[\[Back to top\]](#)

Population	66 sixth grade students coming from 8 elementary school classes in Illinois (US )
Intervention	a) 37 comic books (among which Hi Hi Puffy Ami Yumi, Cartoon Network, Fantastic Four, Spider Man, Scooby-Doo, The Batman Strikes) were made available during free classroom reading periods. Reading periods happened 4 times a week and were 20 minutes long each. The comic books were also introduced to the children.
Comparison(s)	b) Only “textual” books were made available during free classroom reading periods. Reading periods happened 4 times a week and were 20 minutes long each.
Outcome(s)	Measured before the introduction of the comic books (pre-test) and about 6 weeks later at post-intervention. Attitude towards “pleasure” reading (measured with 10 items from ERAS test) a) Mean score at pre-test: 27.17 Mean score at post-intervention: 26.51 b) Mean score at pre-test: 29.30 Mean score at post-intervention: 28.52
Funding	College of Education and Professional Studies Student Telefund Research Grant Donations from Albert Capati of Capital Comics and Games
Comic details	Length: Multiples comic books, variable Access: Physical copies Language(s): English  URL link: Titles of the comic books provided
Notes Protocol	Consent form is in line with the methods and outcomes reported (=stands for protocol, even if not timestamped) Cluster-RCT

[\[Back to top\]](#)

Population	80 children aged 6-7 years referred to the Department of Pediatric Dentistry for comprehensive and dental assessments in Tabriz (Iran)
Intervention	a) Listening to a pictorial story about going to a dental office (from Freddie's First Experiences)
Comparison(s)	b) Listening to a pictorial story about going to a barbershop (from Freddie's First Experiences)
Outcome(s)	<p>Measured during a first assessment session (pre-test), during the dental treatment and immediately afterwards (post-intervention).</p> <p>Child's trait anxiety (=how anxious the child is, measured with SCARED scale, score range ? to ?, higher scores mean more anxious)</p> <p>a) Mean score at pre-test: 17.00, SD = 0.28</p> <p>b) Mean score at pre-test: 17.03, SD = 0.27</p> <p>Child's behavior (=is the child shows discomfort or pain, measured with SEM scale, score range 0 to 9, higher scores mean more pain/discomfort)</p> <p>a) Mean score during-intervention: 3.58, SD = 0.2</p> <p>b) Mean score during-intervention: 6.03, SD = 0.31</p> <p>Child's situational anxiety (=how anxious the child is about his dental treatment, measured with MCDAS scale, score range 8 to 40, higher scores means more anxious)</p> <p>a) Mean score post-intervention: 16.0, SD = 0.30</p> <p>b) Mean score post-intervention: 25.35, SD = 0.48</p> <p>Child's pain perception (=how much pain the child felt during the dental treatment, measured with Wong-Baker FPR scale, score range ? to ?, higher scores means more anxious)</p> <p>a) Mean score post-intervention: 1.00, SD = 0.13</p> <p>b) Mean score post-intervention: 1.48, SD = 0.15</p>
Funding	Tabriz University of Medical Sciences (Iran)
Comic details	<p>Length: Not reported (20 pages each)</p> <p>Access: Projected on a screen</p> <p>Language(s): Not reported</p> <p>URL link: No samples in study report.</p>
Notes Protocol	No protocol or registry entry mentioned

[\[Back to top\]](#)

Population	610 children aged 2-10 years old undergoing tonsillectomy and/or adenoidectomy (Austria)
Intervention	a) Mothers and children received surgery information along with a children's book called Hase Moritz (Rabbit Maurice) illustrating the experience of a rabbit getting hospitalized for tonsillectomy during their pre-operative visit
Comparison(s)	b) Mothers and children received surgery information only during their pre-operative visit
Outcome(s)	<p>Measured on the evening before surgery and on the evening post-surgery (post-intervention).</p> <p>Child's anxiety (measured by mothers with STAI scale, score range 20 to 80, higher scores mean more anxiety)</p> <p>a) Mean score before surgery: 42.11, SD = 10.75 Mean score post-intervention: 40.32, SD = 11.01</p> <p>b) Mean score before surgery: 45.97, SD = 11.48 Mean score post-intervention: 40.83, SD = 10.72</p> <p>Child's mood (measured by mothers with 11 feeling states to rate on 1 to 3 scale)</p> <p>a) Number of children rated "more anxious than usual" at pre-test: 30/160 (18.75%) Number of children rated "more anxious than usual" at post-intervention: 45/160 (28.13%)</p> <p>b) Number of children rated "more anxious than usual" at pre-test: 43/240 (17.92%) Number of children rated "more anxious than usual" at post-intervention: 57/240 (23.75%)</p> <p>The 10 other states are not reported here for brevity (please ask if you think they should). Generally speaking they were quite similar between the two groups.</p>
Funding	Not reported
Comic details	<p>Length: 12 scenes, 20 pages</p> <p>Access: Physical copies</p> <p>Language(s): German , Turkish, Croatian</p> <p>URL link: Cover and sample pages included in the study report.</p>
Notes Protocol	<p>No protocol or registry entry mentioned</p> <p>If you only report how many children felt more X than usual and not how many felt the same and how many felt less X than usual, isn't this a subgroup comparison?</p> <p>It is not clear when the parents received the book. If too much time elapsed this might affect the effect of reading the children's book.</p>

[\[Back to top\]](#)

Population	20 undergraduate psychology students from University of Fribourg (Switzerland)
Intervention	a) 14 “long” cartoons + 14 “shorter / more compact” cartoons. These were all shown in random order.
Comparison(s)	b) 14 “long” cartoons + 14 “shorter / more compact” cartoons. These were all shown in random order.
Outcome(s)	Measured immediately after being shown the cartoons. Funniness of the cartoons (=how funny participants found the cartoons, measured with Likert scale, score range 1 to 7, higher scores means more funny) Mean funniness score for more compact/shorter cartoons: 3.64 Mean funniness score for less compact/longer cartoons: 4.20
Funding	Not reported
Comic details	Length: 28 cartoons, with a long and short version (=56 cartoons total) Access: Physical copies Language(s): Not reported, likely French or non-verbal URL link: Not provided. Single cartoon included in study report.
Notes Protocol	This is effectively a comparison of short vs long versions of the same comics. Fewer vs more panels. 2 nd study author is the author of the cartoons. No protocol or registry entry mentioned

Population	104 children aged 4 to 6 years old recruited from 6 primary schools in the Netherlands.
Intervention	a) Storybook promoting eating carrots with a rabbit as main character (congruent story), along with oral questions (interactive)
Comparison(s)	b) Storybook promoting eating carrots with a turtle as main character (incongruent story), along with oral questions (interactive) c) Storybook promoting eating carrots with a rabbit as main character (congruent story) (passive) d) Storybook promoting eating carrots with a turtle as main character (incongruent story) (passive) The stories were read on 5 consecutive days to groups of approximately 4 children by a daycare worker.
Outcome(s)	<p>Measured after the final reading session (= day 5, last day of intervention).</p> <p>Cognitive response towards carrots (= how strongly the children believe carrots make you stronger, measured with 2 questions, score range 1 to 4, higher scores means stronger belief) Only reported for interactive vs passive reading</p> <p>Automatic affective response towards carrots (= if the children appeared to like the carrots, measured with happy/unhappy faces, score range 0 to 1, higher scores means more liking) Only reported for interactive vs passive reading</p> <p>Elaborate affective response towards carrots (= how much the children like to eat carrots, measured with 2 questions, score range 1 to 4, higher scores means more liking) Only reported for interactive vs passive reading</p> <p>Product consumption (= which foods the children ate, measured by looking at what the children ate in 5 minutes from 4 bowls, higher scores means the child ate more of this food)</p> <ul style="list-style-type: none"> a) Mean number of carrots eaten divided by total foods eaten: 0.18, SD = 0.17 b) Mean number of carrots eaten divided by total foods eaten: 0.15, SD = 0.15 c) Mean number of carrots eaten divided by total foods eaten: 0.11, SD = 0.11 d) Mean number of carrots eaten divided by total foods eaten: 0.12, SD = 0.12 <p>Results for cucumber, cheese and salty sticks reported in the study report but not included here for brevity.</p>
Funding	Netherlands Organisation for Scientific Research (NWO)
Comic details	<p>Length: Not reported</p> <p>Access: Physical copies (A4 size)</p> <p>Language(s): Dutch</p> <p>URL link: Sample pages included in study report.</p>
Notes Protocol	<p>The “baseline group” was not randomized and is therefore not included here.</p> <p>The study authors did not create the storybook</p> <p>No mention of protocol or registry entry</p>

Population	66 school assistant principals (Malaysia)
Intervention	a) A book (" <i>Research methods and statistics</i> ") on research methods and statistics including cartoon humorous illustrations. Chapter 7 on survey research was used.
Comparison(s)	b) A book on research methods and statistics without cartoon illustrations. Chapter 7 on survey research was used.
Outcome(s)	<p>Measured immediately before reading the study materials and a week after receiving the books.</p> <p>Reading comprehension (measured with 10 questions, score range 0 to 100, higher scores means better understanding)</p> <p>a) Mean score pre-intervention: 51.18, SD = 7.29 Mean score at day 7 (post-intervention): 65.14, SD = 10.32</p> <p>b) Mean score pre-intervention: 52.61, SD = 7.96 Mean score at day 7 (post-intervention): 58.07, SD = 6.34</p> <p>Reading motivation (measured with 54-items tool called RMQ, score range 1 to 5, higher scores mean more motivated to read more)</p> <p>a) Mean score pre-intervention: 126.68, SD = 17.79 Mean score at day 7 (post-intervention): 154.40, SD = 11.58</p> <p>b) Mean score pre-intervention: 116.38, SD = 19.46 Mean score at day 7 (post-intervention): 120.78, SD = 12.78</p>
Funding	Not reported
Comic details	<p>Length: 1760 pages, 58 chapters, 143 cartoons. Only volume 1, chapter 7 was used in the study (8 cartoons)</p> <p>Access: Physical copies (A4 size)</p> <p>Language(s): English</p> <p>URL link: Sample cartoon included in study report. Book reference given.</p>
Notes Protocol	<p>No study protocol or registry entry mentioned</p> <p>The study author is the author of the book assessed, which is reportedly a "top-10 bestselling" title in Malaysia.</p>

Author, year

Population	
Intervention	c)
Comparison(s)	d)
Outcome(s)	Measured X
Funding	X
Comic details	Length: Access: x Language(s): x URL link: x
Notes Protocol	X

[\[Back to top\]](#)

Included studies categorized by outcomes measured

Of note, some outcomes may have been measured indirectly. For instance if the study authors gave participants a comic explaining how to use a medical device and measured an increase in [Correct use of the device], one could infer that [Understanding (of instructions)] was improved with the comic.

Some outcomes may also be tricky to categorize or fit multiples categories.

----- Table of Contents -----

Non-health outcomes

- Attitude, beliefs, preference change
- Intention change
- Knowledge change & recall
- Understanding, comprehension
- Interest, desire to read
- Other, uncategorized or not yet categorized

Health outcomes

- Choice of “healthier” snacks, for instance vegetables, fruits
- Depression symptoms, mood changes
- Behavioral problems
- Preparation for medical procedure
- Blood pressure changes
- Heart rate changes
- Tolerance of medical procedure, compliance with medical procedure
- Smoking-related outcomes (smoking status, use, frequency, etc.)
- Anxiety, distress, stress (unspecified)
- Medical screening uptake
- Vaccine uptake
- Pain
- Drug use (excluding tobacco), drug-related issues
- Sexual behavior change
- Health related knowledge change
- Attitude change towards people with a health condition
- Attitude change towards medical test, intervention
- Other health outcomes
- Harms, adverse events

Outcomes related to use of the comics (and fidelity to the study protocol)

- Attention given to study materials, use of study materials
- Contamination, sharing of study materials
- Enjoyment, pleasure, fun, helpfulness of materials, satisfaction, assessment of the study materials, preference, comic book rating
- Perceived credibility of the comics
- Identification with the characters or stories within the comics
- Feasibility of doing an RCT on comics
- Survey response rate changes

Non-health outcomes

Outcome	Measured in (studies)
Attitude, beliefs, preference change	<ul style="list-style-type: none"> • (Muzumdar, 2017) • (Junhasavasdikul, 2017a) • (Leung, 2017) • (Diamond, 2016 & Spiegel, 2013) • (Cabassa, 2015) • (Prokhorov, 2013) • (Unger, 2013) • (Leff, 2011) • (Kirsh, 2002) • (Kerr, 2000) • (Leung, 2014) • (Cardenas, 1993) • (Hammond, 2012) • (Mendiburo-Seguel, 2017) • (James, 2005) • (Olson, 1999) • (Kirsh, 2000) • (Davis, 2017) • (Nasution, 2018) • (Bellingham, 1993) • (Shin, 2012) • (Rodriguez, 2016 & Lin, 2013) • (Lin, 2015) • (Christy, 2016) • (Davis S, 2017) • (Hands, 2018) • (Cohen, 2018) • (Aleixo, 2016) • (Mallia, 2007) • (Unger, 2019) • (Byrne, 2002) • (Kirsh, 2002b) • (Hartling, 2010) • (Kirsh, 2003) • (Greene, 2017) • (Lambert, 2006) • (De Droog, 2014)
Intention change	<ul style="list-style-type: none"> • (Muzumdar, 2017) • (Koops van't Jagt, 2018) • (Duizer, 2014) • (Cabassa, 2015) • (Unger, 2013) • (Kirsh, 2002) • (Cardenas, 1993) • (Hammond, 2012) • (James, 2005) • (Davis, 2017) • (Bellingham, 1993) • (Thompson, 2019) • (Rodriguez, 2016 & Lin, 2013)

	<ul style="list-style-type: none"> • (Hands, 2018) • (Tan, 2018) • (Byrne, 2002) • (Greene, 2017) • (De Droog, 2014)
Knowledge change & recall	<ul style="list-style-type: none"> • (Junhasavasdikul, 2017a) • (Junhasavasdikul, 2017b) • (Koops van't Jagt, 2018) • (Duizer, 2014) • (Kraft, 2016) • (Leung, 2017) • (Diamond, 2016 & Spiegel, 2013) • (Cabassa, 2015) • (Prokhorov, 2013) • (Unger, 2013) • (Risi, 2004) • (Kerr, 2000) • (Delp, 1996) • (Leung, 2014) • (Kovacs, 2011) • (Cardenas, 1993) • (James, 2005) • (Macindo, 2015) • (Moll, 1986) • (Moll, 1977) • (Davis, 2017) • (Nasution, 2018) • (Short, 2013) • (Bellingham, 1993) • (Liu, 2004) • (Shin, 2012) • (Manes, 2014) • (Merç, 2013) • (Tabassum, 2018) • (Thompson, 2019) • (Subramanian, 2016) • (Rodriguez, 2016 & Lin, 2013) • (Lin, 2015) • (Lin, 2016) • (Christy, 2016) • (Davis S, 2017) • (Kotaman, 2019) • (Kotaman, 2017) • (Chan, 2019) • (Aleixo, 2016) • (Brand, 2019) • (Ahamed, 2016) • (Ngi Yi Lok, 2015) • (Unger, 2019) • (Byrne, 2002) • (Hartling, 2010) • (Piaw, 2012)

	<ul style="list-style-type: none"> • (Hassanirokh, 2016) • (Basal, 2016) • (Chua, 2014)
Understanding, comprehension	<ul style="list-style-type: none"> • (Maxwell, 2014) • (Delp, 1996) • (Cooper, 2016) • (Nasution, 2018) • (Tabassum, 2018) • (Alam, 2016) • (Kotaman, 2019) • (Kotaman, 2017) • (Brand, 2019) • (Ahamed, 2016) • (Byrne, 2002) • (Piaw, 2012) • (Hassanirokh, 2016) • (McDonald, 2009) • (Arlin, 1978) • (Chua, 2014)
Interest, desire to read	<ul style="list-style-type: none"> • (Diamond, 2016 & Spiegel, 2013) • (Lin, 2015) • (Lin, 2016) • (Piaw, 2012) • (Arlin, 1978) • (Lambert, 2006) • (Chua, 2014)
Other, uncategorized or not yet categorized	<ul style="list-style-type: none"> • (Muzumdar, 2017) • (Koops van't Jagt, 2018) • (Duizer, 2014) • (Prokhorov, 2013) • (Tae, 2012) • (Tjiam, 2012) • (Unger, 2013) • (Kirsh, 2002) • (Kerr, 2000) • (Leung, 2014) • (Kamel, 2017) • (Cardenas, 1993) • (Cooper, 2016) • (James, 2005) • (Olson, 1999) • (Reinwein, 1990) • (Chan, 2019) • (Mallia, 2007) • (Byrne, 2002) • (Kirsh, 2002b) • (Kirsh, 2003) • (Arlin, 1978)

Health outcomes

Choice of “healthier” snacks, for instance vegetables, fruits	<ul style="list-style-type: none"> • (Leung, 2014) • (Byrne, 2002) • (De Droog, 2014)
Depression symptoms, mood changes	<ul style="list-style-type: none"> • (Gallagher-Thompson, 2015) • (Linden, 1988) • (Felder-Puig, 2003)
Behavioral problems	<ul style="list-style-type: none"> • (Gallagher-Thompson, 2015) • (Kotaman, 2019) • (Kotaman, 2017)
Preparation for medical procedure	<ul style="list-style-type: none"> • (Maxwell, 2014) • (Tae, 2012) • (Campbell, 2005) • (Brand, 2019) • (Aminabadi, 2011)
Blood pressure changes	<ul style="list-style-type: none"> • (Linden, 1988)
Heart rate changes	<ul style="list-style-type: none"> • (Linden, 1988)
Tolerance of medical procedure, compliance with medical procedure	<ul style="list-style-type: none"> • (Gebarski, 2013) • (Tjiam, 2012) • (Delp, 1996)
Smoking-related outcomes (smoking status, use, frequency, etc.)	<ul style="list-style-type: none"> • (Prokhorov, 2013) • (Botvin, 1984) • (Unger, 2019)
Anxiety, distress, stress (unspecified)	<ul style="list-style-type: none"> • (Gallagher-Thompson, 2015) • (Campbell, 2005) • (Kassai, 2016) • (Kuo, 2016) • (Kamel, 2017) • (Macindo, 2015) • (Zieger, 2013) • (Brand, 2019) • (Tunney, 2013) • (Hartling, 2010) • (Aminabadi, 2011) • (Felder-Puig, 2003)
Medical screening uptake	<ul style="list-style-type: none"> • (Risi, 2004) • (Shin, 2012) • (Christy, 2016) • (Davis S, 2017)
Vaccine uptake	<ul style="list-style-type: none"> • (Fernandez, 2017)
Pain	<ul style="list-style-type: none"> • (Zieger, 2013) • (Aminabadi, 2011)
Drug use (excluding tobacco), drug-related issues	<ul style="list-style-type: none"> • (Werch, 1989) • (Botvin, 1984) • (Davis, 2017)
Sexual behavior change	<ul style="list-style-type: none"> • (James, 2005) • (Bellingham, 1993)
Health related knowledge change	<ul style="list-style-type: none"> • To do from Nasution, 2018 backward • (Nasution, 2018) • (Bellingham, 1993) • (Shin, 2012)

	<ul style="list-style-type: none"> • (Manes, 2014) • (Thompson, 2019) • (Subramanian, 2016) • (Christy, 2016) • (Davis S, 2017) • (Aleixo, 2016) • (Unger, 2019) • (Hartling, 2010)
Attitude change towards people with a health condition	To do from Bellingham 1993 backwar <ul style="list-style-type: none"> • (Bellingham, 1993) • (Cohen, 2018)
Attitude change towards medical test, intervention	To do from Shin 2012 backwards <ul style="list-style-type: none"> • (Shin, 2012) • (Thompson, 2019) • (Christy, 2016)
Other health outcomes	<ul style="list-style-type: none"> • (Nasution, 2018) • (Alam, 2016) • (Subramanian, 2016) • (Davis S, 2017) • (Tan, 2018) • (Unger, 2019) • (Hartling, 2010) • (Greene, 2017) • (De Droog, 2014)
Harms, adverse events	<ul style="list-style-type: none"> •

Outcomes related to use of the comics (and fidelity to the study protocol)

Attention given to study materials, use of study materials	<ul style="list-style-type: none"> • (Junhasavasdikul, 2017b) • (Gallagher-Thompson, 2015) • (Risi, 2004) • (Mendiburo-Seguel, 2017) • (Cooper, 2016) • (Shin, 2012) • (Tabassum, 2018) • (Unger, 2019) • (Hartling, 2010) • (Piaw, 2012)
Contamination, sharing of study materials	<ul style="list-style-type: none"> • (Junhasavasdikul, 2017b) • (Unger, 2013) • (Subramanian, 2016)
Enjoyment, pleasure, fun, helpfulness of materials, satisfaction, assessment of the study materials, preference, comic book rating	<ul style="list-style-type: none"> • (Leung, 2017) • (Gallagher-Thompson, 2015) • (Maxwell, 2014) • (Gebarski, 2013) • (Kirsh, 2002) • (Delp, 1996) • (Kassai, 2016) • (Muzumdar, 2015) • (Moll, 1986) • (Kirsh, 2000) • (Davis, 2017) • (Alam, 2016) • (Rodriguez, 2016 & Lin, 2013) • (Lin, 2015) • (Lin, 2016) • (Brand, 2019) • (Tan, 2018) • (Hartling, 2010) • (Piaw, 2012) • (Huber, 1997)
Perceived credibility of the comics	<p>To do from Subramanian 2016 backw</p> <ul style="list-style-type: none"> • (Subramanian, 2016) • (Rodriguez, 2016 & Lin, 2013) • (Aleixo, 2016)
Identification with the characters or stories within the comics	<p>To do from Subramanian 2016 backw</p> <ul style="list-style-type: none"> • (Subramanian, 2016) • (Cohen, 2018) • (Tan, 2018)
Feasibility of doing an RCT on comics	<ul style="list-style-type: none"> • (Mengoni, 2016)
Survey response rate changes	<ul style="list-style-type: none"> • (Hands, 2018)

[\[Back to top\]](#)

Keywords related to comics

English – Common variations (singular)

- Comics
 - Comic book
 - Cartoon
 - Cartoon strip
 - Cartoon-strip
 - Comic-strip
 - Comic strip
 - Strip
 - Strip cartoon
 - Strip-cartoon
 - Graphic novel
 - Graphic-novel
 - Graphic novella
 - Graphic-novella
 - Graphic memoir
 - Graphic narrative
 - Fotonovela
 - Foto novela
 - Foto-novela
 - Fotonovel
 - Foto novel
 - Foto-novel
 - Fotonovella
 - Foto-novella
 - Foto novella
 - Photonovela
 - Photo-novela
 - Photo novela
 - Photonovella
 - Photo novella
 - Photo-novella
 - Photonovel
 - Photo novel
 - Photo-novel
 - Photocomic
 - Photo-comic
 - Photo comic
 - Photostory
 - Photo story
 - Photo-story
 - Picture novel
 - Picture-novel
 - Picture comic
 - Picture-comic

- **Manga**
 - Seinen
 - Shjojo
 - Shonen
 - Josei
 - Kodomomuke
 - Kodomo
 - Nyuyoji
 - Joji
 - Danji
 - Nekketsu
 - Pansu shoto
 - Yonkoma
 - Dojinshi
 - One-shot
 - Yaoi
 - Yuri
 - Hentai
- **Manhwa**
- **Sequential art**
 - Visual narrative
- **Graphic medicine**
 - Medical narratives
 - Pathographies
- **Illustrated book**
- **Zine**
 - E-zine
 - Fanzine
 - Fan zine
 - Fan-zine
 - Webzine
 - Web zine
 - Web-zine
- **Webcomic**
 - Web-comic
 - Web comic
 - Webtoon
 - Web toon
 - Web-toon
 - Electronic comic
 - Electronic-comic
 - E-comic
 - Digital comic
 - Digital-comic
 - Mobile comic
 - Mobile-comic
- **9th art**
 - 9th-art
 - Ninth art
 - Ninth-art

French – Common variations (singular)

- **Bande dessinée [Comic book]**
 - Bande-dessinée [Comic book]
 - Bande illustrée [Illustrated comic book]
 - Roman graphique [Graphic novel]
 - BD [Comic book]
 - Blog BD [Comic blog]
 - Bédénovela [Online comic akin to a television serie]
 - Livre comique [Comic book]
 - Album [Book, among which comic books]
 - Webcomique [Webcomic]
 - Web-comique [Webcomic]
 - 9ème art [9th art]
 - Neuvième art [9th art]

Variations in other languages (singular)

- Tebeo
- Monitos
- Fumetto [Comic book] [IT]
- Banda desenhada
- Stripverhaal
- Комикс [Comics] [RU]
- Komikia
- Képregény
- Manhwa
- História em quadrinhos
 - história en cuadritos
 - historia con cuadritos
- Tiras dibujadas
- Comix
- 漫画 [Manga] [JP]
- Komik [Indonesian]
- Çizgi romanlar [Turkish]

[\[Back to top\]](#)

How we search for comics trials (database searches, keywords used)

Note: Initial searches are done from database inception to [search date]

Pubmed search 2 (<http://www.ncbi.nlm.nih.gov/pubmed>) (search created April 4, 2018)

(cartoons as topic[MeSH Terms] OR comics[Title/Abstract] OR comic book*[Title/Abstract] OR graphic novel*[Title/Abstract] OR photocomic*[Title/Abstract] OR sequential art[Title/Abstract] OR graphic medicine[Title/Abstract] OR cartoon*[Title/Abstract] OR comic-strip*[Title/Abstract] OR comic strip*[Title/Abstract] OR bede[Title/Abstract] OR fotonovel*[Title/Abstract] OR historieta*[Title/Abstract] OR bedes[Title/Abstract] OR bande dessinee*[Title/Abstract] OR bandes dessinee*[Title/Abstract] OR manga[Title/Abstract] OR mangas[Title/Abstract] OR graphic memoir*[Title/Abstract] OR pathograph*[Title/Abstract] OR webcomi*[Title/Abstract] OR manhwa*[Title/Abstract] OR roman graphique[Title/Abstract] OR romans graphique*[Title/Abstract]) AND (random*[Title/Abstract] OR randomized controlled trials as topic[MeSH Terms] OR randomized controlled trial[Publication Type]) NOT (animals[MeSH Terms] NOT humans[MeSH Terms])

Pubmed search 3 (<http://www.ncbi.nlm.nih.gov/pubmed>) (search created May 3, 2019)

(cartoons as topic[MeSH Terms] OR comics[Title/Abstract] OR comic book*[Title/Abstract] OR graphic novel*[Title/Abstract] OR sequential art[Title/Abstract] OR graphic medicine[Title/Abstract] OR illustrated book*[Title/Abstract] OR cartoon*[Title/Abstract] OR comic-strip*[Title/Abstract] OR comic strip*[Title/Abstract] OR cartoon strip*[Title/Abstract] OR strip-cartoon*[Title/Abstract] OR strip cartoon*[Title/Abstract] OR bede[Title/Abstract] OR fotonovel*[Title/Abstract] OR foto novel*[Title/Abstract] OR foto-novel*[Title/Abstract] OR photo-novel*[Title/Abstract] OR photonovel*[Title/Abstract] OR photo novel*[Title/Abstract] OR photo-comic*[Title/Abstract] OR photocomic*[Title/Abstract] OR historieta*[Title/Abstract] OR bedes[Title/Abstract] OR bande dessinee*[Title/Abstract] OR bandes dessinee*[Title/Abstract] OR manga[Title/Abstract] OR mangas[Title/Abstract] OR graphic memoir*[Title/Abstract] OR pathograph*[Title/Abstract] OR webcomi*[Title/Abstract] OR web-comic*[Title/Abstract] OR web comic*[Title/Abstract] OR e-comic*[Title/Abstract] OR e-zine*[Title/Abstract] OR fanzine*[Title/Abstract] OR digital comic*[Title/Abstract] OR manhwa*[Title/Abstract] OR picture book*[Title/Abstract] OR roman graphique[Title/Abstract] OR romans graphique*[Title/Abstract] OR fumett*[Title/Abstract] OR webtoon*[Title/Abstract] OR web-toon*[Title/Abstract] OR web toon*[Title/Abstract]) AND (random*[Title/Abstract] OR randomized controlled trials as topic[MeSH Terms] OR randomized controlled trial[Publication Type]) NOT (animals[MeSH Terms] NOT humans[MeSH Terms])

Pubmed search 4 (<http://www.ncbi.nlm.nih.gov/pubmed>) (search created May 6, 2019)

(cartoons as topic[MeSH Terms] OR comics[Title/Abstract] OR comic book*[Title/Abstract] OR graphic novel*[Title/Abstract] OR sequential art[Title/Abstract] OR graphic medicine[Title/Abstract] OR illustrated book*[Title/Abstract] OR cartoon*[Title/Abstract] OR comic-strip*[Title/Abstract] OR comic strip*[Title/Abstract] OR cartoon strip*[Title/Abstract] OR strip-cartoon*[Title/Abstract] OR strip cartoon*[Title/Abstract] OR bede[Title/Abstract] OR fotonovel*[Title/Abstract] OR foto novel*[Title/Abstract] OR foto-novel*[Title/Abstract] OR photo-novel*[Title/Abstract] OR photonovel*[Title/Abstract] OR photo novel*[Title/Abstract] OR photo-comic*[Title/Abstract] OR photocomic*[Title/Abstract] OR historieta*[Title/Abstract] OR bedes[Title/Abstract] OR bande dessinee*[Title/Abstract] OR bandes dessinee*[Title/Abstract] OR manga[Title/Abstract] OR mangas[Title/Abstract] OR graphic memoir*[Title/Abstract] OR pathograph*[Title/Abstract] OR webcomi*[Title/Abstract] OR web-comic*[Title/Abstract] OR web comic*[Title/Abstract] OR e-comic*[Title/Abstract] OR e-zine*[Title/Abstract] OR fanzine*[Title/Abstract] OR digital comic*[Title/Abstract] OR manhwa*[Title/Abstract] OR picture book*[Title/Abstract] OR roman graphique[Title/Abstract] OR romans graphique*[Title/Abstract] OR fumett*[Title/Abstract] OR webtoon*[Title/Abstract] OR web-toon*[Title/Abstract] OR web toon*[Title/Abstract]) AND ("systematic review" OR "Systematic Reviews as Topic"[MAJR]) NOT (animals[MeSH Terms] NOT humans[MeSH Terms])

CINAHL search 2 (via EBSCO) (search created April 4, 2018)

(cartoon* OR comics OR comic book* OR graphic novel* OR photocomic* OR sequential art OR graphic medicine OR comic-strip* OR comic strip* OR fotonovel* OR historieta* OR bande dessinee* OR manga OR mangas OR graphic memoir* OR pathograph* OR webcomic* OR manhwa* OR roman graphique) AND (randomi* OR controlled trial*) TX

EMBASE search 2 (<https://www.embase.com/#search>) (search created April 4, 2018)

(cartoon* OR comics OR 'comic book' OR 'graphic novel' OR photocomic* OR 'sequential art' OR 'graphic medicine' OR 'comic strip*' OR 'comic strip' OR fotonovel* OR historieta* OR 'bande dessinee' OR manga OR mangas OR 'graphic memoir' OR pathograph* OR webcomic* OR manhwa* OR 'roman graphique') AND 'randomized controlled trial'

CISMeF search 2 (<http://www.chu-rouen.fr/cismef/>) (search created April 4, 2018)

(bande dessinée OR roman graphique) AND random*

CENTRAL search 2 (<https://www.cochranelibrary.com/central>) (search created April 4, 2018)

comics OR comic book* OR graphic novel* OR photocomic* OR sequential art OR graphic medicine OR cartoon* OR comic-strip* OR comic strip* OR fotonovel* OR historieta* OR bande dessinee* OR bandes dessinee* OR manga OR mangas OR graphic memoir* OR pathograph* OR webcomi* OR manhwa* OR roman graphique* OR romans graphique*

CENTRAL search 3 (<https://www.cochranelibrary.com/central>) (search created May 8, 2019)

comics OR comic?book OR cartoon OR comic?strip OR strip?cartoon OR graphic?novel OR graphic?memoir OR graphic?narrative OR fotonovela OR photocomic OR photo?comic OR foto?novel OR picture?novel OR photo?novel OR picture?novel OR manga OR manhwa OR sequential?art OR graphic?medicine OR medical?narratives OR pathograph* OR illustrated?book OR zine OR e?zine OR fanzine OR fan?zine OR webcomic OR web?comic OR webtoon OR web?toon OR digital?comic OR roman?graphique OR livre?comique OR webcomique OR web?comique OR tebeo OR monitos OR fumett* OR banda?desenhada OR stripverhaal OR komikia OR kepregeny OR manhwa OR "historia em quadinhos" OR "historia en cuadritos" OR "historia con cuadritos" [All Text] NOT manga [Author]

Trip search 2 (<http://tripdatabase.com/>) (search created April 4, 2018) (controlled trials only)

(cartoon* OR comics OR comic book* OR graphic novel* OR photocomic* OR sequential art OR graphic medicine OR comic-strip* OR comic strip* OR fotonovel* OR historieta* OR bande dessinee* OR manga OR mangas OR graphic memoir* OR pathograph* OR webcomic* OR manhwa* OR roman graphique)

Google Scholar (first 3 pages) (<http://scholar.google.com/>) (search created April 4, 2018)

1. ("cartoon" OR "comics" OR "comic book" OR "graphic novel" OR "photocomic" OR "sequential art") AND ("randomized controlled")
2. ("graphic medicine" OR "comic strip" OR "fotonovela" OR "historieta" OR "bande dessinée" OR "manga") AND ("randomized controlled")
3. ("graphic memoir" OR "pathograph" OR "webcomic" OR "manhwa" OR "roman graphique") AND ("randomized controlled")

PsycInfo 2 (via Ovid) (<http://www.apa.org/pubs/databases/psycinfo/index.aspx>) (search created April 4, 2018)

((cartoon* or comics or comic book* or graphic novel* or photocomic* or sequential art or graphic medicine or comic-strip* or comic strip* or fotonovel* or historieta* or bande dessinee* or manga or mangas or graphic memoir* or pathograph* or webcomic* or manhwa* or roman graphique) and (randomi* or controlled trial*)).mp. [mp=title, abstract, heading word, table of contents, key concepts, original title, tests & measures]

PROSPERO (<https://www.crd.york.ac.uk/prospéro/>) (search created April 4, 2018) (all fields, single keywords searched)

Cartoon, comics, comic book, graphic novel, photocomic, sequential art, graphic medicine, comic strip, fotonovela, historieta, bande dessinee, manga, graphic memoir, webcomic, manhwa, roman graphique

PROSPERO 2 (<https://www.crd.york.ac.uk/prospéro/> via Google search) (search created May 6, 2019)

Cartoon OR comics OR "comic book" OR "graphic novel" OR photocomic OR "graphic medicine" OR "comic strip" OR fotonovela OR historieta OR "bande dessinée" OR manga OR "graphic memoir" OR webcomic OR manhwa OR "roman graphique" OR "graphic narrative" OR photonovel OR "graphic medicine" OR "fanzine" OR "webtoon" OR "digital comic" site:www.crd.york.ac.uk/prospéro/

Clinicaltrials 2 (<http://clinicaltrials.gov/>) (search created April 4, 2018)

1. (cartoon* OR comics OR comic book* OR graphic novel* OR photocomic* OR sequential art OR graphic medicine OR comic-strip* OR comic strip* OR fotonovel* OR historieta* OR bande dessinee* OR manga)
2. (mangas OR graphic memoir* OR pathograph* OR webcomic* OR manhwa* OR roman graphique)

WHO-ICTRP 2 (<http://apps.who.int/trialsearch/>) (search created April 4, 2018) (including trials in children, all trials)

(cartoon* OR comics OR comic book* OR graphic novel* OR photocomic* OR sequential art OR graphic medicine OR comic-strip* OR comic strip* OR fotonovel* OR historieta* OR bande dessinee* OR manga OR mangas OR graphic memoir* OR pathograph* OR webcomic* OR manhwa* OR roman graphique)

Japanese RCTPortal (<https://rctportal.niph.go.jp/en/>) (search created April 2019) (single keywords searched)

Comic book, comics, manga

Web of Science (<https://apps.webofknowledge.com/>) (search created April 2, 2019)

ALL=(comics OR "comic book*" OR "graphic novel*" OR "illustrated book*" OR cartoon* OR comic-strip* OR "comic strip*" OR "cartoon strip*" OR strip-cartoon* OR "strip cartoon*" OR fotonovel* OR "foto novel*" OR foto-novel*OR photo-novel* OR photonovel* OR "photo novel*" OR photo-comic* OR photocomic* OR historieta* OR "bande dessinee*" OR "bandes dessinee*" OR manga OR mangas OR webcomi* OR web-comic* OR "web comic*" OR e-comic* OR e-zine* OR fanzine* OR "digital comic*" OR manhwa* OR "picture book*" OR fumett* OR webtoon* OR web-toon* OR "web toon*") AND ALL=(random* OR quasi-experiment*)

Modified Web of Science (<https://apps.webofknowledge.com/>) (search created July 12, 2019)

ALL=(comics OR "comic book*" OR "graphic novel*" OR "illustrated book*" OR cartoon* OR comic-strip* OR "comic strip*" OR "cartoon strip*" OR strip-cartoon* OR "strip cartoon*" OR fotonovel* OR "foto novel*" OR foto-novel*OR photo-novel* OR photonovel* OR "photo novel*" OR photo-comic* OR photocomic* OR historieta* OR "bande dessinee*" OR "bandes dessinee*" OR manga OR mangas OR webcomi* OR web-comic* OR "web comic*" OR e-comic* OR e-zine* OR fanzine* OR "digital comic*" OR manhwa* OR "picture book*" OR fumett* OR webtoon* OR web-toon* OR "web toon*") AND ALL=(experiment*)

ERIC (<https://eric.ed.gov/>) (n/a)

Yet to do.

RetractionWatch database of retracted studies (<http://retractiondatabase.org/RetractionSearch.aspx>) (search created May 6, 2019) (Title search)

Cartoon comics photocomic comic-strip fotonovela historieta dessinée manga webcomic manhwa photonovel fanzine webtoon

PubPeer online journal club (<https://pubpeer.com/>) (n/a)

No searches were done on the PubPeer database; this is because VM can already see which included trials have PubPeer comments with the PubPeer Firefox add-on (<https://addons.mozilla.org/fr/firefox/addon/pubpeer/>).

Cartoonscience list of experimental studies involving comics curated by Matteo Farinella (<http://www.cartoonscience.org/>)

ComicsResearch list of dissertations and theses on comics (<http://www.comicsresearch.org/ComicsDissertations.html>)

BOBC (Bonner Online-Bibliographie zur Comicforschung) database of research on comics (<http://www.bobc.uni-bonn.de/>)

Keeping track of what was searched, when and by who (search tracker)

Search name	Executed on	Hits	Executed by	Independently checked by	Notes
Searches executed before April 2, 2019 not (yet) reported here					
Web of Science 0	April 2, 2019	476	VM		Inception to April 2, 2019
Cartoonscience	April 22, 2019	36	VM		
Prospero 2	May 6, 2019	2	VM		Via Google Search, for practical reasons (single search with all keywords)
Pubmed 4	May 6, 2019	14	VM		Inception to May 6, 2019
RetractionWatch 0	May 6, 2019	0	VM		No search limiters. Search currently not very specific.
CENTRAL 3	May 8, 2019	357	VM		
ComicsResearch	July 7, 2019	?	VM		List last updated July 7, 2013
BOBC	July 8, 2019	197	VM		Keyword: experiment
Modified Pubmed 4	July 11, 2019	304	VM		Pubmed 4 with keywords + "experiment"
Modified Web of Science 0	July 12, 2019	1702	VM		Web of Science 2 with keywords + ALL=(experiment*)

[\[Back to top\]](#)

Backward citation searches (references assessed for inclusion)

Researchers using comics typically cite previous research (usually found in their respective “References” section) on which they base their work. Some of these references can refer to trials which should be included in this register. Looking at these references for relevant studies is called “backward citation searching”. The titles (e.g. “*Effects of multimedia-based graphic novel presentation on critical thinking among...*”) of references which appeared potentially relevant to this register were manually identified and searched on Google. This was done for studies cited in:

Included study	Reference list assessed by :	Included study	Reference list assessed by :
Muzumdar, 2017	VM	Cooper, 2016	VM
Junhasavasdikul, 2017a	VM	James, 2005	VM
Junhasavasdikul, 2017b	VM	Muzumdar, 2015	VM
Koops van’t Jagt, 2018	VM	Botvin, 1984	VM
Duizer, 2014		Olson, 1999	VM
Kraft, 2016	VM	Macindo, 2015	VM
Leung, 2017	VM	Moll, 1986	VM
Spiegel, 2013 and Diamond, 2016	VM VM	Kirsh, 2000	VM
Cabassa, 2015	VM	Moll, 1977	VM
Gallagher-Thompson, 2015	VM	Davis, 2017	VM
Maxwell, 2014	VM	Zieger, 2013	VM
Gebarski, 2013	VM	Nasution, 2018	
Prokhorov, 2013	VM	Short, 2013	VM
Tae, 2012	VM	Bellingham, 1993	VM
Tjiam, 2012	VM	Liu, 2004	VM
Unger, 2013	VM	Mengoni, 2016	VM
Leff, 2011	VM	Shin, 2012	VM
Campbell, 2005	VM	Reinwein, 1990	VM
Risi, 2004	VM	Manes, 2014	VM
Tunney, 2013	VM	Merç, 2013	VM
Kirsh, 2002	VM	Tabassum, 2018	VM
Kerr, 2000	VM	Alam, 2016	VM
Delp, 1996	VM	Thompson, 2019	VM
		Subramanian, 2016	VM
Linden, 1988	VM	Rodriguez, 2016	VM
Fernandez, 2017	VM	Lin, 2015	VM
Leung, 2014	VM	Lin, 2016	VM
Chua, 2014		De Droog, 2014	
Kassai, 2016	VM	Christy, 2016	VM
Kovacs, 2011	VM	Davis, 2017 (Stacy)	VM
Kuo, 2016	VM	Kotaman, 2019	VM
Kamel, 2017	VM	Kotaman, 2017	VM
Werch, 1989	VM	Chan, 2019	VM
Cardenas, 1993	VM	Hands, 2018	VM
Hammond, 2012	VM	Cohen, 2018	VM
Mendiburo-Seguel, 2017	VM	Aleixo, 2016	VM
Unger, 2019	VM	Mallia, 2007	VM
Byrne, 2002	VM	Lin, 2013	VM
Kirsh, 2002b	VM	Brand, 2019	VM
Hartling, 2010	VM	Tan, 2018	VM
Huber, 1997	VM	Ahamed, 2016	VM
Piaw, 2012	VM	Ngj Yi Lok, 2015	VM

Hassanirokh, 2016	VM	Kirsh, 2003	VM
Ojeda-Beck, 2018		McDonald, 2009	VM
Arlin, 1978		Greene, 2017	VM
Basal, 2016	VM	Lambert, 2006	VM
Aminabadi, 2011	VM	Felder-Puig, 2003	VM

[\[Back to top\]](#)

Forward citation searches (articles citing included study assessed for inclusion)

Included study	Date of last forward citation search and assessment (+website or tool used)
Muzumdar, 2017	April 2018 (Google Scholar) 20 June 2019 (Google Scholar) (3 hits)
Junhasavasdikul, 2017a Junhasavasdikul, 2017b	April 2018 (Google Scholar) 20 June 2019 (Google Scholar) (0 hits)
Koops van't Jagt, 2018	April 2018 (Google Scholar) 20 June 2019 (Google Scholar) (9 hits)
Duizer, 2014	April 2018 (Google Scholar) 20 June 2019 (Google Scholar) (8 hits)
Kraft, 2016	April 2018 (Google Scholar) 20 June 2019 (Google Scholar) (16 hits)
Leung, 2017	April 2018 (Google Scholar) 20 June 2019 (Google Scholar) (6 hits)
Spiegel, 2013	April 2018 (Google Scholar) 20 June 2019 (Google Scholar) (48 hits)
Diamond, 2016	April 2018 (Google Scholar) 20 June 2019 (Google Scholar) (3 hits)
Cabassa, 2015	April 2018 (Google Scholar) 20 June 2019 (Google Scholar) (5 hits)
Gallagher-Thompson, 2015	April 2018 (Google Scholar) 5 July 2019 (Google Scholar) (17 hits)
Maxwell, 2014	April 2018 (Google Scholar) 5 July 2019 (Google Scholar) (1 hit)
Gebarski, 2013	April 2018 (Google Scholar) 5 July 2019 (Google Scholar) (10 hits)
Prokhorov, 2013	April 2018 (Google Scholar) 5 July 2019 (Google Scholar) (30 hits)
Tae, 2012	April 2018 (Google Scholar) 5 July 2019 (Google Scholar) (110 hits)
Tjiam, 2012	April 2018 (Google Scholar) 5 July 2019 (Google Scholar) (25 hits)
Unger, 2013	April 2018 (Google Scholar) 5 July 2019 (Google Scholar) (79 hits)
Leff, 2011	April 2018 (Google Scholar) 5 July 2019 (Google Scholar) (9 hits)
Campbell, 2005	April 2018 (Google Scholar) 5 July 2019 (Google Scholar) (38 hits)
Risi, 2004	April 2018 (Google Scholar) 5 July 2019 (Google Scholar) (37 hits)
Kirsh, 2002	April 2018 (Google Scholar) 5 July 2019 (Google Scholar) (32 hits)
Kerr, 2000	April 2018 (Google Scholar) 5 July 2019 (Google Scholar) (7 hits)
Delp, 1996	April 2018 (Google Scholar) 5 July 2019 (Google Scholar) (304 hits)
Larson, 1992	April 2018 (Google Scholar)
Linden, 1988	April 2018 (Google Scholar)
Fernandez, 2017	April 2018 (Google Scholar) <i>Not yet cited (5 July 2019)</i>
Leung, 2014	April 2018 (Google Scholar) 5 July 2019 (Google Scholar) (32 hits)
Goodwin, 1982	April 2018 (Google Scholar) 5 July 2019 (Google Scholar) (1 hit)
Kassai, 2016	April 2018 (Google Scholar)

	5 July 2019 (Google Scholar) (19 hits)
Kovacs, 2011	April 2018 (Google Scholar) 5 July 2019 (Google Scholar) (29 hits)
Kuo, 2016	April 2018 (Google Scholar) 5 July 2019 (Google Scholar) (4 hits)
Kamel, 2017	April 2018 (Google Scholar) 5 July 2019 (Google Scholar) (3 hits)
Werch, 1989	April 2018 (Google Scholar)
Cardenas, 1993	April 2018 (Google Scholar) 5 July 2019 (Google Scholar) (17 hits)
Hammond, 2012	April 2018 (Google Scholar)
Mendiburo-Seguel, 2017	April 2018 (Google Scholar) <i>Not yet cited (5 July 2019)</i>
Cooper, 2016	April 2018 (Google Scholar) 5 July 2019 (Google Scholar) (6 hits)
James, 2005	April 2018 (Google Scholar) 5 July 2019 (Google Scholar) (4 hits)
Muzumdar, 2015	April 2018 (Google Scholar) 5 July 2019 (Google Scholar) (3 hits)
Botvin, 1984	April 2018 (Google Scholar)
Olson, 1999	April 2018 (Google Scholar)
Macindo, 2015	April 2018 (Google Scholar) 5 July 2019 (Google Scholar) (6 hits)
Moll, 1986	April 2018 (Google Scholar) 5 July 2019 (Google Scholar) (81 hits)
Kirsh, 2000	April 2018 (Google Scholar) 5 July 2019 (Google Scholar) (46 hits)
Moll, 1977	April 2018 (Google Scholar) 5 July 2019 (Google Scholar) (31 hits)
Davis H, 2017	April 2018 (Google Scholar) 5 July 2019 (Google Scholar) (1 hit)
Zieger, 2013	April 2018 (Google Scholar) 5 July 2019 (Google Scholar) (3 hits)
Nasution, 2018	April 2018 (Google Scholar) 5 July 2019 (Google) (5 hits)
Short, 2013	April 2018 (Google Scholar) 5 July 2019 (Google Scholar) (45 hits)
Bellingham, 1993	April 2018 (Google Scholar) 5 July 2019 (Google Scholar) (69 hits)
Liu, 2004	April 2018 (Google Scholar) 5 July 2019 (Google Scholar) (194 hits)
Mengoni, 2016	May 16, 2019 (Google Scholar) (5 hits)
Shin, 2012	May 16, 2019 (Google Scholar) (8 hits)
Reinwein, 1990	May 16, 2019 (Google) (6 hits)
Manes, 2014	May 16, 2019 (Google) (6 hits)
Merç, 2013	May 16, 2019 (Google Scholar) (29 hits)
Tabassum, 2018	May 21, 2019 (Google Scholar) (3 hits)
Alam, 2016	May 21, 2019 (Google Scholar) (11 hits)
Thompson, 2019	<i>Not yet cited (20 June 2019)</i>
Subramanian, 2016	May 21, 2019 (Google) (4 hits)
Rodriguez, 2016	May 21, 2019 (Google) (18 hits)
Lin, 2015	May 21, 2019 (Google Scholar) (19 hits)
Lin, 2016	May 21, 2019 (Google Scholar) (12 hits)
Wright, 2013	May 21, 2019 (Google Scholar) (20 hits)
Christy, 2016	May 21, 2019 (Google Scholar) (13 hits)
Davis, 2017 (Stacy)	May 21, 2019 (Google Scholar) (13 hits)
Kotaman, 2017	May 21, 2019 (Google Scholar) (7 hits)

Kotaman, 2019	May 21, 2019 (Google) (11 hits)
Chan, 2019	May 21, 2019 (Google Scholar) (1 hit)
Hands, 2018	May 21, 2019 (Google) (11 hits)
Cohen, 2018	May 21, 2019 (Google) (10 hits)
Aleixo, 2016	May 21, 2019 (Google Scholar) (5 hits)
Mallia, 2007	May 21, 2019 (Google) (546 hits)
Lin, 2013	June 3, 2019 (Google Scholar) (2 hits)
Brand, 2019	June 3, 2019 (Google Scholar) (1 hit)
Tan, 2018	June 3, 2019 (Google Scholar) (0 hit)
Ahamed, 2016	June 3, 2019 (Google) (9 hits)
Ngi Yi Lok, 2015	June 3, 2019 (Google) (88 hits, 10 displayed)
Unger, 2019	<i>Not yet cited (20 June 2019)</i>
Byrne, 2002	July 8, 2019 (Google Scholar) (55 hits)
Tunney, 2013	July 8, 2019 (Google Scholar) (26 hits)
Kirsh, 2002b	July 8, 2019 (Google Scholar) (59 hits)
Hartling, 2010	July 8, 2019 (Google Scholar) (14 hits)
Piaw, 2012	July 8, 2019 (Google Scholar) (12 hits)
Hassanirokh, 2016	<i>Not yet cited (July 8, 2019)</i>
Kirsh, 2003	<i>Not found with Google Scholar</i>
Ojeda-Beck, 2018	
McDonald, 2009	July 8, 2019 (Google Scholar) (6 hits)
Arlin, 1978	July 8, 2019 (Google Scholar) (59 hits)
Greene, 2017	July 11, 2019 (Google Scholar) (1 hit)
Basal, 2016	July 11, 2019 (Google Scholar) (9 hits)
Lambert, 2006	<i>Not yet cited (July 11, 2019)</i>
Aminabadi, 2011	July 11, 2019 (Google Scholar) (14 hits)
Felder-Puig, 2003	July 12, 2019 (Google Scholar) (119 hits)
Huber, 1997	
De Droog, 2014	
Chua, 2014	

[\[Back to top\]](#)

Contacts with comics trial authors and comics researchers

Corresponding author	Twitter handle	Date of last email sent asking for comics RCTs	Notes
Cardenas Melchor Pablo Bruce Simons-Morton		April 8, 2018 May 9, 2019	No answers No answers
Thompson Debbe		April 8, 2018 May 9, 2019	No answers Suggested 10 studies.
Junhasavasdikul Detajin Kanokporn Sukhato		April 8, 2018 May 9, 2019	No answers No answers
Kassai Behrouz		April 8, 2018 May 9, 2019	No answers No answers
Prokhorov Alexander V		April 8, 2018 May 9, 2019	No answers No answers
Leung May May		April 8, 2018 May 9, 2019	No answers No answers
Delp Chris Jeffrey Jones		May 14, 2019	No answers
Risi Liliana Bindman JP	@LilianaRisi	May 14, 2019	No answers
Kraft Stephanie A		April 8, 2018 May 9, 2019	No answers No answers
Kirsh Stephen Jay			
Koops van't Jagt Ruth		April 8, 2018 May 9, 2019	No answers No answers
Muzumdar Jagannath		April 8, 2018 May 9, 2019	Suggested 4 studies. No answers
Unger Jennifer B Molina Gregory B Contreras Sandra Baron Melvin		April 8, 2018 May 9, 2019	No answers No answers
Duizer Evelien Jansen Carel		April 8, 2018 May 9, 2019	Suggested 1 study. Pointed out an error. Suggested 3 studies.
Campbell Caroline		May 14, 2019	No answers
Leff Stephen S		April 8, 2018 May 9, 2019	No answers No answers
Hammond David		April 8, 2018 May 9, 2019	No answers No answers
Tjiam AM		April 8, 2018 May 9, 2019	No answers No answers
Jae Woong Tae Hong Su Jin		May 14, 2019	No answers
Gebarski Kathleen S		April 8, 2018 May 9, 2019	No answers No answers
Maxwell Elizabeth Harpreet Pall		April 8, 2018 May 9, 2019	No answers No answers
Kerr Jacqueline McKenna Jim		April 8, 2018 May 9, 2019	No answers Wrong email
Gallagher-Thompson Dolores		April 8, 2018 May 9, 2019	No answers No answers
Cabassa Leopoldo J	@LCabassa	April 8, 2018 May 14, 2019	No answers Wrong email

Kuo Hui-Chen		April 8, 2018	No answers
Tsao Ying		May 9, 2019	No answers
Mendiburo-Seguel Andres		April 8, 2018	No answers
		May 9, 2019	No answers
Kamel Dalia O		April 8, 2018	No answers
Wahba Nadia A		May 9, 2019	No answers
Sanchez Katherine		April 8, 2018	No answers
		May 9, 2019	No answers
Werch Chudley E			
Linden Wolfgang		April 8, 2018	No answers
		May 9, 2019	No answers
Fernandez Maria E	@Maria_e_prof	April 8, 2018	No answers
		May 14, 2019	No answers
Kovacs Francisco M		April 8, 2018	No answers
		May 9, 2019	No answers
Cooper Tarni Louisa		April 8, 2018	No answers
		May 9, 2019	No studies to suggest.
James Shamagonam		May 14, 2019	No answers
Botvin Elizabeth M			
Olson James M		April 8, 2018	No answers
		May 9, 2019	No answers
Macindo John Rey B		April 8, 2018	No answers
		May 9, 2019	No answers
Moll John Michael Henderson			Passed away in 2017
Noe Matthew	@NoetheMatt	April 8, 2018	No answers
Cohn Neil	@visual_linguist	April 8, 2018	Suggested 14 studies.
Farinella Matteo	@matteofarinella	April 8, 2018	No answers
Giboulet Antonin		April 8, 2018	No answers
Tudrej Benoit		May 9, 2019	No answers
Zieger Barbara		April 8, 2018	No answers
		May 9, 2019	No answers
Nasution Shinta		April 8, 2018	Did not suggest studies
		May 9, 2019	No answers
Reinwein Joachim		26 April 2019	No answers
Manes Mindi		28 March 2019	No answers
Merç Ali		28 March 2019	No answers
Tabassum Madiha		28 March 2019	No answers
Thompson Beti		28 March 2019	No answers
Subramanian Roma	@romasubramanian	26 April 2019	No answers
Rodriguez Lulu		28 March 2019	No study to suggest (yet)
Lin Xiao			
Lin Shu-Fen		28 March 2019	No answers
Wright Heather Harris		26 April 2019	No answers
Davis S. & Christy -> Gwede Clement		28 March 2019	No answers
Kotaman Hüseyin		26 April 2019	Not aware of other relevant studies.
Chan Tracy > Wong Simpson		26 April 2019	Did not suggest studies. Working on a meta-analysis on the topic.
Hands Tayla		26 April 2019	No answers
Cohen Elizabeth		26 April 2019	No answers
Aleixo Paul	@paul_aleix	26 April 2019	Suggested 7 studies. Knows ongoing relevant studies, can't share details yet.
Suzuki Hitomi		28 March 2019	No answers
Shimazaki Takashi		28 March 2019	Trial still ongoing. Suggested 4 studies.

Inaoka Kimiko		28 March 2019	No answers
Alam Shama > Durand Anne-Marie		28 March 2019	Suggested 1 study
Nakazawa Jun		23 April 2019	Email blocked by firewall
Richard Mayer		23 April 2019	Says he has not published comics' research.
Gorg Mallia		23 April 2019	Detailed results of (Mallia, 2007) might be published at some point in the future.
Malavika Kulkarni		May 16, 2019	No answers
Anna Brand		June 3, 2019	No answers
Shu Ling Tan	@Tan_ShuLing	June 3, 2019	No answers
Ajurun Begum Ahamed > Raja Nor Safinas Raja Harun		June 5, 2019	Did not suggest studies.
Ngi Yi Lok Alice			
Grootens-Wiegers Petronella		June 5, 2019	No answers
Elena Byrne		July 8, 2019	No answers
> Susan Nitzke (Passed away)			
Anne Marie Tunney		July 8, 2019	No answers
Lisa Hartling	@lisa_hartling	July 8, 2019	No answers
Piaw Chua Yan*		July 8, 2019	No answers
Hassanirokh Fatemeh		July 8, 2019	No answers
Ojeda-Beck Alejandra			
Dominic Davies		July 7, 2019	No answers
Comics Research Hub		July 7, 2019	No answers
Gesellschaft für Comicforschung		July 7, 2019	No answers
The International Bande Dessinée Society Conference > Laurence Grove	@IntBDSoc	July 7, 2019	Did not suggest studies. Suggested Comix Scholars list.
International Graphic Novel and Comics Conference	@TheIGNCC	July 7, 2019	No answers
International Manga Research Center, Kyoto Seika University			
McDonald Peter			
Arlin Marshall			
Comix Scholars list		July 9, 2019	Lead to contacts with Duncan Randy, Janina Wildfeuer & Leonard Rifas
Alexander Dunst			
Jochen Laubrock			
Rifas Leonard			Pointed out having read experimental research involving comics in unpublished masters' theses from the 1940s, 1950s. Noted military research might have also disappeared.
Greene Jessica		July 12, 2019	No answers
Basal Ahmet		July 12, 2019	No answers
Lambert Sheila			
Aminabadi Naser Asl		July 12, 2019	No answers
Felder-Puig Rosemarie > Reinhard J Topf		July 12, 2019	Wrong email (Rosemarie)
Huber Oswald			
De Droog Simone M			

Grey background means this researcher should no longer be contacted to identify further comics RCTs unless he/she/they ask otherwise.

*It is not clear if Piaw or Chua is the last name of this author.

[\[Back to top\]](#)

Suggestions for future comics researchers

(In no particular order)

- Include the comics assessed in the study report or among appendixes, if possible
- Include pictures of what the comic(s) looked like in the study report or among appendixes
- If the comic has an ISBN, mention it in the report.
- Report enough details to identify the comic used if other comics with the same name exist (eg. point out year of publication, name in original language). Report the chapter name or volume used, if relevant.
- If the comic is available on the market, mention how much it costs
- Mention sources of funding (or report no funding)
- Mention if the study authors contributed to the creation of the comic
- If the study authors did contribute to the creation of the comic mention efforts to prevent potential [allegiance bias](#)
- Mention financial conflicts of interest related to the comics assessed
- Mention all efforts made to prevent contamination, such as the comics being shared between groups
- Explain how the random sequences were generated (See: [Rationale](#))
- Explain efforts made to prevent foreknowledge of intervention assignment (See: [Rationale for allocation concealment](#))
- Explain efforts to blind participants, study personnel, outcome assessors and statisticians to group assignment (See: [Rationale](#))
- Explain where readers can find the study protocol or registry entry if there is one (See: [Rationale](#)). If possible, add it as an appendix. [Registered reports](#) can be an alternative.
- Mention adverse events whether expected or unexpected or point out none happened.
- Consider measuring outcomes over 6+ months of follow-up post-intervention.
- Make use of the [CONSORT reporting guidelines](#) for randomised controlled trials to help you describe key elements of your randomised controlled trial. Extensions exist for harms, cluster trials, non-pharmacological trials, pilot trials, etc.
- Make use of the [TIDieR reporting guideline](#) to help you describe the interventions offered in the intervention and comparison group(s) in sufficient details to allow their replication.
- If one is available, do consider sets of key outcomes to measure ([Core Outcome Sets](#))
- If you measure outcomes with a scale, do point out score ranges and what a higher or lower score means
- Mention “comics” or the specific type of comics (eg. fotonovela, manga, manhwa) you are assessing in the study title, keyword or abstract.
- Cite previously published comics randomized controlled trials (such as those included in this register) or comics systematic reviews (when those will be available) if relevant.

[\[Back to top\]](#)

Project details that still need to be discussed (discussion section)

- Should the title of the register be changed to something clearer, more specific?
 - Motive: Title might currently be a bit unclear (eg. “embargo” = participants have to wait until they can obtain the comics)
- Should contributors also be mentioned in the first page / title?
 - Pros:
 - Values and emphasizes contributors
 - Cons:
 - Some contributors may not want to be in the title
 - May falsely make it look like contributors adhere and support this project
 - At some point there might be too many

[\[Back to top\]](#)

How people are contributing or contributed to the project

Original author:

Martin Vuillème had the initial idea for the project, designed the original register, wrote the protocol for the rapid literature review update from which this register emerged, wrote and updated the literature search strategies, contacted study authors for further relevant trials, identified studies meeting inclusion criteria, performed data extraction, assessed risk of bias in included studies and wrote this manuscript.

Suggested potentially relevant studies to include:

Janina Wildfeuer, Leonard Rifas, Carel Jansen, Neil Cohn, Matteo Farinella, Jagannath Muzumdar, Shimazaki Takashi, Anne-Marie Durand and Paul Aleixo.

Replied not knowing other potentially relevant studies to include or answered emails but did not suggest further studies to assess:

Laurence Grove, Raja Nor Safinas Raja Harun, Tarni Cooper, Lulu Rodriguez, Richard Mayer, Gorg Mallia, Kotaman Hüseyin and Shinta Nasution.

Suggested relevant researchers, associations or people to contact

Randy Duncan.

Spent time searching for experimental studies on comics among personal files

Leonard Rifas.

Pointed out error(s):

Carel Jansen pointed out (Duizer, 2014) isn't a duplicate of (Koops van't Jagt, 2017) but reports the results for the low literacy group.

Other:

Special thanks to all those who tweeted and retweeted about the project (not named for practical reasons) and to both the Centre Hospitalier Universitaire Vaudois (CHUV) and the Haute Ecole Pédagogique (HEP) for their institutional access to research databases.

[\[Back to top\]](#)

Conflict of interests and funding statements

Competing interests of key contributors

Contributor	Competing financial interests	Non-financial interests	Beliefs towards comics	Date when last updated
Martin Vuillème (VM)	I do not have competing financial interests to disclose	I am also the author and illustrator of online non-profit webcomics (mainly The Science of Cookies , 2015-2019, most drawings are on a CC-BY-NC license). I have been reading and enjoying comics of various types since childhood. I have been drawing since childhood.	I believe some comics lead to benefits (knowledge, behavior, attitude, etc.), some do harm, many have mixed effects and most do not lead to meaningful effects. I believe their effects to be commonly limited to the short-term (<3 months).	July 20, 2019

Funding

The COLLECCTORS project received no funding. It was mainly done during Martin Vuillème's spare time. (July 20, 2019)

[\[Back to top\]](#)

How to contribute to the register

There are no limits to the ways one can help improve, correct and strengthen the COLLECCTORS register. This can be as simple as pointing out a minor error (for instance “97 participants instead of 99” in study X) or as complex as introducing major modifications (such as including an additional type of research studies in the register).

Some brief ways one can contribute:

- Pointing out the register to researchers interested in running a comics RCT
- Pointing out errors, typos, poor use of English, something that seems to be missing
- Pointing out new studies that might be included in COLLECCTORS
- Providing a study report that currently cannot be accessed
- Looking for pictures of the cover and pages of comics not yet found
- Suggesting alternative explanations that would be easier to understand
- Suggesting new relevant keywords, keywords in non-English languages
- Identifying active email addresses of RCT authors that could not yet be contacted
- Identifying Twitter handles of RCT authors (not if they use Twitter for personal discussions only)
- Offering general suggestions or pointing out something you would like from the register
- Etc.

Some time-consuming ways one can contribute:

- Executing further searches in other databases, in the grey literature
- Contacting further researchers for other relevant RCTs
- Independently re-running database searches and re-assessing studies identified, backward citation searches, forward citation searches
- Double-checking the data extracted from the included studies, completing what is missing (if at all possible)
- Double-checking the risk of bias assessments
- Improving the database search strategies (some keywords and keyword variations are missing for example)
- Translating studies
- Etc.

[\[Back to top\]](#)

Potential uses of the register for research on research (meta-research)

Note: This section is meant for people with an interest on research on research and does make use of jargon.

This register could be used for the following research on research:

- This register is meant to be updated. Updates could be part of Studies Within A Review (SWARs) meant to assess different strategies to keep the register up-to-date (for instance what is the most effective email to send to comics researchers? What is the best timing to send emails to comics researchers? Etc.).
- One could measure if this register had an effect on the number of new citations for studies included within COLLECCTORS, for instance with an interrupted time series.
- One could assess if this register had an effect on the reporting of CONSORT items among future RCTs involving comics.
- One could report a cross-sectional analysis of RCTs involving comics (describing for instance language, countries, n with sufficient reporting of X, n authors reporting conflicts of interest, n comics still available, etc.)
- One could use the notes included in this register for qualitative research.
- One could use the register to analyze how many comics RCTs are included in which databases, which would lead to the highest yield, etc.
- One could use this register to analyze errors made by citizen scientists when doing meta-research.
- One could use this register to analyze the power required in future similar studies (with the caveat that initial studies typically overestimate effect sizes)

[\[Back to top\]](#)

Things left to do

1. Leonard Rifas mentioned potentially relevant experimental research to be found in unpublished masters' theses from the 1940s and 1950s. It is not yet clear to me (VM) how to search for these if they are still available. Contacts with universities? Further contact with scholars?
2. Leonard Rifas mentioned potentially relevant experimental research made for the military (in the United States and Russia). It is not yet clear to me (VM) how to search for these if they are still available. Contact with historians?
3. Include in search strategy: References found through Google searches (12 April 2019) ("étude randomisée bande dessinée")
4. Include old search strategies from rapid reviews

[\[Back to top\]](#)

Notes and general thoughts

- Garden of forking paths, many ways to adapt a Pubmed search strategy, likely possible to introduce some bias this way and select studies you/I like to keep
- Interesting how very small changes to literature search can lead to widely different results, hard to notice without actually replicating a search
- Search strategy likely subpar, librarian would help, but in meantime broad search should (hopefully?) compensate, should use PRESS tool
- Likely not legal to stream/film full review process until literature is open access, could help with transparency and reproducibility though
- To shorten next review updates may be useful to use SR tools, e.g. Covidence, RevMan, but currently likely too time consuming to learn how to use
- Further ways to shorten rapid reviews: re-use rapid review template, giving little care to correct study citations, giving little care to quality of English writing, live documents anyone from the review team can modify at any time, re-using quality appraisals done by other teams without checking them, shortened quality appraisals, not learning how to use RevMan, minimal training offered to contributors, using untrained personnel/students, not following some reporting standards, working overtime, asking authors of included studies to extract data from their own studies (they know them best after all),
- Competition: Who can complete this rapid review (using template X) the fastest? Then look at strategies used, pros and cons, tradeoffs, etc. Compare with full systematic review.
- Assuming a review is “living” and continually/regularly updated, what are the steps to go from a rapid review to a systematic review? Has anyone documented that?
- Can’t export Trip search results, I would need PRO access
- Google Scholar 2nd search leads to 3060 or 3050 results, varies for no clear reasons. 3rd Google Scholar search leads to 29 results but when moving to the 2nd page only 19 results are left.
- Iggy the inhaler included in Clinicaltrials.gov but not on WHO-ICTRP yet WHO-ICTRP includes Clinicaltrials... is it not included due to withdrawn status? (or WHO hasn’t got as many study details as Clinicaltrials for this specific entry)
- It is quite tempting to exclude studies due to being difficult to assess, not sure this introduces bias, more like errors
- Technically I defined comics as “sequences of images”, it is then not clear if I should include studies assessing, e.g. a single drawing (1 panel) + text. What if the intervention is many independent single panel drawings? What if some of them have multiple panels and others not? What if I cannot tell due to insufficient access to the study materials? It is tempting to include them (or to not bother checking if the studies included “true comics” with multiple panels), especially since some of my own drawings follow this pattern but one could argue that the effects of reading/looking at a single panel is not the same as that of reading multiple panels. Until direct comparisons give some answers to those uncertainties the best option could be to assess them separately from clear-cut comics or to do sensitivity analyses. If only aggregated data are available I may have to pre-specify how many/much of “single panels” is okay.
- Similarly, at which point does a video become a comic? Is a GIF a comic or a video? At which point does it stop being a comic/video? What if the intervention is a movie... only including comics?

- As far as I can tell nobody can know if I spent an equal amount of time/effort searching the full-texts of relevant studies with negative or positive results. Likely another way to bias the results.
- I likely won't be appreciated for pointing this out but using Sci-Hub to get the full-texts is also a way to shorten rapid reviews (may increase yield too, could probably be ethically justified in an emergency context) (or perhaps researchers are already doing that in emergencies?) (... but if Sci-Hub is recognized as a valid tool to prevent deaths in emergencies doesn't that mean it needs to be supported?)
- Random idea: Give money/reward prize to people pointing out relevant studies when in an emergency to reduce the time required to do the review (too many participants won't help though, there needs to be some counter-incentives). Full systematic review once past emergency, extra rewards to people
- If shortened quality assessment shows other studies to be good compared with mine and complete quality assessment shows my studies to be okay, isn't this another way to bias the results of the review? Even though switching from a planned shortened assessment to complete assessment seems theoretically appropriate. Just pick whichever quality assessment tool is most in favor of whatever conclusion you like (until/unless assessment tools give similar results).
- Does it matter if I point out benefits or risks first in the Abstract? What if most people only read first part of abstract and that's where I wrote about the benefits?
- A to-do checklist could be quite helpful in the next updates (as long as you don't stick with it too much)
- Slowly starting to get unmanageable with that many included RCTs, didn't expect that, likely going to need to do a selection at some point. Otherwise extraction, analysis and appraisal won't be doable in a single month. Perhaps I should drop the quality appraisal or add it in future brief updates.
- Impossible not to be affected by my previous rapid review on the matter during inclusion/exclusion even if I do not read it again, I recognize authors and still roughly remember their conclusions
- Nobody will ever believe me if I say I made efforts not to look at the conclusions of identified studies when determining eligibility but I actually found that easy to do (blind to my own biases?)
- Easy to miss or intentionally ignore some references when looking for backward citations
- Technically if I wanted to be exhaustive I should look at ALL studies citing included studies as they all could reference relevant studies not found otherwise. Realistically this looks incredibly time consuming (impossible?) and I should probably best only look at RCTs/SRs/reviews.
- A hidden assumption behind my rapid review may be that reading/viewing fotonovela/comics/bandes dessinées/mangas/manhwas leads to similar effects (assuming similar contents). I do not necessarily believe this to be the case, although they certainly share many common aspects and can be difficult to categorize/distinguish. At which point will it be appropriate to do a meta-analysis?
- When is a manga no longer a manga but a comic? What if a comic book (or half of it, 10% of it, 20% of it, etc.) is intentionally drawn using manga+manhwa+comics styles? How do you categorize that? (Hybrid? Is it important to make the distinction?)
- 20-30 minutes to abstract a single study --> 19h with 38 included studies?

- Could be interesting to see how poorly referenced some French literature is when using standard databases (Pubmed, Embase, etc.). Looks like only systematic reviews will find those references... and only if they include French studies.
- What are the moderators modifying the effects of comics? Which ones are most important? Novelty, time spent reading, textual contents, format, author prestige, how they were offered/presented, context when reading, hour of the day, free to read/enforced, etc.
- To what extent can we generalize findings from a comic to another? If geography comics show improved understanding can I safely believe comics can improve medical understanding? Which particular aspects are key for understanding/appeal/etc.?
- Is there an interaction when comics are used with co-interventions? Are the effects multiplicative? Additive? Comics = 1, teaching = 1, (comics + teaching) = 3? How to make them multiplicative? What factors are involved?
- Never-ending task, whenever I think I'm done I find a new relevant article with potentially useful references to check.
- Inclusion of quasi-RCTs is, again, a decision which could influence outcomes in a standard systematic reviews.
- I may have to turn this project to a scoping review, its scope currently seems too big.
- Rewriting the review in lay language would be nice to do for multiple reasons (reproducibility, understanding, reach, audience) but likely beyond my means, unless done in incremental steps.
- Describing extracted data from studies using TIDIER could be an option in updates.
- 10 or so studies extracted and I am already second-guessing the conclusions... too much heterogeneity in comics/comparators/methods to reliably make generalizations
- Damn easy to confuse group a) and b) when extracting data.
- Whoever wants to push this review to a systematic review will need to seriously consider international collaboration (particularly with Japanese, Spanish, English and French authors)
- Some languages seem underrepresented in the comics RCT literature (e.g. Japanese, Italian), is this due to funding restrictions, low interest in RCTs, poorly indexed literature, something else?
- Finding (with Google, Google Scholar, ResearchGate, Pubmed and ERIC) original publications for Japanese articles without their DOI/URL and non-translated names proved incredibly time-consuming and difficult. I dare suggest authors always keep the original names of foreign language articles, e.g. "Les cookies et les bandes dessinées [Cookies and comics]" to facilitate their retrieval. This may already be best practice, I don't know.
- This may already be pointed out in CONSORT but adding information about the score ranges of measurement scales used and what higher/lower scores mean, especially if the scale is modified will likely benefit all future readers, I wish this was more frequent.
- Is there such a thing as "bias in favor of short/brief/simple studies"? (because as a reviewer they are easier to read, take shorter to appraise/extract data)
- Project is starting to look never-ending and requiring more spare time than I am willing to use, likely due in part to broad scope (too broad?)
- Inclusion of text illustrations, especially when made of multiple sequential images seems appropriate but further expands the scope of this review to what seems to be an unmanageable amount of relevant studies (100+)

- I like to believe I am biased in favor of “comics are effective/positive” but to some extent showing that comics “don’t work” could be beneficial to me as it would mean I could spend my spare time doing something else I like more. I also do not strongly believe studies measuring the effects of a unique comic can currently accurately predict the effects of a different one and therefore don’t mind pointing out the studies which weren’t in favor of comics or what could be improved in those who were.
- How big is the impact of contamination (participants share the comics/information with members of the other group)? Key aspect of comics is they can be shared, but this may dilute true effects in a trial. Prevention: rules/info “Please refrain from speaking about the contents of the comic until ____ this is because_____”, verbal reminder/reminders, online comic with limited access, comic kept by study authors after it’s been read, name of comic hidden/not shown, study materials (comic) made accessible only at end of study on study repository, ? (note: if re-reading the comic is the natural behavior of most people, trying to prevent contamination may therefore sometimes lead to a study not representative of natural use)
- Contamination (in comparison groups) is likely to bias towards no effect (at least if the outcome is knowledge). The effect of comics in studies at high risk of contamination could therefore be underestimated in these conditions. It may be overestimated if on the other hand the comic group alone is contaminated from other “outside” sources, eg. school lessons on HIV, cancer awareness campaign, etc.
- Could there be a nocebo effect among those not receiving the comic (eg through frustration)? This could also overestimate the effect of comics. Prevention: comics given to all groups, comic given at the end of the trial, same comic given to all groups but some parts different, blind participants to the comparison group(s)/study objective, ?
- Are participants who got a comic more likely to attentively answer a questionnaire (“the study authors created this comic, I ought to help them by giving it my best”)? Or those who did not less likely to attentively answer the questionnaire (“no need, I did not get the comic”)?
- If participants could read the comics on their own/at home before outcome assessments, it may be important to assess when they last read these. If participants who received the comics read them at day 1 and day 29 but participants who received a handout only read the handout at day 1 the trial is not assessing the effect of reading the comics.
- Risk of bias assessments can be painful when you need to judge how likely an event is to occur; this seems more akin to guesswork. Safe path = unclear risk, but this is maybe not so helpful. Perhaps Cochrane RoB 2.0 may help (note: Not really).
- When most risk of bias assessments are uncertain/high risk I cannot help but also wonder if I am being overly critical/untrustful or if I am doing something wrong. Or maybe they actually are high risk.
- If study participants talk about the cartoons or comics with future participants they might reveal key details (eg. “surprisingly the patient dies of cancer at the end of the comic”) and modify their impact on some outcomes (eg. participants who already knew the ending aren’t surprised to find out the patient dies and are therefore less afraid to die of cancer when they finish reading the comic).
- Allegiance is problematic to define. I assume that people that created a comic [study intervention] can be biased in its favour (“I want/believe my stuff to work”). But study authors could have

created the comic entirely (high likelihood of risk of allegiance) or they may also have contributed text or feedback to variable extents. If they paid the artists is this allegiance? If their institution paid the artists, is this allegiance? If they “slightly” adapted a comic made by someone else, is this allegiance? What if the comic has been made by a cousin? Etc. Further, most of these details aren’t available in study reports.

- Risk of bias assessment takes 5-15 minutes. It would likely be much longer if it was per-outcome.
- Data extraction takes 15-45 minutes (but outliers can take hours, eg. non-English reports)
- Interestingly I did disagree with some of my previous risk of bias assessments (from Vuillème, 2017).
- It sometimes only takes a couple days to change my mind on a risk of bias assessment (“actually, it’s not that clearly explained how they did _____.” Low risk → High risk → Unclear risk). Transparency would require explaining changes but when these become too frequent the rapid review would end up being massively difficult to follow and end up slowed down. Taking notes of changes is also distracting (maybe software could help not forgetting to explain changes though). To what extent should living rapid reviews explain changes and updates to guarantee transparency, reliability yet stick to deadlines?
- Recall, knowledge and comprehension are akin to measuring the same thing
- Comics could be given in steps (eg. part 1 in first month, 2nd in second month, etc.). Sent via emails, mail/envelopes, when visiting pediatrician/doctor, etc.
- (these notes are qualitative data!)
- <http://crebp-sra.com/#/polyglot> could be used to translate searches from Pubmed to other databases (eg. Medline, EMBASE, etc.)
- One should keep in mind comics assessed in the trials are a selection. Trials can be costly and study authors therefore likely assess the comics they deem most likely to be effective. This means one should be careful not to overgeneralize (“those studies found the comic worked therefore all comics are effective”).
- 282 titles/abstracts screened in 35 minutes => 8 studies screened per minute.
- 1700 titles/abstracts screened + quite a few PDFs sought in 3 hours => 9.44 studies screened/min
- Some authors sometimes suggest studies already found and excluded. This is why there can be discrepancies between how many studies they suggested and how many are flagged as found through emails.
- Interestingly (Tan, 2018) is classified as a single-arm trial in ClinicalTrials.gov
- It appears that non-English authors confuse random sampling and random allocation. This makes it quite difficult to determine if they report on a randomized trial or not.
- Considering how many authors confuse random sampling, random allocation, quasi-experimental experiments, quasi-experiments and randomized trials I recommend giving a look at the methods section, even if the study isn’t titled “randomized” and even if its abstract does not describe a randomized trial.
- Some studies aren’t included in Google Scholar or haven’t yet been cited. This is why some forward citation searches only mention a google search. In these situations the study name was searched in quotation marks, eg “Seeing is believing: The role of imagery fluency in narrative persuasion through a graphic novel”.

- Some authors cited comics randomized trials (for instance Neil Cohn cites Mallia, 2007) but did not point these out when asked for such trials.
- Study protocols are commonly imprecise on some details (eg. outcome measures, timing of all measurements, what will be reported, etc.). A strict assessment of outcome reporting risk of bias would likely deem all trials at unclear risk of bias.
- I couldn't find out how to automatically extract a list of studies found by GoogleScholar forward citations / [Cited by]. Maintaining a list of these studies would help reduce time spent assessing the same studies twice and increase transparency/reproducibility. This could also help when updating forward searches. How do you exclude citations found with your previous search? Is there a way to know when Google Scholar indexed a forward citation?
- I could split [Blinding of participants and personnel (all outcomes)] to [Blinding of participants (all outcomes)] and [Blinding of personnel (all outcomes)].
- Assessment of incomplete outcome data bias is probably overly optimistic. No mentions of exclusions or losses does not preclude losses and exclusions.
- How easy would it be to fabricate data in education/psychology trials without ethics approval or audits?
- A unique email was sent to Petronella Grootens-Wiegers on June 5, 2019 as the standardized email did not fit.
- At some point the “webnovels” and “webnovelas” keywords may end up being used for online graphic novels and online fotonovelas. This does not appear to currently be the case (mainly used for text-only).
- Can you call something “abstract screening” when a study has no published abstract? Also, someone should probably double-check the forward citations of (Liu, 2004).
- Looking for, assessing, keeping a trace of, and retrieving forward citations of 35 included RCTs (roughly 1200 citations) took me 5 hours of manual work. Most citations are unique so deduplication would not help a lot. This is equal to 4 forward-citations screened per minute. Most of this time is spent looking for PDFs and checking the methods of studies with insufficiently detailed abstracts. This does not include time spent moving to institutions with access to the relevant journals, looking for email addresses or sending emails to authors for clarifications. RCTs with >50 forward citations in particular kill motivation.
- One may want to double-check the risk of bias assessment of (Hartling, 2010). Indeed we are both members of the Cochrane organization and I might be biased in her favour.
- At some point it might be good to cite the register as a collaborative work (eg COLLECTORS, 2019 instead of Vuillème, 2019), this might help emphasize that for it to stay alive and thriving it needs a collaboration, not a single individual. Credits can be left in the “Contributions” section.
- A substantial number of studies and theses are not included in common databases and their quality feels lacking at times. Are some of these from predatory journals? Should these be flagged so that readers are cautious about their conclusions?
- It can certainly be tempting to stop searching or reduce the scope of the searches either out of getting tired or wishing for closure. Perhaps systematic reviewers also stop searches earlier than planned when funds start to get short.
- I have recently seen other comics databases and registers which were no longer active or updated, is this what will happen to COLLECTORS in a few years? Is there need for more automation/ML?

- Time spent on this register could have been spent on anything else more useful to the world. Systematic review on aspirin?
- On a side note if comics RCTs have titles such as “Evaluation of an AIDS education programme for young adults” and “Towards better-informed consent: Research with livestock-keepers and informal traders in East Africa” these titles are of no use to identify them for what they are. The same can be said of abstracts who do not distinguish cartoons [videos] and cartoons [comics] or books [text only] and books [comics]. This essentially means I (VM) have to search, acquire and browse most of the PDFs to be sure of anything at all (I’m lucky to have broad access!). And there are still reports where only contacts with authors could clarify the situation (if they answer). This makes identifying research on comics abruptly difficult and time-consuming.
- Considering most study authors do not reply to emails it might be worth looking for all the publications made by authors of included studies. And setting alerts for new publications. But this all seems quite time-consuming for unknown benefit.
- Is the COLLECCTORS register sufficiently easy to find? Which keywords (title, OSF description) would help make it more visible or better indexed? Which keywords are people using to find it? Should the register description also include “quasi-experimental”, “experimental” and “experiments” considering this is how many of these studies are described in the literature?
- Thinking back on the EBM Live 2019 conference, the future conflict of interest (COI) statement might be relevant to consider when updating the COI declarations in COLLECCTORS.

[\[Back to top\]](#)

Studies assessed for inclusion (full-text)

Citation	Include, Exclude, Unclear	Reason for exclusion	Source	Date when found
Gonçalves, S., Ferreira, R., Conceição, E. M., Silva, C., Machado, P. P. P., Boyland, E., & Vaz, A. (2018). The Impact of Exposure to Cartoons Promoting Healthy Eating on Children's Food Preferences and Choices. <i>Journal of Nutrition Education and Behavior</i> . https://doi.org/10.1016/j.jneb.2017.12.015	Exclude	Cartoon videos	Pubmed	April 4, 2018
Mendiburo-Seguel, A., Vargas, S., & Rubio, A. (2017). Exposure to Political Disparagement Humor and Its Impact on Trust in Politicians: How Long Does It Last? <i>Frontiers in Psychology</i> , 8. https://doi.org/10.3389/fpsyg.2017.02236	Include		Pubmed	April 4, 2018
Sanchez, K., Eghaneyan, B. H., Killian, M. O., Cabassa, L., & Trivedi, M. H. (2017). Measurement, Education and Tracking in Integrated Care (METRIC): use of a culturally adapted education tool versus standard education to increase engagement in depression treatment among Hispanic patients: study protocol for a randomized control trial. <i>Trials</i> , 18(1). https://doi.org/10.1186/s13063-017-2109-y	Include		Pubmed	April 4, 2018
Junhasavasdikul, D., Sukhato, K., Srisangkaew, S., Theera-Ampornpunt, N., Anothaisintawee, T., & Dellow, A. (2017). Cartoon versus traditional self-study handouts for medical students: CARTOON randomized controlled trial. <i>Medical Teacher</i> , 39(8), 836–843. https://doi.org/10.1080/0142159x.2017.1324137	Include		Pubmed	April 4, 2018
Kamel, D. O., Wahba, N. A., & Talaat, D. M. (2017). Comparison between Positive Dental Images and Neutral Images in Managing Anticipatory Anxiety of Children. <i>Journal of Clinical Pediatric Dentistry</i> , 41(2), 116–119. https://doi.org/10.17796/1053-4628-41.2.116	Include		Pubmed	April 4, 2018
Duizer, E., Jagt, R. K. van 't, & Jansen, C. (2014). Zoete verleiding. <i>Tijdschrift Voor Taalbeheersing</i> , 36(3), 293–319. https://doi.org/10.5117/tvt2014.3.duiz	Include	Dutch translator needed	Pubmed	April 4, 2018
Koops van 't Jagt, R., Hoeks, J. C. J., Duizer, E., Baron, M., Molina, G. B., Unger, J. B., & Jansen, C. J. M. (2017). Sweet Temptations: How Does Reading a Fotonovela About Diabetes Affect Dutch Adults with Different Levels of Literacy? <i>Health Communication</i> , 33(3), 284–290. https://doi.org/10.1080/10410236.2016.1258617	Include		Pubmed	April 4, 2018
Kuo, H.-C., Pan, H.-H., Creedy, D. K., & Tsao, Y. (2016). Distraction-Based Interventions for Children Undergoing Venipuncture Procedures: A Randomized Controlled Study. <i>Clinical Nursing Research</i> , 27(4), 467–482. https://doi.org/10.1177/1054773816686262	Include		Pubmed	April 4, 2018
Wansink, B., & Robbins, R. (2016). Which Design Components of Nutrition Infographics	Exclude	Passively vs actively	Pubmed	April 4,

Make Them Memorable and Compelling? American Journal of Health Behavior, 40(6), 779–787. https://doi.org/10.5993/ajhb.40.6.10		watching same infographics		2018
Kraft, S. A., Constantine, M., Magnus, D., Porter, K. M., Lee, S. S.-J., Green, M., ... Cho, M. K. (2016). A randomized study of multimedia informational aids for research on medical practices: Implications for informed consent. Clinical Trials: Journal of the Society for Clinical Trials, 14(1), 94–102. https://doi.org/10.1177/1740774516669352	Include		Pubmed	April 4, 2018
Leung, M. M., Green, M. C., Tate, D. F., Cai, J., Wyka, K., & Ammerman, A. S. (2016). Fight for Your Right to Fruit: Psychosocial Outcomes of a Manga Comic Promoting Fruit Consumption in Middle-School Youth. Health Communication, 32(5), 533–540. https://doi.org/10.1080/10410236.2016.1211074	Include		Pubmed	April 4, 2018
Diamond, J., McQuillan, J., Spiegel, A. N., Wonch Hill, P., Smith, R., West, J., & Wood, C. (2016). Viruses, Vaccines and the Public. Museums & Social Issues, 11(1), 9–16. https://doi.org/10.1080/15596893.2016.1131099	Include		Pubmed	April 4, 2018
Shinmei, I., Kobayashi, K., Oe, Y., Takagishi, Y., Kanie, A., Ito, M., ... Dobbin, R. D. (2016). Cognitive behavioral therapy for depression in Japanese Parkinson's disease patients: a pilot study. Neuropsychiatric Disease and Treatment, 1319-1331. https://doi.org/10.2147/ndt.s104777	Exclude	Not RCT	Pubmed	April 4, 2018
Cooper, T. L., Kirino, Y., Alonso, S., Lindahl, J., & Grace, D. (2016). Towards better-informed consent: Research with livestock-keepers and informal traders in East Africa. Preventive Veterinary Medicine, 128, 135–141. https://doi.org/10.1016/j.prevetmed.2016.04.008	Include		Pubmed	April 4, 2018
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Bruce, B. (2005). Group interventions for the prevention of injuries in young children: a systematic review. <i>Injury Prevention</i> , 11(3), 143–147. https://doi.org/10.1136/ip.2004.007971	Exclude	Systematic review of injury prevention studies with control groups (RCT or not)	Pubmed	April 4, 2018
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Brown, J. B., Beck, A., Boles, M., & Barrett, P. (1999). Practical methods to increase use of advance medical directives. <i>Journal of General Internal Medicine</i> , 14(1), 21–6. Retrieved from http://www.ncbi.nlm.nih.gov/pubmed/9893087	Exclude	Cartoon vs cartoon + video	Pubmed	April 4, 2018
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Leung, M. M., Tripicchio, G., Agaronov, A., & Hou, N. (2014). Manga Comic Influences Snack Selection in Black and Hispanic New York City Youth. Journal of Nutrition Education and Behavior, 46(2), 142–147. https://doi.org/10.1016/j.jneb.2013.11.004	Include		CENTRAL	April 4, 2018
Rodriguez, C. A. (2015). Fotonovela for Improving Dementia Literacy Among Latinos. Retrieved from http://digitallibrary.usc.edu/utils/getfile/collection/p15799coll40/id/181890/filename/181670.pdfpage/page/1	Unclear	No access	CENTRAL	April 4, 2018
Goodwin, L. D. Igoe. J. B. (1982). An Evaluation of the Effectiveness of Participatory Health Consumer Materials for Children. Retrieved from https://eric.ed.gov/?id=ED221483	Exclude	Comic book vs videos	CENTRAL	April 4, 2018

Zun, L. (2012). THE USE OF CARTOON DISTRACTION IN THE REDUCTION OF PAIN IN PEDIATRIC PATIENTS. In 6th World Congress-World Institute of Pain (pp. 114–114). https://doi.org/10.1111/j.1533-2500.2011.00528.x	Exclude	Cartoon videos	CENTRAL	April 4, 2018
Tjiam, A. M., Holtslag, G., Vukovic, E., Asjes-Tydemans, W. L., Loudon, S. E., Borsboom, G. J. J. M., ... Simonsz, H. J. (2012). An Educational Cartoon Accelerates Amblyopia Therapy and Improves Compliance, Especially among Children of Immigrants. <i>Ophthalmology</i> , 119(11), 2393–2401. https://doi.org/10.1016/j.ophtha.2012.05.035	Exclude	Not RCT	CENTRAL	April 4, 2018
Leiner, M. (2004). Patient communication: a multidisciplinary approach using animated cartoons. <i>Health Education Research</i> , 19(5), 591–595. https://doi.org/10.1093/her/cyq079	Exclude	Cartoon videos	CENTRAL	April 4, 2018
Smith, L. R., & Ryan, B. E. (1997). Language arts achievement level, attitude survey format, and adolescents' attitudes towards reading. <i>Adolescence</i> , 32(126), 271–4. Retrieved from http://www.ncbi.nlm.nih.gov/pubmed/9179323	Exclude	Not RCT	CENTRAL	April 4, 2018
Haynes, R. B. (1978). Children's perceptions of "comic" and "authentic" cartoon violence. <i>Journal of Broadcasting</i> , 22(1), 63–70. https://doi.org/10.1080/08838157809363866	Exclude	Cartoon videos	CENTRAL	April 4, 2018
Strasser, A. A., Orom, H., Tang, K. Z., Dumont, R. L., Cappella, J. N., & Kozlowski, L. T. (2011). Graphic-enhanced information improves perceived risks of cigar smoking. <i>Addictive Behaviors</i> , 36(8), 865–869. https://doi.org/10.1016/j.addbeh.2011.03.005	Exclude	Infographic	CENTRAL	April 4, 2018
Park, D. C., Puglisi, J. T., & Sovacool, M. (1984). Picture Memory in Older Adults: Effects of Contextual Detail at Encoding and Retrieval. <i>Journal of Gerontology</i> , 39(2), 213–215. https://doi.org/10.1093/geronj/39.2.213	Exclude	Not RCT	CENTRAL	April 4, 2018
Bakker, A. B. (1999). Persuasive communication about AIDS prevention: need for cognition determines the impact of message format. <i>AIDS Education and Prevention : Official Publication of the International Society for AIDS Education</i> , 11(2), 150–62. Retrieved from http://www.ncbi.nlm.nih.gov/pubmed/10214498	Unclear	No Access. Email sent July 6, 2019.	CENTRAL	April 4, 2018
A.Gillies, P., Stork, A., & Bretman, M. (1990). Streetwise UK: a controlled trial of an AIDS education comic. <i>Health Education Research</i> , 5(1), 27–33. https://doi.org/10.1093/her/5.1.27	Exclude	HIV comic + teacher guide + classroom discussions vs no intervention	CENTRAL	April 4, 2018
Kassai, B., Rabilloud, M., Dantony, E., Grousson, S., Revol, O., Malik, S., ... Pereira de Souza Neto, E. (2016). Introduction of a paediatric anaesthesia comic information leaflet reduced preoperative anxiety in children. <i>British Journal of Anaesthesia</i> , 117(1), 95–102. https://doi.org/10.1093/bja/aew154	Include		CENTRAL	April 4, 2018

Linked to: https://clinicaltrials.gov/show/NCT00841022				
Sahm, L. J., Wolf, M. S., Curtis, L. M., Behan, R., Brennan, M., Gallwey, H., & Mc Carthy, S. (2011). What's in a label? An exploratory study of patient-centered drug instructions. European Journal of Clinical Pharmacology, 68(5), 777–782. https://doi.org/10.1007/s00228-011-1169-2	Exclude	Visual aid not comic	CENTRAL	April 4, 2018
Loudon, S., Verhoef, B., Joosse, M., Fronius, M., Awan, M., Newsham, D., ... Simonsz, H. (2003). Electronic Recording of Patching for Amblyopia Study (ERPAS): Preliminary Results. In ARVO Annual Meeting Abstract (Vol. 44, pp. 4246–4246). C.V. Mosby Co. Retrieved from https://iovs.arvojournals.org/article.aspx?articleid=2416049	Exclude	Cartoon + reward stickers + information sheet vs picture to colour	CENTRAL	April 4, 2018
Thompson, D., Mahabir, R., Bhatt, R., Boutte, C., Cantu, D., Vazquez, I., ... Buday, R. (2013). Butterfly Girls; promoting healthy diet and physical activity to young African American girls online: rationale and design. BMC Public Health, 13(1). https://doi.org/10.1186/1471-2458-13-709	Include	Completed, awaiting publication (22 April 2019)	CENTRAL	April 4, 2018
Linked to: https://clinicaltrials.gov/show/NCT01481948				
Choi, K.-H., & Kwon, J.-H. (2006). Social Cognition Enhancement Training for Schizophrenia: A Preliminary Randomized Controlled Trial. Community Mental Health Journal, 42(2), 177–187. https://doi.org/10.1007/s10597-005-9023-6	Exclude	Therapy A with cartoons vs therapy B	Google Scholar	April 4, 2018
Imamura, K., Kawakami, N., Furukawa, T. A., Matsuyama, Y., Shimazu, A., Umanodan, R., ... Kasai, K. (2015). Does Internet-based cognitive behavioral therapy (iCBT) prevent major depressive episode for workers? A 12-month follow-up of a randomized controlled trial. Psychological Medicine, 45(9), 1907–1917. https://doi.org/10.1017/s0033291714003006	Exclude	Online therapy with mangas vs information email	Google Scholar	April 4, 2018
No results			Prospero	April 4, 2018
Kovacs, F., Oliver-Frontera, M., Plana, M. N., Royuela, A., Muriel, A., & Gestoso, M. (2011). Improving Schoolchildren's Knowledge of Methods for the Prevention and Management of Low Back Pain. Spine, 36(8), E505–E512. https://doi.org/10.1097/brs.0b013e3181dccebc	Include		Clinicaltrials	April 4, 2018
Linked to: https://clinicaltrials.gov/show/NCT00809640				
Leung, M. Intervention INC: Interactive Nutrition Comics for Urban Minority Youth (status: In progress). https://clinicaltrials.gov/show/NCT03165474	Include	Completed, awaiting publication (22 April 2019)	Clinicaltrials	April 4, 2018

Brooks, A. C. Testing the Effectiveness of a Graphic Novel Health Education Curriculum for Patients With Addiction (status: In progress). https://clinicaltrials.gov/show/NCT02378181	Exclude	Graphic novel as part of a curriculum / therapy	Clinicaltrials	April 4, 2018
Mortimer, R. Fotonovela for Type 2 Diabetes Mellitus (status: Unknown, published article not found). https://clinicaltrials.gov/show/NCT00472095	Unclear	Status unknown (22 April 2019)	Clinicaltrials	April 4, 2018
Iggy and the Inhalers: A Study to Assess the Impact of an Asthma Education Program in School Age Children (status: withdrawn). https://clinicaltrials.gov/show/NCT02839252	Exclude	Comic book + cards + 12 min video vs standard care	Clinicaltrials	April 4, 2018
Jemmott, J. B., Jemmott, L. S., O'Leary, A., Ngwane, Z., Lewis, D. A., Bellamy, S. L., ... Teitelman, A. (2015). HIV/STI risk-reduction intervention efficacy with South African adolescents over 54 months. Health Psychology : Official Journal of the Division of Health Psychology, American Psychological Association, 34(6), 610–21. http://doi.org/10.1037/hea0000140 Linked to: https://clinicaltrials.gov/show/NCT00559403	Exclude	Games + role play + comic workbook vs no intervention	Clinicaltrials	April 4, 2018
Löf, G., Liljeberg, C., Eksborg, S., & Lönnqvist, P.-A. (2017). Interactive web-based format vs conventional brochure material for information transfer to children and parents: a randomized controlled trial regarding preoperative information. Pediatric Anesthesia, 27(6), 657–664. https://doi.org/10.1111/pan.13142 Linked to: http://www.anzctr.org.au/ACTRN12616000528459	Unclear	Study report unclear	WHO-ICTRP	April 4, 2018
Mifflin, K. A., Hackmann, T., & Chorney, J. M. (2012). Streamed Video Clips to Reduce Anxiety in Children During Inhaled Induction of Anesthesia. Anesthesia & Analgesia, 115(5), 1162–1167. http://doi.org/10.1213/ANE.0b013e31824d5224 Linked to: https://clinicaltrials.gov/show/NCT02027844	Exclude	Cartoon videos	WHO-ICTRP	April 4, 2018
Branscum, P. W. (2011). Designing and evaluating an after-school social cognitive theory based comic book intervention for the prevention of childhood obesity among elementary aged school children. University of Cincinnati. Retrieved from https://etd.ohiolink.edu/pg_10?0::NO:10:P10_ACCESSION_NUM:ucin1311775201	Exclude	Comic as part of a program	PsycInfo	April 4, 2018
Weber, A.S. (2015). Use of cloud-based graphic narrative software in medical ethics teaching. In M.B. Nunes & M. Mcpherson (Eds.), Proceedings of MCCSIS conference (167-72). Gran Canaria, Spain: IADIS. Retrieved from https://eric.ed.gov/?id=ED562472	Exclude	Creation of comics	ERIC	April 4, 2018
Atasoy, Ş., & Ergin, S. (2016). The effect of concept cartoon-embedded worksheets on	Exclude	Standard instructions	ERIC	April 4,

grade 9 students' conceptual understanding of Newton's Laws of Motion. Research in Science & Technological Education, 35(1), 58–73. https://doi.org/10.1080/02635143.2016.1248926		vs activities with cartoons on similar topics		2018
Roslina. (2017). The Effect of Picture Story Books on Students' Reading Comprehension. Advances in Language and Literary Studies, 8(2), 213. https://doi.org/10.7575/aiac.all.v.8n.2p.213	Unclear	Study report unclear	ERIC	April 4, 2018
Kotaman, H., & Balci, A. (2019). Impact of realistic and non-realistic storybook characters on young children's book listening comprehension. Early Child Development and Care, 189(3), 450–462. https://doi.org/10.1080/03004430.2017.1325882	Include		Web of Science	April 2, 2019
Chan, T. K. S., Wong, S. W. L., Wong, A. M.-Y., & Leung, V. W.-H. (2019). The Influence of Presentation Format of Story on Narrative Production in Chinese Children Learning English-as-a-Second-Language: A Comparison Between Graphic Novel, Illustration Book and Text. Journal of Psycholinguistic Research, 48(1), 221–242. https://doi.org/10.1007/s10936-018-9600-9	Include		Web of Science	April 2, 2019
Houston-Price, C., Owen, L. H., Kennedy, O. B., & Hill, C. (2019). Parents' experiences of introducing toddlers to fruits and vegetables through repeated exposure, with and without prior visual familiarization to foods: Evidence from daily diaries. Food Quality and Preference, 71, 291–300. https://doi.org/10.1016/j.foodqual.2018.08.003	Exclude	Not comics	Web of Science	April 2, 2019
Leung, M. M., Mateo, K. F., Verdaguer, S., & Wyka, K. (2018). Testing a Web-Based Interactive Comic Tool to Decrease Obesity Risk Among Minority Preadolescents: Protocol for a Pilot Randomized Control Trial. JMIR Research Protocols, 7(11), e10682. https://doi.org/10.2196/10682	Exclude	Comic + emails + newsletter + vs nothing	Web of Science	April 2, 2019
Hands, T., Shaw, A., Gibson, M., & Miller, K. (2018). People and their plants: The effect of an educational comic on gardening intentions. Urban Forestry & Urban Greening, 30, 132–137. https://doi.org/10.1016/j.ufug.2018.01.017	Include		Web of Science	April 2, 2019
Chen, S., Lawrence, J. F., Zhou, J., Min, L., & Snow, C. E. (2018). The efficacy of a school-based book-reading intervention on vocabulary development of young Uyghur children: A randomized controlled trial. Early Childhood Research Quarterly, 44, 206–219. https://doi.org/10.1016/j.ecresq.2017.12.008	Exclude	Picture books were part of a multiple components school intervention	Web of Science	April 2, 2019
El Hachem, M., Carnevale, C., Diociaiuti, A., Ranieri, C. D., Giancristoforo, S., Zambruno, G., & Ciofi Degli Atti, M. L. (2017). Local anesthesia in pediatric dermatologic surgery: Evaluation of a patient-centered approach. Pediatric Dermatology, 35(1), 112–116. https://doi.org/10.1111/pde.13347	Exclude	Not RCT	Web of Science	April 2, 2019

Sadeghian, E., seif, M., Daraei, M. M., Aahmadinia, H., & khalili, A. (2017). The Effect of Preparation for Hospitalization on School-age Children's Fear during Admission in Iranian Hospitals. Journal of Research in Medical and Dental Science, 5(5), 24–29. Retrieved from https://www.irmds.in/abstract/the-effect-of-preparation-for-hospitalization-on-schoolage-childrens-fear-during-admission-in-iranian-hospitals-1341.html	Unclear	Cartoon booklet + explanations in a play room + familiarisation with medical devices vs “usual care”. Unclear what “usual care” encompasses.	Web of Science	April 2, 2019
Hung, Y.-H., Chen, C.-H., & Huang, S.-W. (2016). Applying augmented reality to enhance learning: a study of different teaching materials. Journal of Computer Assisted Learning, 33(3), 252–266. https://doi.org/10.1111/jcal.12173	Exclude	Not RCT, not comics	Web of Science	April 2, 2019
Atasoy, Ş., & Ergin, S. (2016). The effect of concept cartoon-embedded worksheets on grade 9 students' conceptual understanding of Newton's Laws of Motion. Research in Science & Technological Education, 35(1), 58–73. https://doi.org/10.1080/02635143.2016.1248926	Exclude	Concept cartoons	Web of Science	April 2, 2019
Cetin, E., Pehlivan, M., & Hacieminoglu, E. (2014). WITHDRAWN: The Effect of the Science and Technology Course Integrated with Cartoons on Students' Achievement and Attitudes. Procedia - Social and Behavioral Sciences, 116, 973–978. https://doi.org/10.1016/j.sbspro.2014.01.330	Exclude	Duplicate publication of (Cetin, 2013)	Web of Science	April 2, 2019
Cetin, E., Pehlivan, M., Hacieminoglu, E. & Teke, H. (2013). The Effect of the Science and Technology Course Integrated with Cartoons on Students' Achievement and Attitudes. Journal of Educational and Instructional Studies in the world, 3(2), 129-134. Retrieved from http://www.wjeis.org/FileUpload/ds217232/File/18_emine_cetin_teke_mustafa_pehlivan_esme_hacieminoglu_huseyin_teke.pdf	Exclude	Concept cartoons	Web of Science	April 2, 2019
Rubenstein, D. J. (2000). Stimulating Children's Creativity and Curiosity: Does Content and Medium Matter? The Journal of Creative Behavior, 34(1), 1–17. https://doi.org/10.1002/j.2162-6057.2000.tb01199.x	Unclear	Contradictory statements within the study report, such as “[children] were randomly assigned” and “treatment group was based on teacher choice”	Web of Science	April 2, 2019
Akamca, G. Ö., Ellez, A. M., & Hamurcu, H. (2009). Effects of computer aided concept cartoons on learning outcomes. Procedia - Social and Behavioral Sciences, 1(1), 296–301. https://doi.org/10.1016/j.sbspro.2009.01.054	Exclude	Concept cartoons	Web of Science	April 2, 2019

Rosas-Blum, E. D., Granados, H. M., Mills, B. W., & Leiner, M. (2018). Comics as a Medium for Parent Health Education: Improving Understanding of Normal 9-Month-Old Developmental Milestones. <i>Frontiers in Pediatrics</i> , 6. https://doi.org/10.3389/fped.2018.00203	Exclude	Not RCT	Web of Science	April 2, 2019
Khoo, Y. Y., & Fitzgerald, R. (2017). Pocket Cartoons. <i>International Journal of Mobile and Blended Learning</i> , 9(4), 49–64. https://doi.org/10.4018/ijmb.2017100104	Exclude	Cartoon videos	Web of Science	April 2, 2019
Sridhar, A., & Dragan, A. (2017). Comic for contraceptive implant information: a pre–post test quasi-experimental study. <i>Contraception</i> , 96(4), 279–280. https://doi.org/10.1016/j.contraception.2017.07.068	Exclude	Follow-up in (Sridhar, 2019) isn't RCT, I assume this isn't either	Web of Science	April 2, 2019
Perales - Palacios, F. J., & Vilchez - Gonzalez, J. M. (2005). The Teaching of Physics and Cartoons: Can they be interrelated in secondary education? <i>International Journal of Science Education</i> , 27(14), 1647 – 1670. https://doi.org/10.1080/09500690500206366	Exclude	Not RCT	Web of Science	April 2, 2019
Şengül, S., & Üner, İ. (2010). What is the impact of the teaching “Algebraic Expressions and Equations” topic with concept cartoons on the students’ logical thinking abilities? <i>Procedia - Social and Behavioral Sciences</i> , 2(2), 5441–5445. https://doi.org/10.1016/j.sbspro.2010.03.887	Exclude	Concept cartoons	Web of Science	April 2, 2019
Lu, C.-C., Chen, Y.-Y., & Chen, C.-W. (2010). A correlative study of cd-rom picture books in classrooms and school children’s formation of descriptive concepts. <i>International Journal of Science and Mathematics Education</i> , 9(1), 47–67. https://doi.org/10.1007/s10763-010-9212-9	Exclude	2 clusters only	Web of Science	April 2, 2019
Krampen, Günter. (2008). Effects of education-psychological interventions on concentration performance in preschool-and elementary-school-aged children with concentration deficits: Results from 10 experimental studies. <i>Psychologie in Erziehung und Unterricht</i> . 55. 196-210.	Exclude	Measures the effects of different people reading comics to children	Web of Science	April 2, 2019
Arnold, D. H., Lonigan, C. J., Whitehurst, G. J., & Epstein, J. N. (1994). Accelerating language development through picture book reading: Replication and extension to a videotape training format. <i>Journal of Educational Psychology</i> , 86(2), 235–243. https://doi.org/10.1037/0022-0663.86.2.235	Exclude	Training on how to read comics	Web of Science	April 2, 2019
Simsek, Z. C., & Erdogan, N. I. (2015). Effects of the Dialogic and Traditional Reading Techniques on Children’s Language Development. <i>Procedia - Social and Behavioral Sciences</i> , 197, 754–758. https://doi.org/10.1016/j.sbspro.2015.07.172	Exclude	Measures the effects of reading techniques	Web of Science	April 2, 2019
Kato, S., Okamura, T., Kuwabara, K., Takekawa, H., Nagao, M., Umesawa, M., ...	Exclude	Comics + videos	Web of Science	April 2,

Minematsu, K. (2017). Effects of a school-based stroke education program on stroke-related knowledge and behaviour modification—school class based intervention study for elementary school students and parental guardians in a Japanese rural area. <i>BMJ Open</i> , 7(12), e017632. https://doi.org/10.1136/bmjopen-2017-017632				2019
Loucks, J., Mutschler, C., & Meltzoff, A. N. (2016). Children's Representation and Imitation of Events: How Goal Organization Influences 3-Year-Old Children's Memory for Action Sequences. <i>Cognitive Science</i> , 41(7), 1904–1933. https://doi.org/10.1111/cogs.12446	Exclude	Comics vs hands-on experience	Web of Science	April 2, 2019
de Droog, S. M., van Nee, R., Govers, M., & Buijzen, M. (2017). Promoting toddlers' vegetable consumption through interactive reading and puppetry. <i>Appetite</i> , 116, 75–81. https://doi.org/10.1016/j.appet.2017.04.022	Exclude	Measures the effects of passive vs actively reading a comic book	Web of Science	April 2, 2019
Al-Delaimy, A. K., Al-Mekhlafi, H. M., Lim, Y. A. L., Nasr, N. A., Sady, H., Atroosh, W. M., & Mahmud, R. (2014). Developing and evaluating health education learning package (HELP) to control soil-transmitted helminth infections among Orang Asli children in Malaysia. <i>Parasites & Vectors</i> , 7, 416. http://doi.org/10.1186/1756-3305-7-416 Linked to: https://clinicaltrials.gov/show/NCT01640626	Exclude	Multiple interventions combined with comic book	Original rapid review	April 18, 2017
You, W. B., Wolf, M. S., Bailey, S. C., & Grobman, W. A. (2012). Improving patient understanding of preeclampsia: a randomized controlled trial. <i>American Journal of Obstetrics and Gynecology</i> , 206(5), 431.e1-431.e5. http://doi.org/10.1016/j.ajog.2012.03.006 Linked to: https://clinicaltrials.gov/show/NCT01119183	Exclude	Infographic	Original rapid review	April 18, 2017
Holme, S. A., Man, I., Sharpe, J. L., Dykes, P. J., Lewis-Jones, M. S., & Finlay, A. Y. (2003). The Children's Dermatology Life Quality Index: validation of the cartoon version. <i>British Journal of Dermatology</i> , 148, 2, 285-290. https://doi.org/10.1046/j.1365-2133.2003.05157.x	Exclude	Not RCT	Original rapid review	April 18, 2017
Sprafkin, J., Gadow, K. D., & Grayson, P. (1987). Effects of viewing aggressive cartoons on the behavior of learning disabled children. <i>Journal of Child Psychology and Psychiatry</i> , 28, 3, 387-398. https://doi.org/10.1111/j.1469-7610.1987.tb01761.x	Exclude	Cartoon videos	Original rapid review	April 18, 2017
Hapkiewicz, W. G., & Roden, A. H. (1970). The Effect of Aggressive Cartoons: Children's Interpersonal Play.	Exclude	Cartoon videos	Original rapid review	April 18, 2017
Ellis, G. T., & Sekyra, F. . (January 01, 1972). The effect of aggressive cartoons on the behavior of first grade children. <i>The Journal of Psychology</i> , 81, 37-43. https://doi.org/10.1080/00223980.1972.9923785	Exclude	Cartoon videos	Original rapid review	April 18, 2017

Houtermans-Auckel, J. P., Dahlmans, A. A. H. R., Eussen, E. F. B., Krasznai, A., Nicolai, S. P. A., Welten, R. J. T. J., Van, R. E., ... Teijink, J. A. W. (2010). Geen meerwaarde van een therapeutische elastische kous na 'korte strip' wegens varices: Een Gerandomiseerde gecontroleerde trial. <i>Nederlands Tijdschrift Voor Geneeskunde</i> , 154, 13, 592-596.	Exclude	Not comics	Original rapid review	April 18, 2017
Sprafkin, J., Gadow, K. D., & Grayson, P. (January 01, 1988). Effects of cartoons on emotionally disturbed children's social behavior in school settings. <i>Journal of Child Psychology and Psychiatry, and Allied Disciplines</i> , 29, 1, 91-9. http://psycnet.apa.org/doi/10.1111/j.1469-7610.1988.tb00692.x	Exclude	Cartoon videos	Original rapid review	April 18, 2017
Nathanson, D. E. (1977). Designing instructional media for severely retarded adolescents: a theoretical approach to trait-treatment interaction research. <i>American Journal of Mental Deficiency</i> , 82, 1, 26-32. Retrieved from https://www.ncbi.nlm.nih.gov/pubmed/70171	Exclude	Cartoon videos	Original rapid review	April 18, 2017
Corrigan, P. W., Powell, K. J., Fokuo, J. K., & Kosyluk, K. A. (2014). Does Humor Influence the Stigma of Mental Illnesses? <i>The Journal of Nervous and Mental Disease</i> , 202(5), 397–401. https://doi.org/10.1097/nmd.0000000000000138	Exclude	Comic sketches, acting, not images	Original rapid review	April 18, 2017
Bellingham, K., & Gillies, P. (1993). Evaluation of an AIDS education programme for young adults. <i>Journal of Epidemiology and Community Health</i> , 47(2), 134–8. http://doi.org/10.1136/JECH.47.2.134	Include		Original rapid review	April 18, 2017
Spiegel, A. N., McQuillan, J., Halpin, P., Matuk, C., & Diamond, J. (2013). Engaging Teenagers with Science Through Comics. <i>Research in Science Education</i> , 43(6), 2309–2326. http://doi.org/10.1007/s11165-013-9358-x	Include		Original rapid review	April 18, 2017
Davis, H. D. (2017). 'Spyt kom te laat' The development and evaluation of a health-related fotonovela about methamphetamine ('tik') use in the Western Cape and Northern Cape provinces of South Africa. Stellenbosch : Stellenbosch University. Retrieved from http://scholar.sun.ac.za/handle/10019.1/102845	Include		Forward citations	April 8, 2018
Zieger, B., Praskova, M., Busse, E., & Barth, M. (2013). A Prospective Randomised Control Study: Reduction of Children's Pain Expectation Using a Picture Book during Blood Withdrawal. <i>Klinische Pädiatrie</i> , 225(3), 110–114. http://doi.org/10.1055/s-0033-1343481	Include		Forward citations	April 8, 2018
Forster, M., Allem, J.-P., Mendez, N., Qazi, Y., & Unger, J. B. (2016). Evaluation of a telenovela designed to improve knowledge and behavioral intentions among Hispanic patients with end-stage renal disease in Southern California. <i>Ethnicity & Health</i> , 21(1), 58–70. http://doi.org/10.1080/13557858.2015.1007119doi.org/10.1080/13557858.2015.1007119	Exclude	Cartoon videos	Forward citations	April 8, 2018
Nasution, S., Sadono, D., & Wibowo, C. T. (2018). Penyuluhan Kesehatan untuk	Include		Forward citations	April 8,

Pencegahan dan Risiko Penyakit DBD dalam Manga dan Infografis. Jurnal Penyuluhan, 14(1). http://doi.org/10.25015/PENYULUHAN.V14I1.17618				2018
Egawa-Takata, T., Ueda, Y., Morimoto, A., Tanaka, Y., Yagi, A., Terai, Y., ... Shimura, K. (2018). Motivating Mothers to Recommend Their 20-Year-Old Daughters Receive Cervical Cancer Screening: A Randomized Study. J Epidemiol. http://doi.org/10.2188/jea.JE20160155	Exclude	Comic leaflet vs comic leaflet + leaflet for mother	Forward citations	April 8, 2018
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Purnell, K. N., & Solman, R. T. (1991). The influence of technical illustrations on students' comprehension in geography. Reading Research Quarterly, 26(3), 277-299	Exclude	Not comics	Emails to researchers	April 8, 2018
Wong, S. W. L., Miao, H., Cheng, R. W.-y., & Yip, M. C. W. (2017). Graphic Novel Comprehension Among Learners with Differential Cognitive Styles and Reading Abilities. Reading & Writing Quarterly, 33(5), 412-427. http://doi.org/10.1080/10573569.2016.1216343	Unclear	Details unclear	Emails to researchers	April 8, 2018
Jee, B. D., & Anggoro, F. K. (2012). Comic cognition: Exploring the potential cognitive impacts of science comics. Journal of Cognitive Education and Psychology, 11, 196–208. http://doi.org/10.1891/1945-8959.11.2.196	Exclude	Not RCT	Emails to researchers	April 8, 2018
Leiner, M., Peinado, J., Baylon, A., Lopez, I., & Pathak, I. (2018). Divide and conquer: improving parental understanding of health-related instructions using sequential pictorial instructions. Health Education Research, 33(2), 104–113. http://doi.org/10.1093/her/cyy004	Exclude	Not RCT	Emails to researchers	April 8, 2018

Leiner, M., Peinado, J., Villanos, M., et al. (2013). Improving comprehension and accuracy of health questionnaires using pictorial descriptions. <i>Salud Publica Mex</i> , 55, 459–460	Exclude	Not RCT	Emails to researchers	April 8, 2018
Arphorn, S., Augsornpeug, N., Srisorrachatr, S., & Pruktharathikul, V. (2003). Comprehension of safety signs for construction workers: comparison of existing and newly designed signs. <i>Journal of Human Ergology</i> , 32(2), 87–94. Retrieved from http://www.ncbi.nlm.nih.gov/pubmed/16022158	Exclude	Not comics	Emails to researchers	April 8, 2018
Merç, A. (2013). The effect of comic strips on efl reading comprehension. <i>International Journal on New Trends in Education and Their Implications</i> , 4(1), 54-64.	Include		Emails to researchers	April 8, 2018
Aiken, K. G. (2010). Superhero history: Using comic books to teach US history. <i>OAH Magazine of History</i> , 24, 41–47. http://doi.org/10.1093/maghis/24.2.41	Exclude	Not RCT	Emails to researchers	April 8, 2018
Monfort, E., Allain, P., Etcharry-Bouyx, F., & Le Gall, D. (2010). Apport d'une aide imagée à la compréhension de prescriptions médicales chez des sujets âgés et des patients atteints de maladie d'Alzheimer. <i>Psychologie & NeuroPsychiatrie Du Vieillissement</i> , 8(1), 65–75. https://doi.org/10.1684/PNV.2010.0201	Exclude	Not RCT	Emails to researchers	April 8, 2018
Kools, M., van de Wiel, M. W. J., Ruiter, R. A. C., & Kok, G. (2006). Pictures and text in instructions for medical devices: Effects on recall and actual performance. <i>Patient Education and Counseling</i> , 64(1–3), 104–111. https://doi.org/10.1016/J.PEC.2005.12.003	Exclude	Not comics	Emails to researchers	April 8, 2018
Levie WH, Lentz R. Effects of text illustrations: a review of research. <i>Educ Commun Technol J</i> 1982;30:195–232	Exclude	Not RCT	Emails to researchers	April 8, 2018
Filippatou, D., & Pumfrey, P. D. (1996). Pictures, Titles, Reading Accuracy and Reading Comprehension: a research review (1973 - 95). <i>Educational Research</i> , 38(3), 259 - 291. https://doi.org/10.1080/0013188960380302	Exclude	Not RCT	Emails to researchers	April 8, 2018
Ganier, F., Gombert, J., & Fayol, M. (2000). Effets du format de présentation des instructions sur l'apprentissage de procédures à l'aide de documents techniques. <i>Le Travail Humain</i> , 63(2), 121–152. Retrieved from https://www.jstor.org/stable/40660254	Exclude	Not comics	Emails to researchers	April 8, 2018
Bieger, G. R., & Glock, M. D. (1986). Comprehending Spatial and Contextual Information in Picture-Text Instructions. <i>The Journal of Experimental Education</i> , 54(4), 181–188. https://doi.org/10.1080/00220973.1986.10806418	Exclude	Not comics	Emails to researchers	April 8, 2018
Tabassum, M., Alqhatani, A., Aldossari, M., & Richter Lipford, H. (2018). Increasing User Attention with a Comic-based Policy. In <i>Proceedings of the 2018 CHI Conference on Human Factors in Computing Systems - CHI '18</i> . ACM Press. https://doi.org/10.1145/3173574.3173774	Include		Emails to researchers	April 8, 2018
Cohen, E. L., Wasserman, J. A., Schlue, L. M., Keely, C., & Russell, A. (2018). Seeing is	Include		Twitter (Neil Cohn)	April

believing: The role of imagery fluency in narrative persuasion through a graphic novel. Psychology of Popular Media Culture. doi: https://doi.org/10.1037/ppm0000218				2019
Durand, M.-A., Yen, R. W., O'Malley, A. J., Politi, M. C., Dhage, S., Rosenkranz, K., ... Elwyn, G. (2018). What matters most: protocol for a randomized controlled trial of breast cancer surgery encounter decision aids across socioeconomic strata. BMC Public Health, 18(1). https://doi.org/10.1186/s12889-018-5109-2 https://clinicaltrials.gov/ct2/show/NCT03136367	Include	Ongoing, awaiting publication (23 April 2019)	Emails to researchers	March 28, 2019
Yuan L, Manderson L, Tempongko MS, Wei W, Aiguo P. (2000). The impact of educational videotapes on water contact behaviour of primary school students in the Dongting Lakes region, China. Tropical Medicine & International Health. https://www.ncbi.nlm.nih.gov/pubmed/10995095	Exclude	Video + comic book	Emails to researchers	March 28, 2019
Alam, S., Elwyn, G., Percac-Lima, S., Grande, S., & Durand, M.-A. (2016). Assessing the acceptability and feasibility of encounter decision aids for early stage breast cancer targeted at underserved patients. BMC Medical Informatics and Decision Making, 16(1), 147. https://doi.org/10.1186/s12911-016-0384-2	Include		Can't remember	2019
Camargo, 2012 Historias em quadrinhos para educacao em Saúde - Desenvolvimento e avaliacao aplicados aos disturbios do sono. http://repositorio.unifesp.br/handle/11600/22202	Exclude	Not RCT	Can't remember	2019
Vigano, Oscar. Estudio Sobre Aceptacion y Efectividad de las Fotonovelas e Historietas en la Comunicacion de Conocimien- tos en Areas Rurales de Guatemala. Basic Village Education Project. Adademy for Educational Development	Unclear	No access	Can't remember	2019
Antonini, M. (2017). Évaluation de l'amélioration de la cognition sociale chez des adultes avec Trouble du Spectre Autistique par l'intermédiaire d'un serious game: JeStiMuLE : Étude prospective comparative randomisée multicentrique. Médecine humaine et pathologie. Retrieved from https://dumas.ccsd.cnrs.fr/dumas-01779135/document	Exclude	Video game involving comics vs video game	Google Scholar	12 April 2019
Rolland, E. (2016). Impact d'une information délivrée sous forme de bande dessinée concernant la prescription de l'antibiothérapie dans les infections respiratoires en médecine générale. Médecine humaine et pathologie. Retrieved from https://dumas.ccsd.cnrs.fr/dumas-02005678/document	Exclude	Not RCT	Google Scholar	12 April 2019
Aleixo, P. A., & Sumner, K. (2016). Memory for biopsychology material presented in comic book format. Journal of Graphic Novels and Comics, 8(1), 79–88. https://doi.org/10.1080/21504857.2016.1219957	Include		Cartoonscience	22 April 2019

Landherr, L.J.T. (2016). The Production of Science Comics To Improve Undergraduate Engineering. Proc. ASEE Northeast Sect. Conf.	Exclude	Not RCT	Cartoonscience	22 April 2019
Mansoor, L. E., & Dowse, R. (2003). Effect of Pictograms on Readability of Patient Information Materials. Annals of Pharmacotherapy, 37(7–8), 1003–1009. https://doi.org/10.1345/aph.1C449	Exclude	Not comics	Can't remember	2019
Michielutte, R., Bahnson, J., Dignan, M., & Schroeder, E. (1992). The use of illustrations and narrative text style to improve readability of a health education brochure. Journal of Cancer Education, 7(3), 251–260. https://doi.org/10.1080/08858199209528176	Exclude	Not comics	Can't remember	2019
Wilkinson, P., Tylden-Pattenson, L., Gould, J., & Wood, P. (1981). Comparative assessment of two booklets about rheumatoid arthritis, intended for use by patients. Health Education Journal, 40(3), 84–88. https://doi.org/10.1177/001789698104000309	Exclude	Not RCT	Can't remember	2019
Arunakul, M., Kuphasuk, Y., & Boonyathanasit, R. (2012). Effectiveness of oral hygiene instruction media on periodontal health among hearing impaired children. The Southeast Asian Journal of Tropical Medicine and Public Health, 43(5), 1297–1303. Retrieved from http://www.ncbi.nlm.nih.gov/pubmed/23431840	Exclude	Not comics	Can't remember	2019
Strouse, G. A., & Ganea, P. A. (2017). Parent–Toddler Behavior and Language Differ When Reading Electronic and Print Picture Books. Frontiers in Psychology, 8, 677. https://doi.org/10.3389/fpsyg.2017.00677	Exclude	Electronic book had music, animation	Can't remember	2019
Owen, L. H., Kennedy, O. B., Hill, C., & Houston-Price, C. (2018). Peas, please! Food familiarization through picture books helps parents introduce vegetables into preschoolers' diets. Appetite, 128, 32–43. https://doi.org/10.1016/J.APPET.2018.05.140	Exclude	Not comics	Can't remember	2019
Champion, K. E., Newton, N. C., Stapinski, L., & Teesson, M. (2018). Cluster randomised controlled trial of an online intervention to prevent ecstasy and new psychoactive substance use among adolescents: final results and implications for implementation. BMJ Open, 8(11), e020433. https://doi.org/10.1136/bmjopen-2017-020433	Exclude	Not comics	Can't remember	2019
Davis, B., & Jansen, C. (2019). Using a fotonovela to battle crystal meth in South Africa. Journal of Ethnicity in Substance Abuse, 1–19. https://doi.org/10.1080/15332640.2019.1568335	Include		Can't remember	2019
Mengoni, S. E., Gates, B., Parkes, G., Wellsted, D., Barton, G., Ring, H., ... Durand, M.-A. (2016). Wordless intervention for people with epilepsy and learning disabilities (WIELD): a randomised controlled feasibility trial. BMJ Open, 6(11), e012993. https://doi.org/10.1136/bmjopen-2016-012993 http://www.isrctn.com/ISRCTN80067039	Include		Can't remember	2019

https://trialsjournal.biomedcentral.com/articles/10.1186/1745-6215-15-455				
Shin, D. W., Cho, J., Kim, Y. W., Oh, J. H., Kim, S. W., Chung, K.-W., ... Lee, W.-C. (2012). Efficacy of an Educational Material on Second Primary Cancer Screening Practice for Cancer Survivors: A Randomized Controlled Trial. PLoS ONE, 7(3), e33238. https://doi.org/10.1371/journal.pone.0033238 https://clinicaltrials.gov/ct2/show/NCT00948337	Include		Can't remember	2019
Hämeen-Anttila, K., Kemppainen, K., Enlund, H., Bush Patricia, J., & Marja, A. (2004). Do pictograms improve children's understanding of medicine leaflet information? Patient Education and Counseling, 55(3), 371–378. https://doi.org/10.1016/J.PEC.2003.04.006	Exclude	Not comics	Can't remember	2019
Labranche, E. R., Helweg-Larsen, M., Byrd, C. E., & Choquette, R. A. (1997). To Picture or Not to Picture: Levels of Erotophobia and Breast Self-Examination Brochure Techniques1. Journal of Applied Social Psychology, 27(24), 2200–2212. https://doi.org/10.1111/j.1559-1816.1997.tb01648.x	Exclude	Not comics	Can't remember	2019
Patel, V. L., Eisemon, T. O., & Arocha, J. F. (1990). Comprehending instructions for using pharmaceutical products in rural Kenya. Instructional Science, 19(1), 71–84. https://doi.org/10.1007/BF00377986	Exclude	Not comics	Can't remember	2019
Manes, M. R., Burke, A. & Dworkin, M. S. (2014). Food for thought: Effective evidence-based brochure and comic book interventions designed for restaurant food handlers. Food Protection Trends; 34(2):68-82. Retrieved from http://www.foodprotection.org/files/food-protection-trends/MarApr-14-Manes-Liu.pdf	Exclude	Comic + brochure vs nothing	Can't remember	2019
Hill, B., Perri-Moore, S., Kuang, J., Bray, B. E., Ngo, L., Doig, A., & Zeng-Treitler, Q. (2016). Automated pictographic illustration of discharge instructions with Glyph: impact on patient recall and satisfaction. Journal of the American Medical Informatics Association, 23(6), 1136–1142. https://doi.org/10.1093/jamia/ocw019	Exclude	Not comics	Can't remember	2019
Brotherstone, H., Miles, A., Robb, K. A., Atkin, W., & Wardle, J. (2006). The impact of illustrations on public understanding of the aim of cancer screening. Patient Education and Counseling, 63(3), 328–335. https://doi.org/10.1016/j.pec.2006.03.016	Exclude	Not comics	Can't remember	2019
Suzuki, H. Knowledge translation to reduce low birthweight infants in low BMI Japanese pregnant women using a comic book: a randomized control trial . Retrieved from https://rctportal.niph.go.jp/detail/um?trial_id=UMIN000034762	Include	Ongoing, awaiting publication (23 April 2019)	RCTPortal	2019
Shimazaki, T. Identifying psychological mediator bridging health promotion manga and its educational effects. Retrieved from https://rctportal.niph.go.jp/en/detail?trial_id=UMIN000034369	Include	Ongoing, awaiting publication (23 April 2019)	RCTPortal	2019

Tomari, S., Yokota, C., Nishimura, K., Hino, T., Ohyama, S., Arimizu, T., ... Minematsu, K. (2017). Effects of school-based intervention by emergency medical technicians on students and their parents: a community-based prospective study of the Akashi project. <i>BMJ Open</i> , 7(10), e016780. https://doi.org/10.1136/bmjopen-2017-016780	Exclude	Exclude, comics + co-interventions	RCTPortal	2019
Yokota, C. Stroke education program using an animated cartoon and a manga for the students of compulsory education. Retrieved from https://rctportal.niph.go.jp/en/detail?trial_id=UMIN000018245	Exclude	Exclude, comics + co-interventions	RCTPortal	2019
Inaoka, K. Effectiveness of Preventing Second-hand Smoke for Pregnant Women at Home Using an Educational Comic Booklet in Indonesia: A Randomized Controlled Trial. Retrieved from https://rctportal.niph.go.jp/en/detail?trial_id=UMIN000035423	Include	Ongoing, awaiting publication (23 April 2019)	RCTPortal	2019
Lin, S.-F., & Lin, H. (2016). Learning nanotechnology with texts and comics: the impacts on students of different achievement levels. <i>International Journal of Science Education</i> , 38(8), 1373–1391. https://doi.org/10.1080/09500693.2016.1191089	Include		Can't remember	2019
Lin, S.-F., Lin, H., Lee, L., & Yore, L. D. (2014). Are Science Comics a Good Medium for Science Communication? The Case for Public Learning of Nanotechnology. <i>International Journal of Science Education, Part B</i> , 5(3), 276–294. https://doi.org/10.1080/21548455.2014.941040	Include		Can't remember	2019
Rodriguez, L., & Lin, X. (2016). The impact of comics on knowledge, attitude and behavioural intentions related to wind energy. <i>Journal of Visual Literacy</i> , 35(4), 237–252. https://doi.org/10.1080/1051144x.2016.1278090	Include		Can't remember	2019
Ardasheva, Y., Wang, Z., Roo, A. K., Adesope, O. O., & Morrison, J. A. (2017). Representation visuals' impacts on science interest and reading comprehension of adolescent English learners. <i>The Journal of Educational Research</i> , 111(5), 631–643. https://doi.org/10.1080/00220671.2017.1389681	Exclude	Not comics	Can't remember	2019
Ika, M. & Luluk, A. (2018). The development of science comic to improve student's understanding in elementary school. <i>Jurnal Inovasi Pendidikan IPA</i> , 4(1), 75-82. http://dx.doi.org/10.21831/jipi.v4i1.21076	Exclude	Not RCT	Can't remember	2019
Subramanian, R. (2016). Investigating the potential of visual news narratives to reduce mental illness stigma. University of Missouri--Columbia. Retrieved from https://mospace.umsystem.edu/xmlui/handle/10355/62474	Include		Can't remember	2019
Thompson, B., Barrington, W. E., Briant, K. J., Kupay, E., Carosso, E., Gonzalez, N. E., & Gonzalez, V. J. (2019). Educating Latinas about cervical cancer and HPV: a pilot randomized study. <i>Cancer Causes & Control</i> , 1–10. https://doi.org/10.1007/s10552-019-	Include		Can't remember	2019

01150-w				
Mireault, G. et al. (1991). Evaluation d'un programme d'intervention auprès d'enfants de familles séparées: le projet EntramiS [Bachelor's thesis]	Exclude	Not RCT	Can't remember	2019
Reinwein, J. (1990). Lire des bandes dessinées: l'effet de l'image sur la compréhension de lecteurs forts et faibles. Actes du IV ^e Colloque International de didactique du français langue maternelle, pp. 281-287	Include		Can't remember	2019
la mesure de l'effet de l'illustration reinwein 1989	Unclear	No access	Can't remember	2019
Beaudoin, I. et al. (2007). L'inadaptation sociale et scolaire chez les élèves à risque: une approche innovante de lecture accompagnée	Exclude	Co-interventions	Can't remember	2019
Dworkin, M. S., Panchal, P., & Liu, L. (2012). The CHEF Project: Results of a randomized bilingual dual format passive restaurant food handler educational intervention in Chicago. Food Protection Trends, 32(10), 564–573	Include		Can't remember	2019
Garbarino, J. (1987). Children's response to a sexual abuse prevention program: A study of the spiderman comic. Child Abuse & Neglect, 11(1), 143–148. https://doi.org/10.1016/0145-2134(87)90044-5	Exclude	Not RCT	Can't remember	2019
Lemieux, N., & Beaudoin, I. (2015). La multimodalité au coeur de la classe de français : la compréhension de multitextes chez les élèves du 3 cycle du primaire. Revue de recherches en littératie médiatique multimodale, 2. https://doi.org/10.7202/1047312ar	Exclude	Not RCT	Can't remember	2019
Wright, H. H., Capilouto, G. J., & Koutsoftas, A. (2013). Evaluating measures of global coherence ability in stories in adults. International Journal of Language & Communication Disorders, 48(3), 249–256. https://doi.org/10.1111/1460-6984.12000	Exclude	All participants read the comics, order was randomized, not participants	Can't remember	2019
Krischak, G., Gebhard, F., Reichel, H., Friemert, B., Schneider, F., Fisser, C., ... Kraus, M. (2013). A prospective randomized controlled trial comparing occupational therapy with home-based exercises in conservative treatment of rotator cuff tears. Journal of Shoulder and Elbow Surgery, 22(9), 1173–1179. https://doi.org/10.1016/j.jse.2013.01.008	Exclude	Booklet vs therapy	Can't remember	2019
Cohn, N., Paczynski, M., Jackendoff, R., Holcomb, P. J., & Kuperberg, G. R. (2012). (Pea)nuts and bolts of visual narrative: Structure and meaning in sequential image comprehension. Cognitive Psychology, 65(1), 1–38. https://doi.org/10.1016/J.COGLPSYCH.2012.01.003	Exclude	Not measuring the effects of comics but rather comprehension of sequential images within comics. Admittedly close to inclusion criteria.	Can't remember	2019

Dohnt, H. K., & Tiggemann, M. (2008). Promoting positive body image in young girls: an evaluation of 'Shapesville.' <i>European Eating Disorders Review</i> , 16(3), 222–233. https://doi.org/10.1002/erv.814	Unclear	Unclear if Shapesville is a comic	Can't remember	2019
Nagata, R. (1999). Learning biochemistry through manga: Helping students learn and remember, making lectures more exciting. <i>Biochemical Education</i> , 27(4), 200–203. https://doi.org/10.1016/S0307-4412(99)00052-7	Exclude	Not RCT	Can't remember	2019
Di Raddo, P. (2006). Teaching chemistry lab safety through comics. <i>Journal of Chemical Education</i> , 83(4), 571–573. https://doi.org/10.1021/ed083p571	Exclude	Not RCT	Can't remember	2019
Weitkamp, E., & Burnet, F. (2007). The 'chemedian' brings laughter to the chemistry classroom. <i>International Journal of Science Education</i> , 29(15), 1911–1929. https://doi.org/10.1080/09500690701222790	Exclude	Not RCT	Can't remember	2019
Hughes, P. (1998). Exploring visual literacy across the curriculum. In J. Evans (Ed.), <i>What's in the picture?</i> (pp. 115–131). London: Paul Chapman Publishing Ltd	Unclear	No access	Can't remember	2019
Houts, P. S., Doak, C. C., Doak, L. G., & Loscalzo, M. J. (2006). The role of pictures in improving health communication: A review of research on attention, comprehension, recall, and adherence. <i>Patient Education and Counseling</i> , 61(2), 173–190. https://doi.org/10.1016/j.pec.2005.05.004	Exclude	Not RCT	Can't remember	2019
Houghton, F., Toms, J., Meratnia, G., Loney, K., Hopkins, E., & Del Monte, K. (2016). Concerns With Entertainment-Education: Zombie Pandemic Preparedness and the Unanticipated Promotion of a Weapons Culture. <i>Health Education & Behavior</i> , 44(4), 519–523. https://doi.org/10.1177/1090198116677280	Exclude	Not comics	Can't remember	2019
Christy, S. M., Davis, S. N., Williams, K. R., Zhao, X., Govindaraju, S. K., Quinn, G. P., ... Gwede, C. K. (2016). A community-based trial of educational interventions with fecal immunochemical tests for colorectal cancer screening uptake among blacks in community settings. <i>Cancer</i> , 122(21), 3288–3296. https://doi.org/10.1002/cncr.30207	Include		Can't remember	2019
Davis, S. N., Christy, S. M., Chavarria, E. A., Abdulla, R., Sutton, S. K., Schmidt, A. R., ... Gwede, C. K. (2017). A randomized controlled trial of a multicomponent, targeted, low-literacy educational intervention compared with a nontargeted intervention to boost colorectal cancer screening with fecal immunochemical testing in community clinics. <i>Cancer</i> , 123(8), 1390–1400. https://doi.org/10.1002/cncr.30481	Include		Can't remember	2019
Christy, S. M., Sutton, S. K., Gwede, C. K., Chavarria, E. A., Davis, S. N., Abdulla, R., ... Meade, C. D. (2017). Examining the Durability of Colorectal Cancer Screening Awareness and Health Beliefs Among Medically Underserved Patients: Baseline to 12 months Post-	Include		Can't remember	2019

Intervention. Journal of Cancer Education. https://doi.org/10.1007/s13187-017-1301-9				
Gwede, C. K., Sutton, S. K., Chavarria, E. A., Gutierrez, L., Abdulla, R., Christy, S. M., ... Meade, C. D. (2019). A culturally and linguistically salient pilot intervention to promote colorectal cancer screening among Latinos receiving care in a Federally Qualified Health Center. Health Education Research. https://doi.org/10.1093/her/cyz010	Exclude	Fotonovela + DVD vs brochure	Can't remember	2019
Brooks, P. (1977). The role of action lines in children's memory for pictures. Journal of Experimental Child Psychology, 23, 98-107. https://doi.org/10.1016/0022-0965(77)90076-5	Exclude	Not comics	Email (Paul Aleixo)	28 April 2019
Millard, E., & Marsh, J. (2001). Sending Minnie the Minx home: Comics and reading choices. Cambridge Journal of Education, 31, 25-38	Exclude	(suggested even if qualitative)	Email (Paul Aleixo)	28 April 2019
Sabbah, M., Masood M. and Iranmanesh, M. (2013). Effects of graphic novels on reading comprehension in Malaysian year 5 students. Journal of Comics and Graphic Novels, 4(1), 146-160.	Exclude	Not RCT	Email (Paul Aleixo)	28 April 2019
Takashima, H. (1987). Acculturation and second language learning: Use of comics to measure the degree of acculturation. International Review of Applied Linguistics in Language Teaching, 25, 25-40.	Exclude	Not RCT	Email (Paul Aleixo)	28 April 2019
Dowdall, N., Melendez-Torres, G. J., Murray, L., Gardner, F., Hartford, L., & Cooper, P. J. (2019). Shared Picture Book Reading Interventions for Child Language Development: A Systematic Review and Meta-Analysis. Child Development. https://doi.org/10.1111/cdev.13225	Exclude	Focus is reading picture books + co-interventions	Pubmed 4	May 6, 2019
Lühnen, J., Steckelberg, A., & Buhse, S. (2018). Pictures in health information and their pitfalls: Focus group study and systematic review. Zeitschrift Für Evidenz, Fortbildung Und Qualität Im Gesundheitswesen, 137–138, 77–89. https://doi.org/10.1016/j.zefq.2018.08.002	Exclude	Focus is effect of photos	Pubmed 4	May 6, 2019
Lin, X. (2013). The impact of comics on audiences' knowledge of, attitude toward, and behavioral intentions related toward energy. Iowa State University. Retrieved from https://lib.dr.iastate.edu/cgi/viewcontent.cgi?article=4269&context=etd	Included	Note : Original thesis from which (Rodriguez, 2016) emerged	Chance finding when looking for Rodriguez's comic	May 6, 2019
Coldwell, S. E., Kaakko, T., Gartner-Makihara, A. B., Williams, T., Milgrom, P., Weinstein, P., & Ramsay, D. S. (2002). Temporal information reduces children's pain reports during a multiple-trial cold pressor procedure. Behavior Therapy, 33(1 CC-Child Health CC-Oral Health CC-Pain, Palliative and Supportive Care), 45-63. Retrieved from https://www.cochranelibrary.com/central/doi/10.1002/central/CN-00443905/full	Exclude	Borderline case, cartoon figures shown sequentially on TV screen	CENTRAL 3	May 8, 2019
Davis, G. A., & Coelho, C. A. (2004). Referential cohesion and logical coherence of narration after closed head injury. <i>Brain and Language</i> , 89(3), 508-523.	Exclude	Not RCT	CENTRAL 3	May 8, 2019

https://doi.org/10.1016/j.bandl.2004.01.003				
TCTR20171207002. (2017). Behavioral Based Nutrition Education Intervention to Increase Fish Consumption among School Children Using Raised Bed Pool Media: protocol for A Randomized Control Trial. Http://Www.Who.Int/Trialsearch/Trial2.Aspx?Trialid=tctr20171207002 . Retrieved from https://www.cochranelibrary.com/central/doi/10.1002/central/CN-01898159/full	Exclude	Education + comics + cointerventions vs Comics + cointerventions	CENTRAL 3	May 8, 2019
Happé, F., Brownell, H., & Winner, E. (1999). Acquired “theory of mind” impairments following stroke. <i>Cognition</i> , 70(3), 211-240. Retrieved from https://www.cochranelibrary.com/central/doi/10.1002/central/CN-00164658/full	Exclude	Not RCT	CENTRAL 3	May 8, 2019
DRKS00012493. (2017). Comic-based informed consent: influence on patient understanding, - satisfaction and - anxiety before cardiac catheterization + potential percutaneous coronary stent implantation. Http://Www.Who.Int/Trialsearch/Trial2.Aspx?Trialid=drks00012493 . Retrieved from https://www.cochranelibrary.com/central/doi/10.1002/central/CN-01888999/full	Include	Registry entry for (Brand, 2019)	CENTRAL 3	May 8, 2019
Brand, A., Gao, L., Hamann, A., Crayen, C., Brand, H., Squier, S. M., ... Stangl, V. (2019). Medical Graphic Narratives to Improve Patient Comprehension and Periprocedural Anxiety Before Coronary Angiography and Percutaneous Coronary Intervention: A Randomized Trial. <i>Annals of Internal Medicine</i> , 170(8), 579. https://doi.org/10.7326/m18-2976	Include		Chance finding when looking for the linked registry entry	May 16, 2019
ISRCTN14195036. (2008). The National Knowledge Service Tuberculosis Pilot Evaluation Study. Http://Www.Who.Int/Trialsearch/Trial2.Aspx?Trialid=isrctn14195036 . Retrieved from https://www.cochranelibrary.com/central/doi/10.1002/central/CN-01801478/full	Exclude	Leaflet, not comics	CENTRAL 3	May 8, 2019
JPRN-UMIN000019713. (2015). An Educational Program on Human Genetics by developing MANGA cartoon media that can enhance importance of awareness of family health history. Http://Www.Who.Int/Trialsearch/Trial2.Aspx?Trialid=jprn-Umin000019713 . Retrieved from https://www.cochranelibrary.com/central/doi/10.1002/central/CN-01846068/full	Exclude	Not RCT	CENTRAL 3	May 8, 2019
NCT03574129. (2018). Adolescent Transition To Adult Care for HIV-infected Adolescents in Kenya. Https://Clinicaltrials.Gov/Show/Nct03574129 . Retrieved from https://www.cochranelibrary.com/central/doi/10.1002/central/CN-01660781/full	Unclear	Comic book + “toolkit” vs standard care, inclusion will depend on what the toolkit includes Ongoing (29 April 2019), completion	CENTRAL 3	May 8, 2019

		planned 2021		
PACTR201408000830410. (2014). Will cartoons or music reduce distress during painful procedures in the ER. http://www.who.int/trialsearch/Trial2.aspx?Trialid=pactr201408000830410 . Retrieved from https://www.cochranelibrary.com/central/doi/10.1002/central/CN-01823274/full	Exclude	Cartoon video, not comics	CENTRAL 3	May 8, 2019
JPRN-UMIN000007888. (2012). Impact of patient education with cartoon visual aids on the quality of bowel preparation for colonoscopy. http://www.who.int/trialsearch/Trial2.aspx?Trialid=jprn-Umin000007888 . Retrieved from https://www.cochranelibrary.com/central/doi/10.1002/central/CN-01832182/full	Include	Registry entry for (Tae, 2012)	CENTRAL 3	May 8, 2019
ISRCTN54685764. (2005). Electronic Recording of Compliance with Patching Therapy for Amblyopia. http://www.who.int/trialsearch/Trial2.aspx?Trialid=isrctn54685764 . Retrieved from https://www.cochranelibrary.com/central/doi/10.1002/central/CN-01847969/full	Exclude	Cartoon + reward stickers + information sheet vs picture to colour	CENTRAL 3	May 8, 2019
NTR322. (2005). Electronic Recording of Compliance with Patching Therapy for Amblyopia. http://www.who.int/trialsearch/Trial2.aspx?Trialid=ntr322 . Retrieved from https://www.cochranelibrary.com/central/doi/10.1002/central/CN-01826168/full	Exclude	Cartoon + co-interventions vs standard care	CENTRAL 3	May 8, 2019
ISRCTN22835481. (2006). Implementation of Compliance Improvement for Amblyopia Prevention. http://www.who.int/trialsearch/Trial2.aspx?Trialid=isrctn22835481 . Retrieved from https://www.cochranelibrary.com/central/doi/10.1002/central/CN-01815081/full	Exclude	Cartoon + co-interventions vs standard care	CENTRAL 3	May 8, 2019
Simonsz, HJ. (n.d.). Implementation of Compliance Improvement for Amblyopia Prevention. http://www.isrctn.com/ISRCTN22835481				
Malavika, K. (n.d.). Studying the effect of a comic for children which gives details about general anaesthesia on reducing their anxiety before surgery. Retrieved from: http://www.who.int/trialsearch/Trial2.aspx?Trialid=ctri/2018/07/014807	Include	Ongoing, not yet recruiting (as of 29 April 2019)	CENTRAL 3	May 8, 2019
NCT00131729. (2005). Electronic Recording of Compliance With Occlusion Therapy for Amblyopia. https://clinicaltrials.gov/show/Nct00131729 . Retrieved from https://www.cochranelibrary.com/central/doi/10.1002/central/CN-01509078/full	Exclude	Cartoon + co-intervention vs picture to color	CENTRAL 3	May 8, 2019
Tan, S. L., Whittal, A., & Lippke, S. (2018). Testing a photo story intervention in paper versus electronic tablet format compared to a traditional brochure among older adults in Germany: Randomized controlled trial. JMIR Aging, 1(2), e12145. https://doi.org/10.2196/12145	Include		Email (Carel Jansen)	May 9, 2019

Koops van 't Jagt, R., Tan, S. L., Hoeks, J., Spoorenberg, S., Winter, A. de, Paech, J., Lippke, S., and Jansen, C. (in prep.). Using photo stories to support doctor-patient communication: Evaluating a communicative health literacy intervention for older adults.	Unclear	Note: Not yet published as of May 9 2019. [Check status here]	Email (Carel Jansen)	May 9, 2019
Thompson, D., Baranowski, J., Cullen, K., & Baranowski, T. (2007). Development of a theory-based internet program promoting maintenance of diet and physical activity change to 8-year-old African American girls. Computers & Education, 48(3), 446–459. https://doi.org/10.1016/j.compedu.2005.02.005	Exclude	Online comic + cointerventions	Email (Thompson Debbe)	May 9, 2019
Thompson, D., Baranowski, T., Cullen, K., Watson, K., Canada, A., Bhatt, R., ... Zakeri, I. (2007). Food, Fun and Fitness Internet program for girls: influencing log-on rate. Health Education Research, 23(2), 228–237. https://doi.org/10.1093/her/cym020	Exclude	Online comic + cointerventions	Email (Thompson Debbe)	May 9, 2019
Cullen, K. (2008). Feasibility of an 8-week African American Web-based Pilot Program Promoting Healthy Eating Behaviors: Family Eats. American Journal of Health Behavior, 32(1). https://doi.org/10.5993/ajhb.32.1.4	Exclude	Online comic + cointerventions	Email (Thompson Debbe)	May 9, 2019
Thompson, D., Baranowski, T., Baranowski, J., Cullen, K., Jago, R., Watson, K., & Liu, Y. (2009). Boy Scout 5-a-Day Badge: Outcome results of a troop and Internet intervention. Preventive Medicine, 49(6), 518–526. https://doi.org/10.1016/j.ypmed.2009.09.010	Exclude	Video game with co-interventions	Email (Thompson Debbe)	May 9, 2019
Baranowski, T., Baranowski, J., Thompson, D., Buday, R., Jago, R., Griffith, M. J., ... Watson, K. B. (2011). Video Game Play, Child Diet, and Physical Activity Behavior Change. American Journal of Preventive Medicine, 40(1), 33–38. https://doi.org/10.1016/j.amepre.2010.09.029	Exclude	Video game not comics	Email (Thompson Debbe)	May 9, 2019
Thompson, D., Baranowski, T., Buday, R., Baranowski, J., Thompson, V., Jago, R., & Griffith, M. J. (2008). Serious Video Games for Health: How Behavioral Science Guided the Development of a Serious Video Game. Simulation & Gaming, 41(4), 587–606. https://doi.org/10.1177/1046878108328087	Exclude	Video game not comics	Email (Thompson Debbe)	May 9, 2019
Thompson, D., Bhatt, R., Lazarus, M., Cullen, K., Baranowski, J., & Baranowski, T. (2012). A Serious Video Game to Increase Fruit and Vegetable Consumption Among Elementary Aged Youth (Squire's Quest! II): Rationale, Design, and Methods. JMIR Research Protocols, 1(2), e19. https://doi.org/10.2196/resprot.2348	Exclude	Video game + co-interventions, not comics	Email (Thompson Debbe)	May 9, 2019
Thompson, D., Bhatt, R., Vazquez, I., Cullen, K. W., Baranowski, J., Baranowski, T., & Liu, Y. (2015). Creating action plans in a serious video game increases and maintains child fruit-vegetable intake: a randomized controlled trial. International Journal of Behavioral Nutrition and Physical Activity, 12(1). https://doi.org/10.1186/s12966-015-0199-z	Exclude	Video game + co-interventions, not comics	Email (Thompson Debbe)	May 9, 2019

Callender, C., Liu, Y., Moore, C. E., & Thompson, D. (2017). The baseline characteristics of parents and African American girls in an online obesity prevention program: A feasibility study. Preventive Medicine Reports, 7, 110–115. https://doi.org/10.1016/j.pmedr.2017.05.011	Exclude	Not RCT	Email (Thompson Debbe)	May 9, 2019
Navdeep, K. (2019). Impact of photonovel interventions among people with low levels of health literacy: A literature review. Education for Information, 35(1), 21–34. https://doi.org/10.3233/EFI-180212	Exclude	Not RCT, rapid review. All included studies are already part of COLLECTORS	Forward citations (Shin, 2012)	May 16, 2019
Ganesh, L. (2013). The Effect of Comic Strips as a Supplementary Material to Teach Computer Networks. In 2013 IEEE Fifth International Conference on Technology for Education (t4e 2013). IEEE. https://doi.org/10.1109/t4e.2013.63	Unclear	No access. Email sent July 6, 2019.	Forward citations (Merç, 2013)	May 16, 2019
TOPKAYA, Y , ŞİMŞEK, U . (2015). Vatandaşlık ve demokrasi eğitimi dersine yönelik tutum üzerinde eğitici çizgi romanların etkisi. Journal of Computer and Education Research, 3 (6), 152-167. Retrieved from http://dergipark.org.tr/jcer/issue/18618/196532	Unclear	Translator needed (Turkish)	Forward citations (Merç, 2013)	May 16, 2019
Ahamed, A. B. & Harun, R. (2016). The effect of webcomics utilization in reading comprehension among lower secondary students. Retrieved from http://eeic.unsyiah.ac.id/proceedings/index.php/eeic/article/view/53/52	Include		Forward citations (Merç, 2013)	May 16, 2019
Werimon, S., Damopolii, I., & Nunaki, J. H. (2017). Pengaruh model pembelajaran stad dipadu media pembelajaran komik materi sistem pencernaan manusia terhadap hasil belajar siswa. Jurnal eksakta pendidikan (Jep), 1(2), 33. https://doi.org/10.24036/jep.v1i2.52	Unclear	Translator needed (Indonesian)	Forward citations (Merç, 2013)	May 16, 2019
Wasil Hidayah , 4401409008 (2014) PENGEMBANGAN KOMIK PENCEMARAN LINGKUNGAN SEBAGAI SUMBER BELAJAR SISWA KELAS VII SMP. Under Graduates thesis, Universitas Negeri Semarang. Retrieved from https://lib.unnes.ac.id/23152/	Unclear	Translator needed (Indonesian)	Forward citations (Merç, 2013)	May 16, 2019
Damopolii, I., & Rahman, S. R. (2019). The effect of STAD learning model and science comics on cognitive students achievement. Journal of Physics: Conference Series, 1157, 22008. https://doi.org/10.1088/1742-6596/1157/2/022008	Exclude	Not RCT	Forward citations (Merç, 2013)	May 16, 2019
Wulandari, A. T. & Soviyah, S. (2017). The effectiveness of comic strips use towards reading skill of the seventh grade students of smp n 9 yogyakarta in the academic year 2016/2017. Retrieved from http://seminar.uad.ac.id/index.php/utic/article/view/148	Exclude	Not RCT, although it could be, the study authors make contradictory statements	Forward citations (Merç, 2013)	May 16, 2019

Salinas, L. & Paola, S. (2015). El comic: una oportunidad de motivación y aprendizaje en las clases de inglés como L2. Retrieved from https://repository.javeriana.edu.co/handle/10554/17094	Unclear	Translator needed (Spanish 🇪🇸)	Forward citations (Merç, 2013)	May 16, 2019
Damayanti, K., Enawaty, E. & Melati, H. A. (2019). Pengaruh komik kimia berbasis pendekatan inkuiri terhadap hasil belajar tata nama senyawa peserta didik sma. Retrieved from http://jurnal.untan.ac.id/index.php/jpdpb/article/view/32374	Unclear	Translator needed (Indonesian)	Forward citations (Merç, 2013)	May 16, 2019
Ojeda-Beck, A. (2018). Learning from and getting lost in graphic novels: Their role in promoting vocabulary learning, comprehension, motivation, and engagement (Doctoral thesis). Retrieved from https://escholarship.org/uc/item/2hv379p9	Include		Forward citations (Lin, 2016)	May 21, 2019
İlhan, G. O., & Oruç, Ş. (2019). Comic Books Use in Social Studies Lesson: Texas History. TED EĞİTİM VE BİLİM. https://doi.org/10.15390/eb.2019.7830	Exclude	Not RCT	Forward citations (Lin, 2016)	May 21, 2019
Wang, Z., Wang, S., Farinella, M., Murray-Rust, D., Henry Riche, N., & Bach, B. (2019). Comparing Effectiveness and Engagement of Data Comics and Infographics. In Proceedings of the 2019 CHI Conference on Human Factors in Computing Systems - CHI '19. ACM Press. https://doi.org/10.1145/3290605.3300483	Exclude	Infographics not comics	Forward citations (Aleixo, 2016)	May 21, 2019
Arini, F. D., Choiri, A. S., & Sunardi. (2017). The Use Of Comic As A Learning Aid To Improve Learning Interest Of Slow Learner Student. Zenodo. https://doi.org/10.5281/zenodo.221004	Exclude	Not RCT. Said to be "experimental" but no mention of randomization.	Forward citations (Mallia, 2007)	May 21, 2019
Webb, E. N., Balasubramanian, G., O'Broin, U., Webb & J. M. (2012). WHAM! POW! Comics as User Assistance. Journal of Usability Studies, 7(3), 105-117. Retrieved from http://uxpajournal.org/wp-content/uploads/sites/8/pdf/JUS_Noll-Webb_May_2012.pdf	Exclude	Not RCT. Second assessment would be welcome.	Forward citations (Mallia, 2007)	May 21, 2019
Aleixo, P. A., & Sumner, K. (n.d.). Memory for biopsychology material presented in comic book format. Retrieved from http://shura.shu.ac.uk/12833/3/Aleixo%20Memory%20for%20biopsychology%20material.pdf	Exclude	Author version of (Aleixo, 2016)	Forward citations (Mallia, 2007)	May 21, 2019
Ngi Yi Lok, A. (2015). Effect of Comic Strips on English Vocabulary Teaching [Bachelor thesis]. Retrieved from http://repository.lib.ied.edu.hk/pubdata/ir/link/pub/Honour%20Project-%20Ng%20Yi%20Lok%20Alice.pdf	Include		Forward citations (Mallia, 2007)	May 21, 2019
Wang, X., Hu, J., Hengeveld, B. & Rauterberg, M. (n.d.). Can time perception be affected by interactive comics? Retrieved from http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.699.7463&rep=rep1&type=p	Exclude	Not RCT	Forward citations (Mallia, 2007)	May 21, 2019

df				
Tremblay, M. (2013). La bande dessinée pédagogique [Master thesis]	Exclude	Not RCT	Forward citations (Mallia, 2007)	May 21, 2019
Salimah Unik Fadillatus. (2017). Improving students'skills in writing recount text by using manga strips [Bachelor thesis]. Retrieved from http://eprints.iain-surakarta.ac.id/752/1/Unik%20Fadillatus%20Salimah.pdf	Exclude	Not RCT	Forward citations (Mallia, 2007)	May 21, 2019
Wang, X. (2019). Segmentation of panels in d-comics [Doctoral thesis]. Retrieved from http://www.idemployee.id.tue.nl/g.w.m.rauterberg/publications/PhD-thesis/PhD-Thesis%20(Wang%202019).pdf	Exclude	1 st experiment measures panel separation, not the effects of reading the comics. In the other one participants read all comics.	Forward citations (Mallia, 2007)	May 21, 2019
Okmen, G. S. (2017). Using graphic novels at language: turkish a lessons in international baccalaureate diplomma program: the sample of Puslu Kitalar Atlasi [Master thesis]	Unclear	Translator needed (Turkish)	Forward citations (Mallia, 2007)	May 21, 2019
Ching, H. S. & Fook, F. S. (2013). Effects of multimedia-based graphic novel presentation on critical thinking among students of different learning approaches. The Turkish Online Journal of Educational Technology, 12(4), 56-66. Retrieved from https://files.eric.ed.gov/fulltext/EJ1018032.pdf	Exclude	Graphic novel vs graphic novel + sound vs graphic novel + sound + audiotext	Backward citations (Ahamed, 2016)	May 21, 2019
Widayanti, A., & Muntaha, M. (2019). Islamic web comics as visual aid in teaching english for islamic secondary school students. Indonesian Journal of Islamic Literature and Muslim Society, 3(1), 75. https://doi.org/10.22515/islimus.v3i1.1298	Exclude	Webcomics vs film	Backward citations (Ahamed, 2016)	June 3, 2019
Darsalina, L., Syamaun, A. & Sari, D. F. (2016). The Application of Comic Strips in Teaching Vocabulary. Research in English and Education (Read), 1(2), 137-145. Retrieved from https://pdfs.semanticscholar.org/71d4/d4b3f3c38d685f52e4ff017af215576e3459.pdf	Exclude	Not RCT	Chance finding when looking for backward citations of (Ngi Yi Lok, 2015)	June 3, 2019
Al Bardaweel, S., & Dashash, M. (2018). E-learning or educational leaflet: does it make a difference in oral health promotion? A clustered randomized trial. BMC Oral Health, 18(1). https://doi.org/10.1186/s12903-018-0540-4	Exclude	Comics vs e-learning program (close to being included)	Chance finding when looking for comics about RCTs	June 5, 2019
Nsangi, A., Semakula, D., Oxman, A. D., Austvoll-Dahlgren, A., Oxman, M., Rosenbaum, S., ... Sewankambo, N. K. (2017). Effects of the Informed Health Choices primary school intervention on the ability of children in Uganda to assess the reliability of claims about treatment effects: a cluster-randomised controlled trial. The Lancet, 390(10092),	Exclude	Comics as part of an educational program	Personal involvement of VM in the project	June 5, 2019

374–388. doi: https://doi.org/10.1016/s0140-6736(17)31226-6				
Ellyn Leighton, O. W., Alexandra DeSorbo, H., & Monique Hedmann, M. H. (2015). Hip Hop Stroke: Study Protocol for a Randomized Controlled Trial to Address Stroke Literacy. <i>Journal of Clinical Trials</i> , 5(5). https://doi.org/10.4172/2167-0870.1000242	Exclude	Comics as part of an educational program	Chance finding when looking for comics about RCTs	June 5, 2019
Grootens-Wiegers, P., de Vries, M. C., van Beusekom, M. M., van Dijck, L., & van den Broek, J. M. (2015). Comic strips help children understand medical research. <i>Patient Education and Counseling</i> , 98(4), 518–524. https://doi.org/10.1016/j.pec.2014.12.005	Exclude	Not RCT but mentions that a RCT “will be performed in further research”	Chance finding when reading a study on a comic	June 5, 2019
Sari, B., Başal, H. A., Takacs, Z. K., & Bus, A. G. (2019). A randomized controlled trial to test efficacy of digital enhancements of storybooks in support of narrative comprehension and word learning. <i>Journal of Experimental Child Psychology</i> , 179, 212–226. https://doi.org/10.1016/j.jecp.2018.11.006	Exclude	Measuring the effects of static vs dynamic storybooks	Chance finding when looking for comics about RCTs	June 5, 2019
Anggara, D. S., Gunawan, H. I., & Prasetyawan, E. (2019). Effectiveness of Scientific Learning Approaches with Comic Scientific Media on Mathematics Subjects in Private Elementary School, Bojongsari District, Depok. In <i>Proceedings of the International Conference Primary Education Research Pivotal Literature and Research UNNES 2018 (IC PEOPLE UNNES 2018)</i> . Atlantis Press. https://doi.org/10.2991/icpeopleunnes-18.2019.10	Exclude	Not RCT	Web of Science 1 citation alert	June 20, 2019
Nestadt, D. F., Saisaengjan, C., McKay, M. M., Bunupuradah, T., Pardo, G., Lakhonpon, S., ... Mellins, C. A. (2019). CHAMP+ Thailand: Pilot Randomized Control Trial of a Family-Based Psychosocial Intervention for Perinatally HIV-Infected Early Adolescents. <i>AIDS Patient Care and STDs</i> , 33(5), 227–236. https://doi.org/10.1089/apc.2019.0021	Exclude	Comics as part of a program	Web of Science 1 citation alert	June 20, 2019
Woolman, C. (2018). “Mindreading” from primary science: using concept cartoons to develop theory of mind in 5–6-year-olds – a pilot study. <i>Education 3-13</i> , 47(4), 395–409. https://doi.org/10.1080/03004279.2018.1489874	Exclude	Not RCT	Web of Science 1 citation alert	June 20, 2019
Leung, A. Y. M., Leung, I. S. H., Liu, J. Y. W., Ting, S., & Lo, S. (2018). Improving health literacy and medication compliance through comic books: a quasi-experimental study of Chinese community-dwelling older adults. <i>Global Health Promotion</i> , 25(4), 67–78. https://doi.org/10.1177/1757975918798364	Exclude	Not RCT	Forward citations (Koops, 2018)	June 20, 2019
Wood, M. (2015). The effect of graphic novel supplements on reading comprehension and motivation in secondary students [Doctorate thesis]. Retrieved from https://search.proquest.com/docview/1766580310?accountid=15920	Exclude	2 clusters only in this RCT	Forward citations (Spiegel, 2013)	June 20, 2019
Burhanudin, F., Endang Susilowati, S., & Haryani, S. (2018). Development of Human	Exclude	Not RCT	Forward citations	June 20,

Skeleton Comic to Enhance Student's Motivation and Science Learning Outcomes. Journal of Primary Education, 8(1), 101-107. Retrieved from https://journal.unnes.ac.id/sju/index.php/jpe/article/view/25390			(Spiegel, 2013)	2019
Diamond, J., Jee, B., Matuk, C., McQuillan, J., Spiegel, A. N., & Uttal, D. (2015). Museum Monsters and Victorious Viruses: Improving Public Understanding of Emerging Biomedical Research. Curator: The Museum Journal, 58(3), 299–311. https://doi.org/10.1111/cura.12115	Exclude	Process details about (Spiegel, 2013) not RCT results	Forward citations (Spiegel, 2013)	June 20, 2019
Unger, J. B., Soto, D. W., Rendon, A. D., Baezconde-Garbanati, L., & Cruz, T. B. (2019). Empowering Hispanic Multiunit Housing Residents to Advocate for Smokefree Policies: A Randomized Controlled Trial of a Culturally Tailored Fotonovela Intervention. Health Equity, 3(1), 198–204. https://doi.org/10.1089/heq.2018.0098	Include		Forward citations (Cabassa, 2015)	June 20, 2019
Byrne, E., & Nitzke, S. (2002). Preschool Children's Acceptance of a Novel Vegetable Following Exposure to Messages in a Storybook. Journal of Nutrition Education and Behavior, 34(4), 211–214. https://doi.org/10.1016/s1499-4046(06)60095-x	Include		Forward citations (Gebarski, 2013)	July 5, 2019
Tsao, Y., Kuo, H.-C., Lee, H.-C., & Yiin, S.-J. (2017). Developing a medical picture book for reducing venipuncture distress in preschool-aged children. International Journal of Nursing Practice, 23(5), e12569. https://doi.org/10.1111/ijn.12569	Unclear	Study described as “quasi experimental” and participants “assigned to groups on the basis of date of admission”. Email sent to authors for clarification (July 5, 2019)	Forward citations (Gebarski, 2013)	July 5, 2019
Tunney, A. M., & Boore, J. (2013). The effectiveness of a storybook in lessening anxiety in children undergoing tonsillectomy and adenoidectomy in northern ireland. Issues in Comprehensive Pediatric Nursing, 36(4), 319–335. https://doi.org/10.3109/01460862.2013.834398	Include		Forward citations (Tsao, 2017)	July 5, 2019
Lewis, K. M., Amatya, K., Coffman, M. F., & Ollendick, T. H. (2015). Treating nighttime fears in young children with bibliotherapy: Evaluating anxiety symptoms and monitoring behavior change. Journal of Anxiety Disorders, 30, 103–112. https://doi.org/10.1016/j.janxdis.2014.12.004	Exclude	Novel, not comics	Cannot remember	July 5, 2019
Bravender, T., Russell, A., Chung, R. J., & Armstrong, S. C. (2010). A “Novel” Intervention: A Pilot Study of Children's Literature and Healthy Lifestyles. PEDIATRICS, 125(3), e513–e517. https://doi.org/10.1542/peds.2009-1666	Exclude	Novel, not comics	Cannot remember	July 5, 2019

Landrau-Cribbs, E. (2018). "Development and Testing of a Culturally Tailored Intervention to Promote HPV Vaccination Intentions in Latina Young Adults" (Doctoral thesis). ETD Collection for University of Texas, El Paso. AAI10823462. https://digitalcommons.utep.edu/dissertations/AAI10823462	Unclear	No access. Email sent July 6, 2019.	Forward citations (Unger, 2013)	July 5, 2019
Kirsh, S. J., & Olczak, P. V. (2003). The Effects of Extremely Violent Comic Books on Social Information Processing. Journal of Interpersonal Violence, 17(11), 1160–1178. https://doi.org/10.1177/088626002237400	Include		Forward citations (Kirsh, 2002)	July 5, 2019
Goetschius, A. B. (2011). "I Can See She Does Not Want to be Pregnant": Using Images to Inform Low-Literacy Audiences About Safe Abortion in Zambia. Retrieved from https://search.proquest.com/openview/e8909775b2a8ab3fd8d7aa2ab86d98c9/1?pq-origsite=gscholar&cbl=18750&diss=y	Exclude	Not comics, illustrated instructions	Forward citations (Delp, 1996)	July 5, 2019
Wang, J. L., Acevedo, N., & Sadler, G. R. (2017). Using Comics to Promote Colorectal Cancer Screening in the Asian American and Pacific Islander Communities. Journal of Cancer Education, 33(6), 1263–1269. https://doi.org/10.1007/s13187-017-1241-4	Exclude	Not RCT	Forward citations (Delp, 1996)	July 5, 2019
Barrett, J. C. (2017). Development, implementation and evaluation of pictorial health education for low-literacy, low-resource communities (Master thesis). Retrieved from https://espace.curtin.edu.au/handle/20.500.11937/59106	Exclude	Not RCT, visual tool not comics	Forward citations (Delp, 1996)	July 5, 2019
Hartling, L. (2010). A randomized controlled trial of storytelling as a communication tool aimed at parents of children presenting to the emergency department with croup (Doctoral thesis). Retrieved from https://era.library.ualberta.ca/items/8f7d2250-ae9a-49ee-b2db-b1924adb1525	Include		Forward citations (Delp, 1996)	July 5, 2019
Dworkin, M. S., Pratap, P., Jackson, U. & Chakraborty, A. (2015). Efficacy of a culturally-tailored educational photonovella addressing prevention of meat and poultry-related food poisoning for African Americans of low socioeconomic status. Food Prot Trends, 35(3), 176–184. Retrieved from http://www.foodprotection.org/files/food-protection-trends/May-Jun-15-dworkin.pdf	Exclude	Not RCT	Forward citations (James, 2005)	July 5, 2019
Clarke Moloney, M., Moore, A., Adelola, O. A., Burke, P. E., McGee, H., & Grace, P. A. (2005). Information leaflets for venous leg ulcer patients: are they effective? Journal of Wound Care, 14(2), 75–77. https://doi.org/10.12968/jowc.2005.14.2.26730	Exclude	Information leaflet, not comics (admittedly very similar to Delp, 1996 but I'm increasingly believing these do not constitute comics of comic	Forward citations (Moll, 1986)	July 5, 2019

		strips)		
Kirsh, S. J. & Olczak, P. V. (2003). Comic book violence and vengeance. In Perspectives on Violence. Retrieved from ResearchGate	Include		Forward citations (Kirsh, 2000)	July 5, 2019
Fischbach, S., & Conner, S. L. (2016). Empathy and Interpersonal Mentalizing in Ethics Education: An Exercise with Graphic Novels. Journal for Advancement of Marketing Education, 24, 88–94. Retrieved from www.mmaglobal.org/publications/JAME/JAME-Issues/JAME-2016-Vol24-SpecialIssue/JAME-2016-Vol24-Special-Issue-Fischbach-Conner-pp88-94.pdf	Unclear	If the study exercise were given to classes this becomes a cluster-RCT and could be excluded due to insufficient number of clusters. Email sent July 6, 2019	Forward citations (Short, 2013)	July 5, 2019
Hoffman R. (2018) Comics in the Omani EFL Classroom: Boosting Student Vocabulary, Reading, and Motivation. In: Al-Mahrooqi R., Denman C. (eds) English Education in Oman. English Language Education, vol 15. Springer, Singapore. https://doi.org/10.1007/978-981-13-0265-7_16	Exclude	Not RCT	Forward citations (Short, 2013)	July 5, 2019
Sinha, I., Patel, A., Kim, F. S., MacCorkle, M. L., & Watkins, J. F. (2011). Comic Books Can Educate Children About Burn Safety in Developing Countries. Journal of Burn Care & Research, 32(4), e112–e117. https://doi.org/10.1097/bcr.0b013e3182223c6f	Exclude	Not RCT	Forward citations (Liu, 2004)	July 5, 2019
Piaw, C. Y. (2012). Using Content-based Humorous Cartoons in Learning Materials to Improve Students' Reading Rate, Comprehension and Motivation: It is a Wrong Technique? Procedia - Social and Behavioral Sciences, 64, 352–361. https://doi.org/10.1016/j.sbspro.2012.11.042	Include		Forward citations (Liu, 2004)	July 5, 2019
Roozafzai, Z. S. (2012). The role of comic reading materials in enhancing the ability to read in EFL. I-manager's Journal on English Language Teaching, 2(3), 7-15. Retrieved from https://eric.ed.gov/?id=EJ1070200	Unclear	Not clear if RCT. Email should be sent to authors for clarification	Forward citations (Liu, 2004)	July 5, 2019
Arast, O. & Gorijan, B. (2016). The effect of listening to comic strip stories on incidental vocabulary learning among iranian efl learners. Modern Journal of Language Teaching Methods (MJLTM), 6(3), 66-74. Retrieved from http://article.sapub.org/10.5923.j.jalll.20160201.01.html	Exclude	Comics + slides + presentation vs presentation only	Forward citations (Liu, 2004)	July 5, 2019
Hassanirokh, F. & Yeganehpour, P. (2016). The effect of comic strips on Turkish EFL learners' reading comprehension. The Journal of International Education Science, 3(6), 256-263.	Include		Forward citations (Liu, 2004)	July 5, 2019

Tarabuzan, E. O. & Popa, N. L. (2015). Using comic strips in teaching and learning french as foreign language: changes in motivational beliefs. Review of Artistic Education, 9(10), 273-278. Retrieved from https://www.ceeol.com/search/article-detail?id=285293	Unclear	Not clear if RCT. Email should be sent to authors for clarification	Forward citations (Liu, 2004)	July 5, 2019
Havard, C. T. & Skylar, S. W. (2018). Adventures with Sport Rivalry Man: Initial Testing of a Classroom Method Using Comics and Cartoons to Teach about Rivalry and Fan Behavior. Journal of School Counseling, 16(25), 1-30. Retrieved from https://eric.ed.gov/?id=EJ1200586	Exclude	Not RCT	Forward citations (Liu, 2004)	July 5, 2019
Habibatul Azizah Al Faruq, Nurhalimah. (2018). Comic Strips in Teaching Simple Past Tense for EFL Learners. Journal of English Language, Literature, and Teaching, 3(2), 53-56	Exclude	Not RCT (slight doubts remain due to the way the methods are worded)	Forward citations (Liu, 2004)	July 5, 2019
Kamil, A., Komariah, E. & Yuliana. (2017). The Use of Comic to Improve Students' Reading Comprehension Skill at Junior High School. Research in English and Education (READ), 2 (3), 1-7. Retrieved from http://www.jim.unsyiah.ac.id/READ/article/view/7154	Exclude	Cluster RCT with only 2 clusters (slight doubts remain due to the way the methods are worded)	Forward citations (Liu, 2004)	July 5, 2019
Setyorini, W. & Hartono, R. (2017). The effectiveness of digital and printed comics to teach monologue of visual and auditory students. English Education Journal, 7(1), 73-78. Retrieved from https://journal.unnes.ac.id/sju/index.php/eej/article/view/14689	Unclear	Not clear if RCT. Email should be sent to authors for clarification	Forward citations (Liu, 2004)	July 5, 2019
Kurniadi, A. (2016). Teaching reading comprehension narrative text through comic book at second grade of smpn 8 bandar lampung. Retrieved from http://digilib.unila.ac.id/23676/	Exclude	Not RCT	Forward citations (Liu, 2004)	July 5, 2019
Sudarsono, M. A. & Pontianak, F. U. (2016). The effectiveness of teaching reading comprehension on descriptive text through comic strips. Jurnal Pendidikan dan Pembelajaran, 5(5), 1-11. Retrieved from http://jurnal.untan.ac.id/index.php/jpdpb/article/view/15425	Exclude	Not RCT (slight doubts remain due to the way the methods are worded)	Forward citations (Liu, 2004)	July 5, 2019
Shuozhao, H. (2006). The effect of storyboard visuals on ESL reading recall. Retrieved from https://search.proquest.com/docview/305280115?pq-origsite=gscholar	Unclear	No access	Forward citations (Liu, 2004)	July 5, 2019
Rengur, Z. A. & Sugirin. (2019). The Effectiveness Of Using Comic Strips To Increase Students' Reading Comprehension For The Eight Grade Of SMPN 1 Pundong. Advances in Social Science, Education and Humanities Research, 323, 127-130. Retrieved from https://www.atlantis-press.com/proceedings/icossce-icsmc-	Unclear	Not clear if RCT. Email should be sent to authors for clarification	Forward citations (Liu, 2004)	July 5, 2019

18/125909986				
Oner, S. (2017). The Effect of a Selected Graphic Novel on Reading Comprehension. International Journal of Arts and Sciences, 10(2), 525-540. Retrieved from http://www.universitypublications.net/ijas/1002/html/V7G120.xml	Exclude	Not RCT (slight doubts remain due to the way the methods are worded)	Forward citations (Liu, 2004)	July 5, 2019
Agung, Wahyu Nugroho. (2017) The effectiveness of teaching reading using comic strip to facilitate students' reading comprehension on narrative text. Retrieved from http://eprints.iain-surakarta.ac.id/1230/	Unclear	Not clear if RCT. Email should be sent to authors for clarification	Forward citations (Liu, 2004)	July 5, 2019
Eny Kusumawati, Khairuddin. (2017). Instructions, comic strips and ESP reading comprehension. Seminar Nasional Sistem Informasi 2017, 141-151. Retrieved from https://jurnalfti.unmer.ac.id/index.php/senasif/article/view/34/25	Unclear	Translator needed (Indonesian)	Forward citations (Liu, 2004)	July 5, 2019
Paschall, K. R. (2014). A Comparison of a Traditional Text and Its Graphic Adaptation on Reading Comprehension in a Secondary Classroom. Retrieved from https://search.proquest.com/docview/1609381793?pg-origsite=gscholar	Unclear	No access	Forward citations (Liu, 2004)	July 5, 2019
Bhavnagri, N. P., & Samuels, B. G. (1996). Children's literature and activities promoting social cognition of peer relationships in preschoolers. Early Childhood Research Quarterly, 11(3), 307–331. https://doi.org/10.1016/s0885-2006(96)90010-1	Exclude	Not RCT	Backward citations (Byrne, 2002)	July 6, 2019
Lawatsch, D. E. (1990). A comparison of two teaching strategies on nutrition knowledge, attitudes and food behavior of preschool children. Journal of Nutrition Education, 22(3), 117–123. https://doi.org/10.1016/s0022-3182(12)80605-4	Exclude	Stories, not comics	Backward citations (Byrne, 2002)	July 6, 2019
Muramoto, T. (1993). Understanding and memory of Manga story. Proceedings of Annual Conference of 35th Japanese Association of Educational Psychology	Unclear	No access	Cited in The Visual Narrative Reader	July 6, 2019
Murata, N. (1993). The effects of comic strips as a teaching strategy. The Science of Reading, 37: 127–136 (in Japanese with English abstract)	Unclear	No access	Cited in The Visual Narrative Reader	July 6, 2019
Sato, K. (1998). Effects of comics on comprehension and memory. Annual Report of Faculty of Education, Ehime University, 45(1), 53-58.	Unclear	No access	Cited in The Visual Narrative Reader	July 6, 2019
McDonald, P. (2009). To What Extent Can Defining Graphic/Written Text Relations Support The Teaching of Reading Comprehension in Multi-Modal Texts? (Master's thesis). Retrieved from http://asian-efl-journal.com/wp-content/uploads/Thesis-McDonald1.pdf	Include		Google Search ("research on comics")	July 7, 2019
Stall, R. C. (2000). Using Comics to Teach Multiple Meaning of Words. University of Nevada, Las Vegas. Dissertation Abstracts International, Section B: The Sciences and Engineering, 2001 Apr; 61 (10): 5270.	Exclude	Comics as part of a complex intervention vs complex	ComicsResearch	July 7, 2019

		intervention		
Martin, G. I. (1992). Secondary English Students' Responses to Classics Illustrated Comic Books. Ed.D. University of Virginia. DAI.	Unclear	No access	ComicsResearch	July 7, 2019
Lamanno, A. A. (2007). Exploring the Use of Graphic Novels in the Classroom: Does Exposure to Non-Traditional Texts Increase the Reading Comprehension Skills and Motivation of Low-Functioning Adolescent Readers? Dissertation Abstracts International, Section A: The Humanities and Social Sciences, 2008 Apr; 68 (10): 4243. Pennsylvania State U. Retrieved from https://etda.libraries.psu.edu/catalog/7696	Exclude	Not RCT	ComicsResearch	July 7, 2019
Kraft, K. R. (1990). The Use of Comic Strips and Single-Panel Cartoons as an Outreach to Unchurched Young Adults through the Broad Street United Methodist Church, Burlington, New Jersey. D.Min. Drew University. DAI.	Unclear	No access	ComicsResearch	July 7, 2019
Gagnon, J.-C. (1980). L'acte de lecture essai d'analyse experimentale sur la lecture d'une sequence narrative sous forme de bande dessinee. Universite Laval (Canada). DAI.	Unclear	No access	ComicsResearch	July 7, 2019
Khoii, R., & Forouzesh, Z. (2010). Using Comic Strips with Reading Texts: Are We Making a Mistake? Literacy Information and Computer Education Journal, 1(3), 168–177. https://doi.org/10.20533/licej.2040.2589.2010.0024	Exclude	Comics as part of complex intervention. Not clear if RCT	Backward citations (Piaw, 2012)	July 7, 2019
Bryant, J., Comisky, P., & Zillmann, D. (1979). Teachers' humor in the college classroom. Communication Education, 28(2), 110–118. https://doi.org/10.1080/03634527909378339	Exclude	Not about comics	Backward citations (Piaw, 2012)	July 7, 2019
Orekoya, O. S., Chan, E. S., & Chik, M. P. (2014). Humor and Reading Motivation in Children: Does the Tickling Work? International Journal of Education, 6(1), 61. https://doi.org/10.5296/ije.v6i1.4724	Exclude	Not RCT	Backward citations (Piaw, 2012)	July 7, 2019
Arlin, M., & Roth, G. (1978). Pupils' Use of Time While Reading Comics and Books. American Educational Research Journal, 15(2), 201–216. https://doi.org/10.3102/00028312015002201	Include		Backward citations (Hassanirokh, 2016)	July 7, 2019
Sadowski, C. J., Gulgoz, S., & LoBello, S. G. (1994). An evaluation of the use of content-relevant cartoons as a teaching device. Journal of Instructional Psychology, 21(4), 368–370.	Unclear	Not found	Backward citations (Leff, 2011)	July 8, 2019
Shea, J. A., Guerra, C. E., Weiner, J., Aguirre, A. C., Ravenell, K. L., & Asch, D. A. (2008). Adapting a patient satisfaction instrument for low literate and Spanish-speaking populations: Comparison of three formats. Patient Education and Counseling, 73(1), 132–140. https://doi.org/10.1016/j.pec.2008.03.026	Exclude	Not comics	Backward citations (Leff, 2011)	July 8, 2019
Leff, S. S., Crick, N., Angelucci, J., Haye, K. Jawad, A., Grossman, M. & Power, T. (2006).	Unclear	Not found	Backward citations	July 8,

Understanding social cognitive development in context: Partnering with urban African American girls to create a hostile attribution bias measure. <i>Child Development</i> , 77, 1351-1358			(Leff, 2011)	2019
Aminabadi, N. A., Vafaei, A., Erfanparast, L., Oskouei, S. G., & Jamali, Z. (2011). Impact of Pictorial Story on Pain Perception, Situational Anxiety and Behavior in Children: A Cognitive-Behavioral Schema. <i>Journal of Clinical Pediatric Dentistry</i> , 36(2), 127–132. https://doi.org/10.17796/jcpd.36.2.3163251527508338	Include		Found while searching Forward citations of (Byrne, 2002)	July 8, 2019
Felder-Puig, R., Maksys, A., Noestlinger, C., Gadner, H., Stark, H., Pfluegler, A., & Topf, R. (2003). Using a children's book to prepare children and parents for elective ENT surgery: results of a randomized clinical trial. <i>International Journal of Pediatric Otorhinolaryngology</i> , 67(1), 35–41. https://doi.org/10.1016/s0165-5876(02)00359-2	Include		Found while searching Forward citations of (Byrne, 2002)	July 8, 2019
Harrison, A. (1991). Preparing children for venous blood sampling. <i>Pain</i> , 45(3), 299–306. https://doi.org/10.1016/0304-3959(91)90054-2	Exclude	Not comics (pictures with explanations)	Found while searching Forward citations of (Byrne, 2002)	July 8, 2019
Quon, A. (2014). Exposure to gain- and loss-framed message picture books and its effect on preschoolers' acceptance of an unfamiliar or disliked vegetable	Unclear	Not found	Forward citations (Byrne, 2002)	July 8, 2019
Barnes, J. (2016). Development and testing of education materials to increase visual exposure of MyPlate foods in preschoolers. Retrieved from https://twu-ir.tdl.org/handle/11274/8744	Exclude	Not comics	Forward citations (Byrne, 2002)	July 8, 2019
Healing through story: Development of a children's story and workbook for witnesses of domestic violence	Unclear	Not found	Forward citations (Byrne, 2002)	July 8, 2019
Basal, A., Aytan, T., & Demir, I. (2016). Teaching Vocabulary with Graphic Novels. <i>English Language Teaching</i> , 9(9), 95. https://doi.org/10.5539/elt.v9n9p95	Include		Forward citations (McDonald, 2009)	July 8, 2019
Lambert, S. (2006). The Effect Of Comic Books On Students' Reading Attitudes (Master's thesis). Retrieved from http://thekeep.eiu.edu/theses/194	Include		Forward citations (Arlin, 1978)	July 8, 2019
İlhan, G. O., & Oruç, Ş. (2019). Comic Books Use in Social Studies Lesson: Texas History. <i>TED EĞİTİM VE BİLİM</i> . https://doi.org/10.15390/eb.2019.7830	Exclude	Not RCT	Forward citations (Arlin, 1978)	July 8, 2019
In Dunst, A., In Laubrock, J., & In Wildfeuer, J. (2019). Empirical comics research: Digital, multimodal, and cognitive methods. (note: Part II and Part III, Neil Cohn contributed)	Unclear	ISBN: 9781138737440 No access	Email (Randy Duncan, Janina Wildfeuer)	July 10, 2019
Stamenković, D., Tasić, M., & Forceville, C. (2018). Facial expressions in comics: an empirical consideration of McCloud's proposal. <i>Visual Communication</i> , 17(4), 407–432.	Exclude	Not RCT (random order), individual	Email (Janina Wildfeuer)	July 10, 2019

https://doi.org/10.1177/1470357218784075		image not comic		
Martín-Arnal, L. A., León, J. A., Broek, P. van den, & Olmos, R. (2019). Understanding Comics. A Comparison between Children and Adults through a Coherence/Incoherence Paradigm in an Eye-tracking Study. <i>Psicología Educativa</i> , 25(2), 127–137. https://doi.org/10.5093/psed2019a7			Email (Janina Wildfeuer)	July 10, 2019
Rifas, L. (1989). A Bibliography of Articles about Comic Books and Strips which are Cited or Abstracted in Reference Indices (note: Leonard might still have a copy)	Unclear	No access. Email sent July 10, 2019 to Michigan University Art Collection. Access is possible on site only.	Email (Leonard Rifas)	July 10, 2019
Masters' theses from the 1940s, 1950s (no master titles provided)	Unclear	It is not clear how to search for these (if they are still available)	Email (Leonard Rifas)	July 10, 2019
Experimental studies done by the military, among which studies on Will Eisner's comics and on How Stalin Hopes We Will Destroy America (no study titles provided)	Unclear	It is not clear how to search for these (if they are still available)	Email (Leonard Rifas)	July 10, 2019
Goodman, L. E., & Goodman, M. J. (1986). Prevention: How Misuse of a Concept Undercuts Its Worth. <i>The Hastings Center Report</i> , 16(2), 26. https://doi.org/10.2307/3563088	Exclude	Not RCT	Email (Leonard Rifas)	July 10, 2019
Mayer, R. E., Bove, W., Bryman, A., Mars, R., & Tapangco, L. (1996). When less is more: Meaningful learning from visual and verbal summaries of science textbook lessons. <i>Journal of Educational Psychology</i> , 88(1), 64-73. http://dx.doi.org/10.1037/0022-0663.88.1.64	Exclude	Not comics (sequential illustrations of process). Admittedly close to inclusion criteria.	Email (Leonard Rifas)	July 10, 2019
Kopatich, R. D., Feller, D. P., Kurby, C. A., & Magliano, J. P. (2019). The role of character goals and changes in body position in the processing of events in visual narratives. <i>Cognitive Research: Principles and Implications</i> , 4(1). https://doi.org/10.1186/s41235-019-0176-1	Exclude	Not comics (Photos with text descriptions)	Modified Pubmed 4 (keywords + "experiment")	July 11, 2019
van den Heuvel-Panhuizen, M., Elia, I., & Robitzsch, A. (2014). Effects of reading picture books on kindergartners' mathematics performance. <i>Educational Psychology</i> , 36(2), 323–346. https://doi.org/10.1080/01443410.2014.963029	Exclude	Picture book + co-interventions vs control	Modified Pubmed 4 (keywords + "experiment")	July 11, 2019

Greene, J., Hibbard, J. H., & Sacks, R. M. (2017). Testing a Personal Narrative for Persuading People to Value and Use Comparative Physician Quality of Care Information: An Experimental Study. <i>Medical Care Research and Review</i> , 76(4), 497–511. https://doi.org/10.1177/1077558717730156	Include		Modified Pubmed 4 (keywords + “experiment”)	July 11, 2019
Ganea, P. A., Ma, L., & DeLoache, J. S. (2011). Young Children’s Learning and Transfer of Biological Information From Picture Books to Real Animals. <i>Child Development</i> , 82(5), 1421–1433. https://doi.org/10.1111/j.1467-8624.2011.01612.x	Exclude	Not comics (picture book)	Modified Pubmed 4 (keywords + “experiment”)	July 11, 2019
Schmidt, S. R., & Williams, A. R. (2001). Memory for humorous cartoons. <i>Memory & Cognition</i> , 29(2), 305–311. https://doi.org/10.3758/bf03194924	Unclear	Interventions manipulated “within subject” might mean all were exposed to all interventions	Modified Pubmed 4 (keywords + “experiment”)	July 11, 2019
Mayer, R. E., Griffith, E., Jurkowitz, I. T. N., & Rothman, D. (2008). Increased interestingness of extraneous details in a multimedia science presentation leads to decreased learning. <i>Journal of Experimental Psychology: Applied</i> , 14(4), 329–339. https://doi.org/10.1037/a0013835	Exclude	Not comics (illustrations)	Modified Pubmed 4 (keywords + “experiment”)	July 11, 2019
Goldesin, C. D. (2018). Learning Stories in the Hospital: Is There a Place for the Use of Learning Stories Within the Child Life Practice? Retrieved from https://search.proquest.com/openview/1c2ed4da2be95719c805ba54388fc2bc/1?pq-origsite=gscholar&cbl=18750&diss=y	Unclear	No access	Forward citations (Aminabadi, 2011)	July 11, 2019
Öz, H., & Efecioglu, E. (2015). Graphic novels: An alternative approach to teach English as a foreign language. <i>Journal of Language and Linguistic Studies</i> , 11(1), 75-90. Retrieved from https://www.jlls.org/index.php/jlls/article/view/364	Exclude	Cluster RCT with only 2 clusters (classrooms)	Backward citations (Basal, 2016)	July 12, 2019
Dye, A. M. (1982). Comic books and how they are used as factors in the development of attitude towards reading (Master’s thesis). Angelo State University (note: unpublished – shows no differences)	Unclear	Not found. Email sent to Angelo State University on July 12, 2019. Need to be on site to access.	Backward citations (Lambert, 2006)	July 12, 2019
Hartling L., Scott, S. D., Johnson, D. W., Bishop, T. & Klassen, T.P. (2013). A Randomized Controlled Trial of Storytelling as a Communication Tool. <i>PLoS ONE</i> 8(10): e77800. https://doi.org/10.1371/journal.pone.0077800	Include	To do	Forward citations (Felder-Puig, 2003)	July 12, 2019
Ko, A. B., Simons, J. P., & Mandell, D. L. (2007). Introduction of visually oriented information handouts in an academic pediatric otolaryngology practice. <i>Otolaryngology–Head and Neck Surgery</i> , 136(3), 471–476. https://doi.org/10.1016/j.otohns.2006.11.041	Exclude	Not RCT, not comics	Forward citations (Felder-Puig, 2003)	July 12, 2019

Noronha, J. R., & Shanthi, S. (2015). Effectiveness of Picture Book on Preoperative Anxiety among Children (6–12 Years) in Selected Hospitals at Mangalore. <i>Asian Journal of Nursing Education and Research</i> , 5(4), 523. https://doi.org/10.5958/2349-2996.2015.00107.x	Unclear	RCT but it is not clear what the “picture book” contained	Forward citations (Felder-Puig, 2003)	July 12, 2019
Babitha, M. J., Mamatha, P. S. & Anjaline, d. (2011). Effectiveness of Picture Book on Children's Worries about Surgery. <i>International Journal of Nursing Education</i> , 3(2), 8-11. Retrieved from http://www.indianjournals.com/ijor.aspx?target=ijor:ijone&volume=3&issue=2&article=003	Unclear	RCT but it is not clear what the “picture book” contained	Forward citations (Felder-Puig, 2003)	July 12, 2019
Wang, Y. (n.d.). Bibliotherapy for chinese patients with depression in rehabilitation. In <i>Mental Illnesses: Understanding, Prediction and Control</i>	Exclude	Not comics	Forward citations (Felder-Puig, 2003)	July 12, 2019
Muzammil, L., & Andy, A. (2019). Can Young Learners Utilize Cartoon Picture and Song To Learn?: A teaching model. In <i>Proceedings of the 3rd Asian Education Symposium (AES 2018)</i> . Atlantis Press. https://doi.org/10.2991/aes-18.2019.115	Unclear	Study report unclear on the methods and intervention used	Modified Web of Science 0	July 12, 2019
Tsai, C.-Y., Chang, Y.-H., & Lo, C.-L. (2018). Learning under time pressure: Learners who think positively achieve superior learning outcomes from creative teaching methods using picture books. <i>Thinking Skills and Creativity</i> , 27, 55–63. https://doi.org/10.1016/j.tsc.2017.11.003	Exclude	Picture book + co-interventions	Modified Web of Science 0	July 12, 2019
Sari, V. F. (2018). Comics as an Alternative Learning Media for Introductory Accounting Course. In <i>Proceedings of the First Padang International Conference On Economics Education, Economics, Business and Management, Accounting and Entrepreneurship (PICEEBA 2018)</i> . Atlantis Press. https://doi.org/10.2991/piceeba-18.2018.81	Exclude	Not RCT (methods not very clear)	Modified Web of Science 0	July 12, 2019
Anggara, D. S., Gunawan, H. I., & Prasetyawan, E. (2019). Effectiveness of Scientific Learning Approaches with Comic Scientific Media on Mathematics Subjects in Private Elementary School, Bojongsari District, Depok. In <i>Proceedings of the International Conference Primary Education Research Pivotal Literature and Research UNNES 2018 (IC PEOPLE UNNES 2018)</i> . Atlantis Press. https://doi.org/10.2991/icpeopleunnes-18.2019.10	Exclude	Not RCT	Modified Web of Science 0	July 12, 2019
BAO, S., KUBOKI, R., IJIMA, R., MINAGAWA, H., YAMANAKA, K., & MIZUHIKI, T. (2019). Printed Book or E-book, Which is Better? An Investigation using Manga and Magazine. <i>International Journal of Affective Engineering</i> , 18(1), 9–16. https://doi.org/10.5057/ijae.ijae-d-17-00038	Exclude	Not RCT	Modified Web of Science 0	July 12, 2019
Raynaudo, G., & Peralta, O. (2018). Children learning a concept with a book and an e-book: a comparison with matched instruction. <i>European Journal of Psychology of Education</i> ,	Exclude	Not comics (pictures)	Modified Web of Science 0	July 12, 2019

34(1), 87–99. https://doi.org/10.1007/s10212-018-0370-4				
van Dijk, A., Poorthuis, A. M. G., Thomaes, S., & de Castro, B. O. (2018). Does Parent-Child Discussion of Peer Provocations Reduce Young Children's Hostile Attributional Bias? <i>Child Development</i> , 89(5), 1908–1920. https://doi.org/10.1111/cdev.13087	Include	To do	Modified Web of Science 0	July 12, 2019
Holiday, S., & Davies, J. J. (2016). Animal crackers in my ... book? Effects of shared reading on parents' memory for product placement in children's books. <i>Journal of Family Studies</i> , 24(3), 257–273. https://doi.org/10.1080/13229400.2016.1185022	Exclude	Measures the effects of parents reading to child vs child reads alone	Modified Web of Science 0	July 12, 2019
Chen, S., Lawrence, J. F., Zhou, J., Min, L., & Snow, C. E. (2018). The efficacy of a school-based book-reading intervention on vocabulary development of young Uyghur children: A randomized controlled trial. <i>Early Childhood Research Quarterly</i> , 44, 206–219. https://doi.org/10.1016/j.ecresq.2017.12.008	Exclude	Picture books as part of a program	Modified Web of Science 0	July 12, 2019
Flack, Z. M., & Horst, J. S. (2017). Two sides to every story: Children learn words better from one storybook page at a time. <i>Infant and Child Development</i> , 27(1), e2047. https://doi.org/10.1002/icd.2047	Exclude	Not comics (pictures with text)	Modified Web of Science 0	July 12, 2019
Leung, D., Chen, J., Lou, V., Wong, E., Chan, A., So, W., & Chan, C. (2017). Effects of Promotional Materials on Attitudes and Fear towards Colorectal Cancer Screening among Chinese Older Adults: An Experimental Study. <i>International Journal of Environmental Research and Public Health</i> , 14(7), 769. https://doi.org/10.3390/ijerph14070769	Exclude	Not comics (cartoon video)	Modified Web of Science 0	July 12, 2019
Chew, F. P., & Eau, K. L. (2017). Creativity Teaching Through E-Book Reading Program Among the Children in Malaysia. <i>Advanced Science Letters</i> , 23(3), 2043–2047. https://doi.org/10.1166/asl.2017.8588	Exclude	Not RCT	Modified Web of Science 0	July 12, 2019
Azman, F., Zaibon, S. & Shiratuddin, N. (2016). The Impact of Instructional Comics towards Student Performance in WWW Programming. Retrieved from https://www.researchgate.net/publication/320944232_The_Impact_of_Instructional_Comics_towards_Student_Performance_in_WWW_Programming	Exclude	About creating comics	Modified Web of Science 0	July 12, 2019
Fajriannor T.M., M., Nurdin, F., Khotimah, H., & Oktavianor, H. (2017). The Influence Of Health Education To Parents Through The Children With Hand Puppets And Comic Strip On Knowledge Of Healthy Latrine Use. In <i>Proceedings of the 2nd Sari Mulia International Conference on Health and Sciences 2017 (SMICHS 2017)</i> . Atlantis Press. https://doi.org/10.2991/smichs-17.2017.47	Exclude	Not RCT (methods not very clear)	Modified Web of Science 0	July 12, 2019
Barros, D. M. R., Begosso, L. R., Fabri, J. A., & L'Erario, A. (2017). The use of comic strips	Exclude	Not RCT (before-after)	Modified Web of	July 12,

in the teaching of software engineering. In 2017 IEEE Frontiers in Education Conference (FIE). IEEE. https://doi.org/10.1109/fie.2017.8190537			Science 0	2019
Takahashi, S., Takahashi, T. B., & Atsushi, Y. (2017). Educational effects of the manga case method in online and offline environments using a Manga Case related to social media literacy. In 2017 IEEE Frontiers in Education Conference (FIE). IEEE. https://doi.org/10.1109/fie.2017.8190484	Include	To do	Modified Web of Science 0	July 12, 2019
Aji, H., Suryani, N., & Warto, M. (2017). Historical Comics' Development of Babad Wirasaba to Improve Senior High School Students' Historical Awareness in Purbalingga. In Proceedings of the International Conference on Teacher Training and Education 2017 (ICTTE 2017). Atlantis Press. https://doi.org/10.2991/ictte-17.2017.66	Exclude	Not RCT	Modified Web of Science 0	July 12, 2019
Segura-Perez, S., Damio, G., Galdamez, G. & Perez-Escamilla, R. (2017). Development and Validation of a Culturally Appropriate Heart Disease Prevention Fotonovela among Spanish Speaking Low-income Latinos. The FASEB Journal. Retrieved from https://www.fasebj.org/doi/abs/10.1096/fasebj.31.1_supplement.149.5	Exclude	Not RCT	Modified Web of Science 0	July 12, 2019
Zare, A. B. & Izadpanah, S. (2016). The impact of using picture on EFL iranian learners' reading comprehension and word retention. Modern Journal of Language Teaching Methods, 6(4), 632-639	Exclude	Not RCT, not comics (methods not clear)	Modified Web of Science 0	July 12, 2019
Chiang, F., Chiu, C., & Su, Z. (2016). Using digital storytelling to enhance elementary school students' creative thinking. In 2016 International Conference on Advanced Materials for Science and Engineering (ICAMSE). IEEE. https://doi.org/10.1109/icamse.2016.7840183	Exclude	Storybooks as part of a complex intervention. Not clear if RCT as methods contradict the abstract	Modified Web of Science 0	July 12, 2019
Yeh, T.-L., & Chen, C.-C. (2016). A Study of e-Picture Books and Traditional Picture Books on Children's Reading Attention. In Advances in Intelligent Systems and Computing (pp. 635–642). Springer International Publishing. https://doi.org/10.1007/978-3-319-41694-6_61	Exclude	Not RCT	Modified Web of Science 0	July 12, 2019
Thresia, F. (2016). The Effectiveness of CIRC Method and Comic-Strip Media to English Writing Ability. PROCEEDINGS OF THE NINTH INTERNATIONAL CONFERENCE ON APPLIED LINGUISTICS (CONAPLIN 9), 82, 77-80	Exclude	Not RCT	Modified Web of Science 0	July 12, 2019
Fedotova, O., Kotliarenko, I., & Latun, V. (2015). Comics Projects of the International Cultural and Educational Organizations in Youth Forums Devoted to Anti-Terrorism's Issues. Procedia - Social and Behavioral Sciences, 186, 192–196. https://doi.org/10.1016/j.sbspro.2015.04.038	Exclude	Not RCT	Modified Web of Science 0	July 12, 2019

Jamaludin, Z., Chepa, N., Ishak, W. H. W. & Zaibon, S. B. (2015). Digital graphic novels: technology enhanced narrative for learning. Proceedings of the International Conference on Computing & Informatics, 1-15.	Exclude	Not RCT, interactive comics	Modified Web of Science 0	July 12, 2019
Chua, Y. P. (2014). The effects of humor cartoons in a series of bestselling academic books. HUMOR, 27(3). https://doi.org/10.1515/humor-2014-0069	Include		Modified Web of Science 0	July 12, 2019
de Droog, S. M., Buijzen, M., & Valkenburg, P. M. (2014). Enhancing children's vegetable consumption using vegetable-promoting picture books. The impact of interactive shared reading and character-product congruence. Appetite, 73, 73–80. https://doi.org/10.1016/j.appet.2013.10.018	Include		Modified Web of Science 0	July 12, 2019
Suriyasupapong, T., Srijamon, S., & Prasarnphanich, S. (2014). The Development of an Instructional Model for Thai Reading Comprehension Ability for Prathom Suksa 4 Students. Procedia - Social and Behavioral Sciences, 112, 670–676. https://doi.org/10.1016/j.sbspro.2014.01.1216	Exclude	Cluster RCT with only 2 clusters (classrooms)	Modified Web of Science 0	July 12, 2019
Sengul, S. & Dereli, M. (2013). The Effect of Learning Integers Using Cartoons on 7th Grade Students' Attitude to Mathematics. KURAM VE UYGULAMADA EGITIM BILIMLERI, 13(4), 2526-2534	Exclude	Not RCT	Modified Web of Science 0	July 12, 2019
Lu, C.-C., Chen, Y.-Y., & Chen, C.-W. (2010). A CORRELATIVE STUDY OF CD-ROM PICTURE BOOKS IN CLASSROOMS AND SCHOOL CHILDREN'S FORMATION OF DESCRIPTIVE CONCEPTS. International Journal of Science and Mathematics Education, 9(1), 47–67. https://doi.org/10.1007/s10763-010-9212-9	Unclear	RCT, but not clear what "picture book" is	Modified Web of Science 0	July 12, 2019
Şengül, S., & Dereli, M. (2010). Does instruction of "Integers" subject with cartoons effect students' mathematics anxiety? Procedia - Social and Behavioral Sciences, 2(2), 2176–2180. https://doi.org/10.1016/j.sbspro.2010.03.302	Exclude	Not RCT	Modified Web of Science 0	July 12, 2019
Yaman, H. (2010). Cartoons as a Teaching Tool: A Research on Turkish Language Grammar Teaching. KURAM VE UYGULAMADA EGITIM BILIMLERI, 10(2), 1231-1242. Retrieved from https://files.eric.ed.gov/fulltext/EJ889204.pdf	Unclear	Not clear if RCT from the methods	Modified Web of Science 0	July 12, 2019
Huber, O., & Leder, H. (1997). Are more compact cartoons more humorous? Humor - International Journal of Humor Research, 10(1). https://doi.org/10.1515/humr.1997.10.1.91	Include		Modified Web of Science 0	July 12, 2019
MASUDA, H., & KUDO, Y. (1996). THE APPLICATION OF "CONTEXT EFFECT" TO THE TEACHING OF THE READING OF JAPANESE CLASSICS FOR NOVICE READERS. The Japanese Journal of Educational Psychology, 44(4), 445–453. https://doi.org/10.5926/jjep1953.44.4_445	Unclear	Can't get to open the study report / file	Modified Web of Science 0	July 12, 2019

Tigges, S. (n.d.). A comic strip to explain the concept of p-values to medical students	Unclear	Inclusion likely. Not yet started (July 13, 2019)	Chance finding through Twitter feed of VM	July 13, 2019
Van Tongeren, D. R., Hibbard, R., Edwards, M., Johnson, E., Diepholz, K., Newbound, H., ... Green, J. D. (2018). Heroic Helping: The Effects of Priming Superhero Images on Prosociality. <i>Frontiers in Psychology</i> , 9. https://doi.org/10.3389/fpsyg.2018.02243			Email (Leonard Rifas)	July 13, 2019
Smith-Edwards, B. (2008). Motivation and Middle School Readers: Graphic Novels, Comic Books, and Free Voluntary Reading Time (Doctoral thesis). University of Oklahoma Graduate College. (unpublished)			Email (Leonard Rifas)	July 13, 2019
Huck, C. S. (1955). The Nature and Derivation of Young Children's Social Concepts (Doctoral thesis). Northwestern University. Retrieved from https://archive.org/stream/ERIC_ED010086/ERIC_ED010086_djvu.txt	Exclude	Not RCT (interviews)	Email (Leonard Rifas)	July 13, 2019
Volker, L. A. (1946). An Analysis of Children's Interests in Comic Books (Master's thesis). University of Omaha. Retrieved from https://digitalcommons.unomaha.edu/cgi/viewcontent.cgi?article=3425&context=studentwork	Exclude	Not RCT (survey)	Email (Leonard Rifas)	July 13, 2019
Cooper, E., & Jahoda, M. (1947). The Evasion of Propaganda: How Prejudiced People Respond to Anti-Prejudice Propaganda. <i>The Journal of Psychology</i> , 23(1), 15–25. https://doi.org/10.1080/00223980.1947.9917316			Email (Leonard Rifas)	July 13, 2019
Ring, E. (1975). Eine Fehlerquelle bei Bildern als Testvorlage. <i>Zeitschrift für Experimentelle und Angewandte Psychologie</i> 22 (1), 89-93.			Backward citations (Huber, 1997)	July 27, 2019
Jones James Gary Fine Robert Brust. (1979). Interaction effects of picture and caption on humor ratings of cartoons. <i>The Journal of Social Psychology</i> 108, 193-198.			Backward citations (Huber, 1997)	July 27, 2019

[\[Back to top\]](#)

Risk of bias assessments (individual studies)

Muzumdar, 2017

Bias	Review author judgement	Support for judgement
Selection bias		
Random sequence generation	High risk	"Each adult who agreed to participate in the study was randomly assigned by day of the week to receive either the CDC vaccine information flyer or the comic flyer."
Allocation concealment	Unclear risk	Details not provided
Performance bias		
Blinding of participants and personnel (all outcomes)	High risk	No blinding
Detection bias		
Blinding of outcome assessment (all outcomes)	High risk	No blinding
Attrition bias		
Incomplete outcome data	Low risk	284 participants. 19 questionnaires excluded for "incompleteness" or "socially desirable responding" (both undefined, unclear how it was determined and by whom). Balanced missing outcomes, unlikely to have an important effect.
Reporting bias.		
Selective reporting	Unclear risk	No study protocol or registry entry mentioned in study report.
Other bias.		
Other sources of bias	High risk	Funding: American Association of Colleges of Pharmacy Allegiance: The study authors created the comic. Contamination: Participants could have shared the comics.

Bias	Review author judgement	Support for judgement
Selection bias		
Random sequence generation	Low risk	Use of a computer to generate random numbers in subsequent non-pilot trial.
Allocation concealment	Unclear risk	Envelopes mentioned but no further details provided (eg. Opaque, numbered)
Performance bias		
Blinding of participants and personnel (all outcomes)	High risk	Unlikely to have used blinding, as blinding was not used in subsequent non-pilot trial.
Detection bias		
Blinding of outcome assessment (all outcomes)	High risk	Unlikely to have used blinding, as blinding was not used in subsequent non-pilot trial.
Attrition bias		
Incomplete outcome data	Low risk	152 participants, results shown for all participants.
Reporting bias.		
Selective reporting	Unclear risk	No protocol or registry entry mentioned in this pilot study protocol/report.
Other bias.		
Other sources of bias	High risk	Funding: Non-profit. Allegiance: Principal investigator is author of the cartoons which he sells for profit. Contamination: Students were separated in the classroom and studied the materials individually.

Bias	Review author judgement	Support for judgement
Selection bias		
Random sequence generation	Low risk	"Students were then allocated to two groups using a computer-generated simple randomization program"
Allocation concealment	Unclear risk	"[...] and were given either a cartoon-style or traditional-style handout in a sealed envelope." Unclear if the envelopes were sequentially numbered and opaque.
Performance bias		
Blinding of participants and personnel (all outcomes)	High risk	No blinding, participants knew what they received; those who got the traditional copy may have felt frustrated and spent less time learning.
Detection bias		
Blinding of outcome assessment (all outcomes)	High risk	No blinding, participants completed a questionnaire; those who got the cartoon handout may have decided to spend more time answering.
Attrition bias		
Incomplete outcome data	Low risk	5 participants in the cartoon group did not attend the post-learning test and 9 in the traditional handout group. Reasons not specified. If all the 9 dropouts had the maximum score (20/20) or did not improve from their average pre-learning scores (10/20), their mean post-test scores would still be lower than the cartoon group and outcomes similar.
Reporting bias.		
Selective reporting	Low risk	"The registration was [...] not performed.". But all outcomes measured in the pilot trial are reported.
Other bias.		
Other sources of bias	High risk	Principal investigator is author of the cartoons which he sells for profit, co-authors are his colleagues. Contamination: A single participant said he had read parts of the cartoon he was not intended to receive.

Bias	Review author judgement	Support for judgement
Selection bias		
Random sequence generation	Unclear risk	"Participants from both groups were randomly assigned to one of three conditions."
Allocation concealment	Unclear risk	No details provided
Performance bias		
Blinding of participants and personnel (all outcomes)	High risk	No blinding
Detection bias		
Blinding of outcome assessment (all outcomes)	High risk	No blinding
Attrition bias		
Incomplete outcome data	Low risk	210 participants. 5 participants excluded due to lack of formal education. 3 excluded due to having received a form of higher education.
Reporting bias.		
Selective reporting	Unclear risk	No study protocol or registry entry mentioned in study report.
Other bias.		
Other sources of bias	High risk	Funding: Not reported. Allegiance: The study authors created the fotonovela. Contamination: Unclear if participants could or could not share the fotonovela and if they all read at once.

Bias	Review author judgement	Support for judgement
Selection bias		
Random sequence generation	Unclear risk	"De deelnemers werden willekeurig verdeeld over de drie condities [participants were randomly assigned to the three conditions]"
Allocation concealment		
Performance bias		
Blinding of participants and personnel (all outcomes)		
Detection bias		
Blinding of outcome assessment (all outcomes)		
Attrition bias		
Incomplete outcome data		
Reporting bias.		
Selective reporting		
Other bias.		
Other sources of bias		

Bias	Review author judgement	Support for judgement
Selection bias		
Random sequence generation	Low risk	“Eligible respondents were randomly assigned to one of the five study arms” Online survey through “Survey Sampling International (SSI)” which I assume knows how to use random methods to allocate participants.
Allocation concealment	Low risk	Web-based automated allocation to the study groups.
Performance bias		
Blinding of participants and personnel (all outcomes)	High risk	No blinding
Detection bias		
Blinding of outcome assessment (all outcomes)	Low risk	Outcomes were measured with an automated online survey with true/false statements.
Attrition bias		
Incomplete outcome data	Low risk	1565 participants completed the survey. 65 respondents were excluded due to answering more quickly than expected and unusually extreme answers. Exclusions unlikely to affect overall results.
Reporting bias.		
Selective reporting	Unclear risk	No study protocol or registry entry mentioned in study report.
Other bias.		
Other sources of bias	Unclear risk	Funding: Greenwall foundation, NCATS Allegiance: The study authors co-created the comics with external artists Contamination: Interventions were online and outcomes measured immediately after being given the intervention.

Bias	Review author judgement	Support for judgement
Selection bias		
Random sequence generation	Unclear risk	"each participant was randomly assigned to one of three groups"
Allocation concealment	High risk	"the teacher who was supervising the class randomly distributed a colored folder to each student. The colors represented the group to which the students were assigned"
Performance bias		
Blinding of participants and personnel (all outcomes)	High risk	No blinding
Detection bias		
Blinding of outcome assessment (all outcomes)	High risk	No blinding
Attrition bias		
Incomplete outcome data	Low risk	263 participants. No mentions of losses or dropouts and study procedures make losses unlikely.
Reporting bias.		
Selective reporting	Unclear risk	No study protocol or registry entry mentioned in study report.
Other bias.		
Other sources of bias	High risk	Funding: ? Allegiance: The study author created the comic. Contamination: The participants were instructed not to speak with each other and read the study materials in specific classrooms.

Bias	Review author judgement	Support for judgement
Selection bias		
Random sequence generation	Low risk	"Using a table of random numbers to select a "starting" seat, teenagers were systematically assigned"
Allocation concealment	Unclear risk	"teenagers were systematically assigned within classes to receive packets that included either the comic or the essay and the survey. ". Unclear if packages were opaque, sealed, numbered.
Performance bias		
Blinding of participants and personnel (all outcomes)	High risk	No blinding
Detection bias		
Blinding of outcome assessment (all outcomes)	High risk	No blinding
Attrition bias		
Incomplete outcome data	Low risk	873 participants. Results shown for 867 participants. No reasons provided but difference unlikely to have a meaningful impact.
Reporting bias.		
Selective reporting	Unclear risk	No study protocol or registry entry mentioned in study report.
Other bias.		
Other sources of bias	Unclear risk	Funding: Non-profit Allegiance: Unclear if the study author created the comic. Contamination: Unclear if participants could or could not share and discuss the comic.

Bias	Review author judgement	Support for judgement
Selection bias		
Random sequence generation	Low risk	"The envelopes were shuffled randomly prior to the data collection so that assignment of students to experimental condition would be random." (in Unger, 2013)
Allocation concealment	Unclear risk	"Participants received a sealed envelope". Unclear if opaque and sequentially numbered.
Performance bias		
Blinding of participants and personnel (all outcomes)	High risk	No blinding
Detection bias		
Blinding of outcome assessment (all outcomes)	High risk	No blinding
Attrition bias		
Incomplete outcome data	Low risk	185 participants, of which 157 completed the 1-month follow-up and 25 were excluded (7 didn't identify as Hispanic, 18 didn't answer the ethnicity question). 66 in fotonovela group, 66 in depression brochure group.
Reporting bias.		
Selective reporting	High risk	Study based on (Unger, 2013), mentions behavioral intentions in the methods; intentions also included in (Unger, 2013) but not included in the report.
Other bias.		
Other sources of bias	High risk	Funding: Non-profit. Allegiance: Study authors created the fotonovela. Contamination:

Bias	Review author judgement	Support for judgement
Selection bias		
Random sequence generation	Unclear risk	"A total of 147 Latino CGs met entry criteria and were randomly assigned to either the FNC or UIC"
Allocation concealment	Unclear risk	Details not reported
Performance bias		
Blinding of participants and personnel (all outcomes)	High risk	Participants not blinded
Detection bias		
Blinding of outcome assessment (all outcomes)	Unclear risk	Outcome assessments with phone calls, no blinding. Participants may have mentioned the fotonovela.
Attrition bias		
Incomplete outcome data	Low risk	147 participants. 13 deleted for data problems, 13 deleted because not primary caregiver and 11 dropped out due to time constraints or lack of interest. Reasons balanced between groups, unlikely to have an important impact.
Reporting bias.		
Selective reporting	Unclear risk	No study protocol or registry entry mentioned in study report.
Other bias.		
Other sources of bias	Unclear risk	Funding: National Office of the Alzheimer's Association grant Alzheimer's Disease Center at University of California, Davis. Free copies of the fotonovela available online. Allegiance: The study authors created the fotonovela. Contamination: Participants could have shared the fotonovela.

Bias	Review author judgement	Support for judgement
Selection bias		
Random sequence generation	Low risk	"Each patient was randomly assigned to either the control or intervention group by a computer-generated randomization program."
Allocation concealment	Unclear risk	No details provided
Performance bias		
Blinding of participants and personnel (all outcomes)	High risk	No blinding of participants
Detection bias		
Blinding of outcome assessment (all outcomes)	Unclear risk	Endoscopists outcome assessors were "blinded" (unclear how) to group assignment. Participants may have mentioned the cartoons to endoscopists.
Attrition bias		
Incomplete outcome data	Low risk	27 participants. 4 participants were then excluded (2 had to be hospitalized, 1 was too old and 1 did not come to the appointment). Reasons unlikely to be related to the study outcome.
Reporting bias.		
Selective reporting	Unclear risk	Study protocol mentioned, no links provided.
Other bias.		
Other sources of bias	High risk	Funding: Non-profit Allegiance: The study authors developed the cartoon which was created by independent artists. Contamination: Parents could have shared the cartoon.

Bias	Review author judgement	Support for judgement
Selection bias		
Random sequence generation	Low risk	"Using a random number generator [18], outpatient children (2–14 years of age) scheduled for VCUG between December 2011 and June 2012 were randomly assigned to two groups"
Allocation concealment	Unclear risk	Participants received either a storybook or no storybook by mail but no further details are given on how the allocation was kept concealed.
Performance bias		
Blinding of participants and personnel (all outcomes)	High risk	Participants weren't blinded
Detection bias		
Blinding of outcome assessment (all outcomes)	Unclear risk	Technologists were "blinded" to the assignment (not clear how). Parents and children may have referred to the storybook and unblinded the trial.
Attrition bias		
Incomplete outcome data	Unclear risk	232 participants, of which only 103 answered the survey (50 in each group). 3 participants excluded (didn't indicate if they had read the storybook, technologist didn't rate the study outcome)
Reporting bias.		
Selective reporting	Unclear risk	No study protocol or registry entry mentioned in study report.
Other bias.		
Other sources of bias	Unclear risk	Funding: Not reported. The storybook is freely available. Allegiance: The study authors created the storybook. Contamination: Guardians could have shared the storybook.

Bias	Review author judgement	Support for judgement
Selection bias		
Random sequence generation	Unclear risk	"Households were pair-matched based on intensity of smoking as reflected by the number of cigarettes smoked daily and were randomized to receive..."
Allocation concealment	Unclear risk	No details provided
Performance bias		
Blinding of participants and personnel (all outcomes)	High risk	No blinding
Detection bias		
Blinding of outcome assessment (all outcomes)	High risk	No blinding. Unlikely to have affected nicotine levels measured by monitors but may have affected other outcomes.
Attrition bias		
Incomplete outcome data	Unclear risk	91 households recruited. 40/47 fotonovela households completed the 12 months survey vs 36/44 in the standard care group. Balanced losses between groups with "similar characteristics" but unclear to me if this could meaningfully affect results.
Reporting bias.		
Selective reporting	Unclear risk	No study protocol or registry entry mentioned in study report.
Other bias.		
Other sources of bias	High risk	Funding: Non-profit. Allegiance: Study Contamination: Clustering: ICC not mentioned.
Notes		Attrition should best be considered per outcome measure in the next review update.

Bias	Review author judgement	Support for judgement
Selection bias		
Random sequence generation	Low risk	"Patients were randomized by using a random-number generator."
Allocation concealment	Unclear risk	No details provided
Performance bias		
Blinding of participants and personnel (all outcomes)	High risk	No blinding, participants and personnel knew what the participants received; nurses may have treated patients receiving cartoons differently (eg. lower emphasis on good bowel preparation).
Detection bias		
Blinding of outcome assessment (all outcomes)	Low risk	"endoscopists [...] were blinded to the instructions the patients had received". Unclear how they were blinded but considering they "determined bowel preparation [...] using endoscopic images [...] after all colonoscopies were performed", risk likely low as there would be no verbal contact with the patients.
Attrition bias		
Incomplete outcome data	Unclear risk	27 patients lost to follow-up in the written instructions group and 29 in the cartoon group. No reasons provided.
Reporting bias.		
Selective reporting	Low risk	No study protocol or registry entry mentioned in study report but the study does have an entry (UMIN000007888). All outcomes planned to be measured are reported.
Other bias.		
Other sources of bias	Unclear risk	Financial: Study authors disclose no financial COI. Allegiance: Study authors are authors of the cartoon. Contamination: Patients could have shared the cartoons but given the sensitive topic (colonoscopies) this seems unlikely.

Bias	Review author judgement	Support for judgement
Selection bias		
Random sequence generation	Unclear risk	"they randomly gave each eligible child the colouring pictures (control) or one of the three components of the educational programme"
Allocation concealment	Unclear risk	Researchers used "identical looking envelopes, all of which were made the same weight" which contained the 3 interventions. Unclear if they were sequentially numbered, opaque and sealed.
Performance bias		
Blinding of participants and personnel (all outcomes)	Unclear risk	Participants weren't blinded but knowledge of intervention appears to me unlikely to affect use of eyepatches among children. Participants were instructed not to tell researchers or orthoptists in which group they were. Researchers may have inadvertently found out allocation during home visits.
Detection bias		
Blinding of outcome assessment (all outcomes)	Unclear risk	Participants weren't blinded but outcomes were measured with monitors taped to eyepatches. Participants were instructed not to tell researchers or orthoptists in which group they were. Researchers may have inadvertently found out allocation during home visits.
Attrition bias		
Incomplete outcome data	Unclear risk	The parents of 5 children could not be contacted. The parents of 18 children withdrew from the study (refused to participate or use monitors) (1 in cartoon group, 4 calendar, 9 information leaflet, 10 coloring picture).
Reporting bias.		
Selective reporting	Unclear risk	Study protocol mentioned, no links provided.
Other bias.		
Other sources of bias	Unclear risk	Financial: The authors disclose no COI. Allegiance: The study authors did not create the cartoons. Contamination: The parents may have shared the cartoons with other parents.

Bias	Review author judgement	Support for judgement
Selection bias		
Random sequence generation	Low risk	"The envelopes were shuffled randomly prior to the data collection so that assignment of students to experimental condition would be random."
Allocation concealment	Unclear risk	Allocation hidden in envelopes but unclear if they were sequentially numbered and opaque.
Performance bias		
Blinding of participants and personnel (all outcomes)	High risk	No blinding
Detection bias		
Blinding of outcome assessment (all outcomes)	High risk	No blinding
Attrition bias		
Incomplete outcome data	Unclear risk	Unclear how many participants agreed to participate. 28 participants did not complete the 1-month follow-up (no further details provided). 18 participants excluded from analysis because they did not self-identify as Hispanic/Latino.
Reporting bias.		
Selective reporting	Unclear risk	No study protocol or registry entry mentioned in study report.
Other bias.		
Other sources of bias	High risk	Financial: Funding not reported. Allegiance: Study authors created the fotonovela. Contamination: Participants could have shared the fotonovela with people from the other group.

Bias	Review author judgement	Support for judgement
Selection bias		
Random sequence generation	Unclear risk	"Participating boys were randomized on a 1:2 ratio to the standard written vignette only version (n = 34) or to the written plus cartoon vignette version (n = 62)." No further details provided
Allocation concealment	Unclear risk	No details provided
Performance bias		
Blinding of participants and personnel (all outcomes)	High risk	No blinding
Detection bias		
Blinding of outcome assessment (all outcomes)	High risk	No blinding
Attrition bias		
Incomplete outcome data	Low risk	116 participants. 20 excluded for reasons unrelated to the study outcomes.
Reporting bias.		
Selective reporting	Unclear risk	No study protocol or registry entry mentioned
Other bias.		
Other sources of bias	High risk (in favour of comics)	Funding: Non-profit Allegiance: The study authors created the study materials. Contamination: It is not clear if participants could share or discuss the study materials

Bias	Review author judgement	Support for judgement
Selection bias		
Random sequence generation	Low risk	"a computerized randomization grid was used to allocate the children into three groups"
Allocation concealment	Unclear risk	Not details provided
Performance bias		
Blinding of participants and personnel (all outcomes)	High risk	No blinding, anxiety outcome could be affected by participants' differing expectations.
Detection bias		
Blinding of outcome assessment (all outcomes)	Unclear risk	Anxiety outcome was measured by observers "blinded to the method of preparation" (unclear how).
Attrition bias		
Incomplete outcome data	High risk	198 children randomized but preoperative outcomes shown for 191 children. Table 1 also has percentages not coherent with the number of participants. Reasons for those discrepancies are not reported
Reporting bias.		
Selective reporting	Unclear risk	No study protocol or registry entry mentioned in study report.
Other bias.		
Other sources of bias	Unclear risk	Funding: Not reported Allegiance: Cartoon wasn't made by the study authors. Contamination: Unclear if the parents could keep the cartoon strips and share them.

Bias	Review author judgement	Support for judgement
Selection bias		
Random sequence generation	Unclear risk	"Two comics were randomly allocated"
Allocation concealment	Unclear risk	"a sealed envelope containing a randomly allocated photo-comic was provided." Unclear if opaque, numbered.
Performance bias		
Blinding of participants and personnel (all outcomes)	High risk	No blinding
Detection bias		
Blinding of outcome assessment (all outcomes)	High risk	No blinding
Attrition bias		
Incomplete outcome data	Low risk	659 participants. "658 of 659 (99.8%) of the baseline participants completed a follow-up questionnaire."
Reporting bias.		
Selective reporting	Unclear risk	No study protocol or registry entry mentioned in study report.
Other bias.		
Other sources of bias	High risk	Funding: ? Allegiance: The study authors created the photo-comic. Contamination: Participants could have shared the photo-comic with each other.

Bias	Review author judgement	Support for judgement
Selection bias		
Random sequence generation	Unclear risk	"Research assistants [...], randomly assigned participants to one of two conditions."
Allocation concealment	Unclear risk	No details provided
Performance bias		
Blinding of participants and personnel (all outcomes)	High risk	No blinding. Participants told researchers were "developing measures".
Detection bias		
Blinding of outcome assessment (all outcomes)	High risk	No blinding, subjective coding of outcomes.
Attrition bias		
Incomplete outcome data	Low risk	117 participants, results reported for all participants. No losses or dropouts mentioned.
Reporting bias.		
Selective reporting	Unclear risk	No study protocol or registry entry mentioned in study report.
Other bias.		
Other sources of bias	Unclear risk	Funding: Not reported. Allegiance: Study authors aren't authors of the comics. Contamination: Unclear if participants could share the comics or discuss these.

Bias	Review author judgement	Support for judgement
Selection bias		
Random sequence generation	Low risk	"Subjects were randomly (by quota) allocated by a computer random numbers table"
Allocation concealment		Not assessed (clarifications needed)
Performance bias		
Blinding of participants and personnel (all outcomes)		Not assessed (clarifications needed)
Detection bias		
Blinding of outcome assessment (all outcomes)		Not assessed (clarifications needed)
Attrition bias		
Incomplete outcome data		Not assessed (clarifications needed)
Reporting bias.		
Selective reporting	Unclear risk	No study protocol or registry entry mentioned in study report.
Other bias.		
Other sources of bias		Not assessed (clarifications needed)

Bias	Review author judgement	Support for judgement
Selection bias		
Random sequence generation	Low risk	"The envelopes [containing wound care instructions with or without illustrations] were numbered randomly by a computer."
Allocation concealment	Unclear risk	"Instruction sheets were kept in white envelopes to prevent the nursing staff from identifying the type of instructions "... "The envelopes were numbered randomly by a computer." ... Unclear if envelopes were sequentially numbered, opaque and sealed.
Performance bias		
Blinding of participants and personnel (all outcomes)	High risk	No blinding, participants knew they received the cartoon illustrations or standard illustrations, satisfaction with care likely to be influenced
Detection bias		
Blinding of outcome assessment (all outcomes)	Unclear risk	Telephone calls were made by "blinded" outcome research assistants or by CD. It is not clear how this blinding was achieved and participants may have inadvertently revealed their allocation; satisfaction with care could be influenced.
Attrition bias		
Incomplete outcome data	High risk	166 of 400 participants couldn't be contacted by telephone, mainly due to "inaccurate [contact] information"; their characteristics are said to be similar to respondents. Similar baseline characteristics of respondents. 2 participants excluded from cartoon group and 27 from the text-only group for not reading the text/cartoon; this is likely to lead to an overestimate of the text effect. Analysis is per-protocol.
Reporting bias.		
Selective reporting	Unclear risk	No study protocol or registry entry mentioned in study report.
Other bias.		
Other sources of bias	Unclear risk	Financial: COI not disclosed Allegiance: ____ Contamination: Cartoon illustrations could have been shared between people with children with lacerations, although unlikely

Bias	Review author judgement	Support for judgement
Selection bias		
Random sequence generation	Unclear risk	"Subjects were randomly (but balanced for gender) assigned to one of two expectancy conditions."
Allocation concealment		Not assessed (clarifications needed)
Performance bias		
Blinding of participants and personnel (all outcomes)		Not assessed (clarifications needed)
Detection bias		
Blinding of outcome assessment (all outcomes)		Not assessed (clarifications needed)
Attrition bias		
Incomplete outcome data		Not assessed (clarifications needed)
Reporting bias.		
Selective reporting		Not assessed (clarifications needed)
Other bias.		
Other sources of bias		Not assessed (clarifications needed)

Bias	Review author judgement	Support for judgement
Selection bias		
Random sequence generation	Unclear risk	"Thirty clinics were randomized to receive..."
Allocation concealment	Unclear risk	No details provided in the abstract
Performance bias		
Blinding of participants and personnel (all outcomes)	Unclear risk	Unclear if vaccine uptake is affected by knowledge of intervention received.
Detection bias		
Blinding of outcome assessment (all outcomes)	Unclear risk	Unclear if vaccine uptake assessed from medical records is affected by knowledge of intervention received. Unclear if outcome assessors were blinded
Attrition bias		
Incomplete outcome data	Unclear risk	188 parents lost to follow-up for reasons not provided, it is unclear from the abstract in which group they were.
Reporting bias.		
Selective reporting	Unclear risk	No study protocol or registry entry mentioned in abstract/poster.
Other bias.		
Other sources of bias	Unclear risk	Financial: No details on COI. Allegiance: Unclear who created the fotonovela Contamination: Fotonovela could have been shared between parents.

Bias	Review author judgement	Support for judgement
Selection bias		
Random sequence generation	Unclear risk	"randomized pilot study was conducted in which each participant was assigned to either the Comic or Attention-control group"
Allocation concealment	Unclear risk	No details provided
Performance bias		
Blinding of participants and personnel (all outcomes)	High risk	No blinding
Detection bias		
Blinding of outcome assessment (all outcomes)	High risk	No blinding, direct observation by lead researcher
Attrition bias		
Incomplete outcome data	Low risk	56, 57 or 59 participants at baseline (not clear). Results shown for 56 participants. Difference unlikely to have meaningfully affected results.
Reporting bias.		
Selective reporting	Unclear risk	No study protocol or registry entry mentioned in study report.
Other bias.		
Other sources of bias	High risk	Funding: Non-profit. Allegiance: Study authors created the comic. Contamination: Participants read the study materials in specific classrooms for each group.

Bias	Review author judgement	Support for judgement
Selection bias		
Random sequence generation	Low risk	"Randomization was performed by a computer-generated random number list prepared by the department of biostatistics of the co-ordination centre"
Allocation concealment	Low risk	"central randomisation" ... "a neuropsychologist at the coordination centre allocated participants to the intervention or control group by unmasking one line at each randomization on the list."
Performance bias		
Blinding of participants and personnel (all outcomes)	High risk	No blinding
Detection bias		
Blinding of outcome assessment (all outcomes)	High risk	No blinding
Attrition bias		
Incomplete outcome data	Low risk	115 participants, 111 included in analyses. 2 lost to follow-up, 3 dropped out prematurely. Losses too few to meaningfully affect results.
Reporting bias.		
Selective reporting	Low risk	All outcomes mentioned in registry entry (NCT00841022) reported.
Other bias.		
Other sources of bias	Unclear risk	Funding: Non-profit. Allegiance: The study authors did not create the comic leaflets. Contamination: Participants could have shared the comic leaflets.

Bias	Review author judgement	Support for judgement
Selection bias		
Random sequence generation	Low risk	"Randomization was performed according to the table of random numbers of Moses and Oakford."
Allocation concealment	Unclear risk	"sealed opaque envelopes were prepared". "each envelope contained the number in the corresponding order in the table of random numbers." Recruitment nurses may nevertheless have opened the envelopes.
Performance bias		
Blinding of participants and personnel (all outcomes)	Unclear risk	Participants and teachers knew who received a comic book. Children weren't told there were other study groups. Communication between children from different schools could nevertheless have happened.
Detection bias		
Blinding of outcome assessment (all outcomes)	Unclear risk	Teachers who handed out the questionnaires knew which children had received a comic book but were instructed not to interfere with the study or help the students. Research assistants "blinded" (unclear how) to the allocation later entered the data.
Attrition bias		
Incomplete outcome data	Unclear risk	No clusters were lost to follow-up. 63 children lost to follow-up or excluded from intervention group at day 98. 27 children lost to follow-up or excluded from control group at day 98.
Reporting bias.		
Selective reporting	Unclear risk	No study protocol or registry entry mentioned in study report.
Other bias.		
Other sources of bias	Unclear risk	Financial: Non-profit funding and foundation Allegiance: Unclear who created the comic. Contamination: The comic was made freely available through the internet; participants may have shared the comic. Clustering: ICC taken into account.

Bias	Review author judgement	Support for judgement
Selection bias		
Random sequence generation	Low risk	"The recruited children were randomized by a 1:1:1 allocation ratio by lot ..."
Allocation concealment	Unclear risk	Allocation concealment details not reported
Performance bias		
Blinding of participants and personnel (all outcomes)	High risk	No blinding, participants knew they received the storybook or no storybook, distress outcome likely to be influenced by participants' expectations
Detection bias		
Blinding of outcome assessment (all outcomes)	High risk	No blinding, storybook was used during the medical procedure, distress outcome likely to be influenced by outcome assessors' expectations
Attrition bias		
Incomplete outcome data	Low risk	A total of 6 children dropped out of the study (1 in group A, 2 in group B, 4 in group C), balanced, with similar reasons; unlikely to have an important effect
Reporting bias.		
Selective reporting	Unclear risk	No study protocol or registry entry mentioned in study report.
Other bias.		
Other sources of bias	Unclear risk	Financial: Authors declare no COI and no funding. Allegiance: An external cartoonist created the storybook. Contamination: Parents may have shared the storybook with other parents.
Notes	Contradictory statements about numbers of children allocated to each group between the methods section and CONSORT flow diagram.	

Bias	Review author judgement	Support for judgement
Selection bias		
Random sequence generation	High risk	"Children presenting on Saturdays and Mondays were assigned to group I, while those presenting on Tuesdays and Thursdays were assigned to group II."
Allocation concealment	Unclear risk	No details provided
Performance bias		
Blinding of participants and personnel (all outcomes)	High risk	No blinding
Detection bias		
Blinding of outcome assessment (all outcomes)	High risk	It is unclear who assessed child anxiety and child behaviour. No mentions of blinding, likely not done.
Attrition bias		
Incomplete outcome data	Low risk	60 participants. Results reported for all participants.
Reporting bias.		
Selective reporting	Unclear risk	No study protocol or registry entry mentioned in study report.
Other bias.		
Other sources of bias	Unclear risk	Funding: Not reported Allegiance: Images were selected from the Internet. Contamination: Parents may have discussed the cartoon images with other parents.

Bias	Review author judgement	Support for judgement
Selection bias		
Random sequence generation	Unclear risk	"Subjects were randomly assigned to one of three conditions"
Allocation concealment	Unclear risk	No details provided
Performance bias		
Blinding of participants and personnel (all outcomes)	High risk	No blinding
Detection bias		
Blinding of outcome assessment (all outcomes)	High risk	No blinding
Attrition bias		
Incomplete outcome data	Low risk	152 participants, results shown for all 152. No mention of losses.
Reporting bias.		
Selective reporting	Unclear risk	No mention of registry entry or protocol
Other bias.		
Other sources of bias	Unclear risk	<p>Funding: Non-profit</p> <p>Allegiance: The cartoon was not made by the study authors.</p> <p>Contamination: It is not made clear if participants could share or discuss the study materials.</p>

Bias	Review author judgement	Support for judgement
Selection bias		
Random sequence generation	High risk	"five clinic days were randomized to control, and five to intervention conditions in a randomized ..."
Allocation concealment	Unclear risk	Allocation concealment details not reported
Performance bias		
Blinding of participants and personnel (all outcomes)	High risk	No blinding, participants knew they received the cartoon or no cartoon, self-efficacy outcome likely to be influenced by participants' expectations
Detection bias		
Blinding of outcome assessment (all outcomes)	High risk	No blinding, participants knew they received the cartoon or no cartoon, self-efficacy outcome likely to be influenced by participants' expectations
Attrition bias		
Incomplete outcome data	Unclear risk	8 mothers did not finish the questionnaire; it is not reported in which each group they were or reasons for non-completion. 25 mothers were further excluded because their tenants did not have control over water heaters; it is not reported in which group they were either. It is not clear if those exclusions were pre-specified and when they happened.
Reporting bias.		
Selective reporting	Unclear risk	No study protocol or registry entry mentioned in study report.
Other bias.		
Other sources of bias	Unclear risk	Financial: COI not reported. Allegiance: Unclear who created the cartoon, likely the study authors. Contamination: Mothers could have shared the cartoon with other mothers but given only 5 days to do so this appears unlikely.

Bias	Review author judgement	Support for judgement
Selection bias		
Random sequence generation	Unclear risk	"Each respondent was randomly assigned to view warnings from two of nine health effects tested in the study... Due to a technical flaw in the program, the second set of warnings assigned to respondents was not assigned at random"
Allocation concealment	Low risk	Web-based survey
Performance bias		
Blinding of participants and personnel (all outcomes)	High risk	No blinding
Detection bias		
Blinding of outcome assessment (all outcomes)	High risk	Web-based survey, unblinded participants self-reported outcomes
Attrition bias		
Incomplete outcome data	Unclear risk	783 + 510 participants. No mentions of losses or dropouts or exclusions which appears surprising with such a large sample.
Reporting bias.		
Selective reporting	Unclear risk	Study protocol mentioned with link to an online database. I couldn't find the protocol on the database.
Other bias.		
Other sources of bias	Low risk	Funding: Non-profit. Allegiance: Warning created by external advertising firm. Contamination: Participants could have discussed the health warnings with future participants.

Bias	Review author judgement	Support for judgement
Selection bias		
Random sequence generation	Low risk	"the questionnaire was programmed on 25 computers... participants were randomly assigned either to an experimental or to one of two control groups..." I assume this means the study authors used computer-generated random numbers.
Allocation concealment	Low risk	Online randomisation
Performance bias		
Blinding of participants and personnel (all outcomes)	High risk	No blinding
Detection bias		
Blinding of outcome assessment (all outcomes)	High risk	No blinding
Attrition bias		
Incomplete outcome data	High risk	347 participants participated. Only 146 (42%) sent answers at 1-week.
Reporting bias.		
Selective reporting	Unclear risk	Study protocol mentioned, no links provided.
Other bias.		
Other sources of bias	Unclear risk	Funding: Non-profit Allegiance: Cartoons were selected from image databases, they were not made by the study authors. Contamination: Participants could have shared or discussed the study materials.

Bias	Review author judgement	Support for judgement
Selection bias		
Random sequence generation	High risk	"a randomized independent-group study... As a station became available, the group nominated the next participant to move to it. The enumerators alternated between the three communication tools and each participant was exposed to only one tool."
Allocation concealment	High risk	"The allocation of participants to stations involved participants' sitting in a group, away from the stations. As a station became available, the group nominated the next participant to move to it."
Performance bias		
Blinding of participants and personnel (all outcomes)	High risk	No blinding of participants
Detection bias		
Blinding of outcome assessment (all outcomes)	High risk	No blinding of study observers
Attrition bias		
Incomplete outcome data	Low risk	22 participants, results shown for all participants.
Reporting bias.		
Selective reporting	Unclear risk	No study protocol or registry entry mentioned in study report.
Other bias.		
Other sources of bias	Unclear risk	Funding: Non-profit Allegiance: Cartoons made by independent artist. Contamination: Unclear if participants could speak with each other.

Bias	Review author judgement	Support for judgement
Selection bias		
Random sequence generation	Unclear risk	"The schools were randomly allocated to control (did not read Laduma) and intervention (did read Laduma) groups."
Allocation concealment	Unclear risk	No details provided. Cluster allocation
Performance bias		
Blinding of participants and personnel (all outcomes)	High risk	No blinding of participants
Detection bias		
Blinding of outcome assessment (all outcomes)	High risk	No blinding
Attrition bias		
Incomplete outcome data	Unclear risk	19 clusters with 1168 participants. 1 cluster lost in both groups. 722 participants at T3. "No difference in drop out between intervention group and the control group was found." Balanced losses reportedly due to "impending school examinations".
Reporting bias.		
Selective reporting	Unclear risk	No study protocol or registry entry mentioned in study report.
Other bias.		
Other sources of bias	High risk	Funding: Non-profit Allegiance: Fotonovela likely made by the study authors. Contamination: Participants could have shared the fotonovela. Clustering: No mention of ICC or clustering

Bias	Review author judgement	Support for judgement
Selection bias		
Random sequence generation	Unclear risk	"Each section was randomly assigned to either the CDC vaccine information flyer or the comic format vaccine information flyer."
Allocation concealment	Unclear risk	Allocation concealment details not reported
Performance bias		
Blinding of participants and personnel (all outcomes)	High risk	No blinding, participants knew they received the comic-flyer or standard flyer, attitude outcome likely to be influenced by participants' expectations
Detection bias		
Blinding of outcome assessment (all outcomes)	High risk	No blinding, the research assistant who collected the data knew which participants received the comic-flyer or standard flyer. He/she may have unintentionally extracted data from the questionnaires in a way that favoured the comic-flyer from his professor.
Attrition bias		
Incomplete outcome data	Unclear risk	Insufficient reporting of attrition/exclusions to permit judgement
Reporting bias.		
Selective reporting	Unclear risk	No study protocol or registry entry mentioned in study report.
Other bias.		
Other sources of bias	High	Unclear if cluster RCT or non-cluster RCT. If it is a cluster trial number of clusters is unclear, which suggests it could be non-randomized. Intraclass correlation not taken into account.

Bias	Review author judgement	Support for judgement
Selection bias		
Random sequence generation	Unclear risk	"Individuals in each of the two schools were randomly assigned to the following four conditions..."
Allocation concealment	Unclear risk	No details provided
Performance bias		
Blinding of participants and personnel (all outcomes)	High risk	No blinding
Detection bias		
Blinding of outcome assessment (all outcomes)	High risk	No blinding
Attrition bias		
Incomplete outcome data	Unclear risk	646 participants. Results shown for 637, 623 or 643 participants depending on the outcome. Reasons for losses not reported. Small losses but some results are fragile to small differences.
Reporting bias.		
Selective reporting	Unclear risk	No protocol or registry entry mentioned
Other bias.		
Other sources of bias	Unclear risk	<p>Funding: Not reported</p> <p>Allegiance: The study authors likely designed the pipeline cartoon.</p> <p>Contamination: It is not made clear if participants could share or discuss the study materials.</p>

Bias	Review author judgement	Support for judgement
Selection bias		
Random sequence generation	Unclear risk	"Participants were randomly assigned to read materials..."
Allocation concealment	Unclear risk	No details provided
Performance bias		
Blinding of participants and personnel (all outcomes)	High risk	No blinding
Detection bias		
Blinding of outcome assessment (all outcomes)	High risk	No blinding
Attrition bias		
Incomplete outcome data	Low risk	106 participants. 3 excluded for not following the instructions, unlikely to affect results.
Reporting bias.		
Selective reporting	Unclear risk	No study protocol or registry entry mentioned in study report.
Other bias.		
Other sources of bias	High risk	Funding: Non-profit Allegiance: Some cartoons came from a book and others were made by an artist for the study authors. Contamination: Participants could have discussed with each other.

Bias	Review author judgement	Support for judgement
Selection bias		
Random sequence generation	Low risk	"To randomly assign the participants, a sample frame was created with an online number randomizer"
Allocation concealment	Unclear risk	No details provided
Performance bias		
Blinding of participants and personnel (all outcomes)	High risk	No blinding
Detection bias		
Blinding of outcome assessment (all outcomes)	High risk	No blinding
Attrition bias		
Incomplete outcome data	Low risk	20 participants. Results shown for all participants.
Reporting bias.		
Selective reporting	Unclear risk	No study protocol or registry entry mentioned in study report.
Other bias.		
Other sources of bias	High risk	Funding: Not reported. Allegiance: Storybook created by the study authors. Contamination: Participants could have discussed with each other.

Bias	Review author judgement	Support for judgement
Selection bias		
Random sequence generation	Unclear risk	"[patients] were each randomly allocated an experimental booklet"
Allocation concealment	Unclear risk	No details provided
Performance bias		
Blinding of participants and personnel (all outcomes)	High risk	No blinding
Detection bias		
Blinding of outcome assessment (all outcomes)	High risk	No blinding
Attrition bias		
Incomplete outcome data	Low risk	373 participants divided in 12 groups. Results shown in aggregate for all 373 participants and only summarized narratively.
Reporting bias.		
Selective reporting	Unclear risk	No study protocol or registry entry mentioned in study report.
Other bias.		
Other sources of bias	High risk	Funding: _____ Allegiance: The study author made the illustrations. Contamination: Participants could have discussed with each other. Other: Comparison group isn't from the same population and may have been selected non-randomly.

Bias	Review author judgement	Support for judgement
Selection bias		
Random sequence generation	Unclear risk	“randomly assigned participants to one of two conditions”
Allocation concealment	Unclear risk	No details provided
Performance bias		
Blinding of participants and personnel (all outcomes)	High risk	No blinding. Participants told researchers were “developing measures”.
Detection bias		
Blinding of outcome assessment (all outcomes)	High risk	No blinding, subjective coding of outcomes.
Attrition bias		
Incomplete outcome data	Low risk	119 participants. No losses or dropouts mentioned; the study authors discuss results for “all participants”.
Reporting bias.		
Selective reporting	Unclear risk	No study protocol or registry entry mentioned in study report.
Other bias.		
Other sources of bias	Unclear risk	Funding: Not reported. Allegiance: Study authors aren’t authors of the comics. Contamination: Unclear if participants could share the comics or discuss these.

Bias	Review author judgement	Support for judgement
Selection bias		
Random sequence generation	Unclear risk	"On a random basis 28 patients were given a booklet illustrated with a large number of cartoons, and 22 were given a purely textual booklet."
Allocation concealment	Unclear risk	No details provided
Performance bias		
Blinding of participants and personnel (all outcomes)	High risk	No blinding
Detection bias		
Blinding of outcome assessment (all outcomes)	High risk	No blinding
Attrition bias		
Incomplete outcome data	Low risk	50 participants. All are said to have completed the questionnaire.
Reporting bias.		
Selective reporting	Unclear risk	No study protocol or registry entry mentioned in study report.
Other bias.		
Other sources of bias	High risk	Funding: _____ Allegiance: The study author made the illustrations. Contamination: Participants could have discussed with each other.

Bias	Review author judgement	Support for judgement
Selection bias		
Random sequence generation	Unclear risk	"Respondents were randomly assigned to one of three groups"
Allocation concealment	Unclear risk	"Each participant was given an envelope containing either a fotonovela and accompanying questionnaire, a traditional brochure and accompanying questionnaire, or a questionnaire only (control" Unclear if envelopes were opaque, sealed and numbered.
Performance bias		
Blinding of participants and personnel (all outcomes)	High risk	No blinding
Detection bias		
Blinding of outcome assessment (all outcomes)	High risk	No blinding
Attrition bias		
Incomplete outcome data	Low risk	303 participants. Results shown for 270 participants (89%) suggesting small balanced losses. Reasons not provided but unlikely to affect results.
Reporting bias.		
Selective reporting	Unclear risk	No study protocol or registry entry mentioned in study report.
Other bias.		
Other sources of bias	High risk	Funding: Non-profit Allegiance: Study author created the fotonovela. Contamination: Participants could have shared the fotonovela with eachother.

Bias	Review author judgement	Support for judgement
Selection bias		
Random sequence generation	Unclear risk	"They were assigned to 2 groups using block randomisation"
Allocation concealment	Unclear risk	No details provided
Performance bias		
Blinding of participants and personnel (all outcomes)	High risk	No blinding
Detection bias		
Blinding of outcome assessment (all outcomes)	Unclear risk	Nurses and doctors are said to be blinded but they may have seen the picture book or heard participants mention these.
Attrition bias		
Incomplete outcome data	Low risk	120 participants. Results shown for all participants.
Reporting bias.		
Selective reporting	Unclear risk	No study protocol or registry entry mentioned in study report.
Other bias.		
Other sources of bias	High risk	Funding: For-profit Allegiance: The storybook was made by the authors. Contamination: Participants could have discussed the storybook with eachother.

Bias	Review author judgement	Support for judgement
Selection bias		
Random sequence generation	Unclear risk	"Jumlah tersebut dibagi menjadi kelompok perlakuan dengan jumlah total 234 orang dan kelompok kontrol 57 orang dengan prosedur acak. [The study population was divided in an intervention group with a total of 234 participants and a control group with 57 participants using a random procedure]"
Allocation concealment		
Performance bias		
Blinding of participants and personnel (all outcomes)		
Detection bias		
Blinding of outcome assessment (all outcomes)		
Attrition bias		
Incomplete outcome data		
Reporting bias.		
Selective reporting	Unclear risk	No study protocol or registry entry mentioned in study report.
Other bias.		
Other sources of bias		

Bias	Review author judgement	Support for judgement
Selection bias		
Random sequence generation	Unclear risk	"participants were randomly assigned into the graphic novel and traditional textbook conditions."
Allocation concealment	Unclear risk	No details provided
Performance bias		
Blinding of participants and personnel (all outcomes)	High risk	No blinding
Detection bias		
Blinding of outcome assessment (all outcomes)	High risk	No blinding
Attrition bias		
Incomplete outcome data	Unclear risk	139 participants. Results unclearly reported.
Reporting bias.		
Selective reporting	Unclear risk	No study protocol or registry entry mentioned in study report.
Other bias.		
Other sources of bias	High risk	Funding: None. Allegiance: Graphic novel was made by the study authors. Contamination: Unclear if participants could discuss the study materials with each other.

Bias	Review author judgement	Support for judgement
Selection bias		
Random sequence generation	Unclear risk	"youth training centres were assigned randomly."
Allocation concealment	Unclear risk	No details provided. Cluster allocation.
Performance bias		
Blinding of participants and personnel (all outcomes)	High risk	No blinding
Detection bias		
Blinding of outcome assessment (all outcomes)	High risk	No blinding
Attrition bias		
Incomplete outcome data	Low risk	6 centres (173+164 participants). 70% and 73% of participants in the intervention and control group completed questionnaires at pre and post-test. Most missing reports said to be due to illness or work placements.
Reporting bias.		
Selective reporting	Unclear risk	No study protocol or registry entry mentioned in study report.
Other bias.		
Other sources of bias	High risk	Funding: Non-profit Allegiance: Study authors created the comic. Contamination: Participants could have shared the comic with other clusters. Clustering: No mention of ICC or clustering effects.

Bias	Review author judgement	Support for judgement
Selection bias		
Random sequence generation	Unclear risk	"Students in each cluster were randomly divided into four treatment groups"
Allocation concealment	Unclear risk	No details reported
Performance bias		
Blinding of participants and personnel (all outcomes)	High risk	No blinding, participants and personnel knew which intervention they received; personnel may have been more supportive of participants of a specific group.
Detection bias		
Blinding of outcome assessment (all outcomes)	High risk	No blinding, participants knew which intervention they received; this may have affected their motivation. Scoring was subjective.
Attrition bias		
Incomplete outcome data	Low risk	107 participants, results shown for 106, reasons for this single missing outcome not reported but unlikely to have had an effect on the overall results.
Reporting bias.		
Selective reporting	Unclear risk	No study protocol or registry entry mentioned in study report.
Other bias.		
Other sources of bias	Low risk	Funding: University of Arizona. Allegiance: Comic strips selected from a textbook and slightly modified by the study authors. Contamination: Comic strips had to be given back after being read and all students were tested right after reading the study materials.

Bias	Review author judgement	Support for judgement
Selection bias		
Random sequence generation	Low risk	"Participants were randomly allocated individually online by a researcher using a database on a secure website"
Allocation concealment	Low risk	"Participants were randomly allocated individually online" Allocation determined by clinical trials unit.
Performance bias		
Blinding of participants and personnel (all outcomes)	High risk	"Owing to the nature of the intervention, it was not possible for the participants or research team to be blind to group allocation."
Detection bias		
Blinding of outcome assessment (all outcomes)	High risk	"Owing to the nature of the intervention, it was not possible for the participants or research team to be blind to group allocation."
Attrition bias		
Incomplete outcome data	High risk	40 participants, none excluded from analysis. 21 missing questionnaires (out of 120) and 7 missing seizure diaries overall at 20 weeks. No withdrawal from the study. "The proportion of missing data was similar across the two groups." Although balanced, results remain fragile.
Reporting bias.		
Selective reporting	Low risk	All outcomes described in the study protocols (10.1186/1745-6215-15-455 and ISRCTN80067039) are reported.
Other bias.		
Other sources of bias	Unclear risk	Funding: Non-profit Allegiance: Study authors did not create the picture booklet. Contamination: Carers could have shared the picture booklet. "A minority of carers and participants were already familiar with Beyond Words [the intervention booklet]."

Bias	Review author judgement	Support for judgement
Selection bias		
Random sequence generation	Low risk	"Randomization tables were generated using a randomization program"
Allocation concealment	Unclear risk	"The randomized assignments were not revealed to study coordinators until after recruitment was completed. Ethics". Unclear how allocation was kept hidden.
Performance bias		
Blinding of participants and personnel (all outcomes)	High risk	No blinding
Detection bias		
Blinding of outcome assessment (all outcomes)	High risk	No blinding
Attrition bias		
Incomplete outcome data	Low risk	326 participants at baseline. 277 (85%) at 1-year follow-up. Balanced dropout rates in relatively low numbers, unlikely to affect results.
Reporting bias.		
Selective reporting	Low risk	All outcomes specified* in the registry entry (NCT00948337) are reported.
Other bias.		
Other sources of bias	Unclear risk	Funding: Non-profit Allegiance: The study authors created the photo-novel. Contamination: Participants could have shared the photo-novel. There was media coverage of cancer screening during the study.
Note		*registry outcome measures could be described with more precision (eg. "screening behaviour for second primary cancer" does not specify which cancer screening and "knowledge and attitudes" could be measured with many different tools/questionnaires)

Bias	Review author judgement	Support for judgement
Selection bias		
Random sequence generation	Unclear risk	“la moitié des enfants (n = 55) était assignée aléatoirement à la version non illustrée des textes expérimentaux, l'autre moitié à la version illustrée des mêmes textes. » [half the children (n = 55) were randomly assigned to the non-illustrated version of the experimental texts, the other half to the illustrated version of the same texts.]
Allocation concealment	Unclear risk	Not reported
Performance bias		
Blinding of participants and personnel (all outcomes)	High risk	No blinding
Detection bias		
Blinding of outcome assessment (all outcomes)	High risk	No blinding
Attrition bias		
Incomplete outcome data	Low risk	330 participants and results shown for all 330 participants.
Reporting bias.		
Selective reporting	Unclear risk	No protocol or registry entry mentioned.
Other bias.		
Other sources of bias	Low risk	Funding: Not reported Allegiance: The study authors didn't make the comics Contamination: Unclear if participants could share or discuss the comics, although unlikely in a classroom test setting.
Note		

Bias	Review author judgement	Support for judgement
Selection bias		
Random sequence generation	Unclear risk	"[...] restaurants were randomized into [study groups]"
Allocation concealment	Unclear risk	Not reported
Performance bias		
Blinding of participants and personnel (all outcomes)	High risk	No blinding
Detection bias		
Blinding of outcome assessment (all outcomes)	High risk	No blinding
Attrition bias		
Incomplete outcome data	Low risk	98 restaurants in the sample, 98 restaurants in the results section. A loss of 2 restaurants would be unlikely to affect results meaningfully.
Reporting bias.		
Selective reporting	Unclear risk	No protocol or registry entry mentioned.
Other bias.		
Other sources of bias	High risk	Funding: Non-profit Allegiance: Comic created by the study authors Contamination: The comic could have been shared between restaurants. Clustering: Unclear. Assessment from researcher with statistical expertise required.
Note		

Bias	Review author judgement	Support for judgement
Selection bias		
Random sequence generation	Unclear risk	"Subjects were randomly assigned"
Allocation concealment	Unclear risk	Not reported
Performance bias		
Blinding of participants and personnel (all outcomes)	High risk	No blinding
Detection bias		
Blinding of outcome assessment (all outcomes)	High risk	No blinding
Attrition bias		
Incomplete outcome data	Low risk	167 participants, results shown for all participants.
Reporting bias.		
Selective reporting	Low risk	No protocols mentioned but replication of (Liu, 2004) and shows results for the same outcome
Other bias.		
Other sources of bias	Low risk	Funding: Not reported Allegiance: Study author didn't create the comics Contamination: Unclear if participants could share or discuss the comics, although unlikely in a classroom test setting.
Note		

Bias	Review author judgement	Support for judgement
Selection bias		
Random sequence generation	High risk	"assigned participants round robin to each of the six possible condition pairings"
Allocation concealment	Unclear risk	Not reported
Performance bias		
Blinding of participants and personnel (all outcomes)	High risk	Not blinded to study intervention
Detection bias		
Blinding of outcome assessment (all outcomes)	Unclear risk	Unclear if attention and comprehension were measured by the study authors or through an automated website
Attrition bias		
Incomplete outcome data	Low risk	60 participants. 9 participants excluded for attention outcome due to eye tracker malfunction and 1 more due to being an outlier (text condition). Unlikely to meaningfully affect results.
Reporting bias.		
Selective reporting	Unclear risk	No study protocol or registry entry mentioned.
Other bias.		
Other sources of bias	High risk	Funding: Non-profit Allegiance: Study author created the comic. Contamination: Participants could see 2 different ToS versions.
Note		

Bias	Review author judgement	Support for judgement
Selection bias		
Random sequence generation		Not assessed as only qualitative / feasibility data was measured
Allocation concealment		Not assessed as only qualitative / feasibility data was measured
Performance bias		
Blinding of participants and personnel (all outcomes)		Not assessed as only qualitative / feasibility data was measured
Detection bias		
Blinding of outcome assessment (all outcomes)		Not assessed as only qualitative / feasibility data was measured
Attrition bias		
Incomplete outcome data		Not assessed as only qualitative / feasibility data was measured
Reporting bias.		
Selective reporting		Not assessed as only qualitative / feasibility data was measured
Other bias.		
Other sources of bias		Not assessed as only qualitative / feasibility data was measured
Note		

Bias	Review author judgement	Support for judgement
Selection bias		
Random sequence generation	Low risk	"Randomization was generated by a biostatistician at the Cancer Center via Microsoft Excel"
Allocation concealment	Unclear risk	"assignments enclosed in separate sealed envelopes... sequentially numbered". Unclear if envelopes were opaque.
Performance bias		
Blinding of participants and personnel (all outcomes)	High risk	No blinding
Detection bias		
Blinding of outcome assessment (all outcomes)	High risk	No blinding
Attrition bias		
Incomplete outcome data	Low risk	"Retention was 100%" "All the participants (n = 160) completed the follow-up survey."
Reporting bias.		
Selective reporting	Unclear risk	No protocol or registry entry mentioned
Other bias.		
Other sources of bias	High risk	Funding: Non-profit Allegiance: Study authors created the fotonovela Contamination: Participants were "taken to a room". Unclear to me if they were alone in this room.
Note		

Bias	Review author judgement	Support for judgement
Selection bias		
Random sequence generation	Low risk	"Participants were randomly assigned to view one of these six types of stories." Online survey website
Allocation concealment	Low risk	Online survey website
Performance bias		
Blinding of participants and personnel (all outcomes)	High risk	No blinding
Detection bias		
Blinding of outcome assessment (all outcomes)	High risk	Self-reports from unblinded participants
Attrition bias		
Incomplete outcome data	Low risk	155 to 160 participants per group reported in the results. Losses are too few to meaningfully affect results
Reporting bias.		
Selective reporting	Unclear risk	No registry entry or protocol mentioned
Other bias.		
Other sources of bias	Unclear risk	Funding: Non-profit Allegiance: External designer but study author contributed ideas for the cartoons. Contamination: Online survey, contamination unlikely
Note		

Bias	Review author judgement	Support for judgement
Selection bias		
Random sequence generation	Low risk	"respondents were randomly assigned to one of the two experimental treatments" Online experiment suggesting use of random number algorithm.
Allocation concealment	Low risk	Online experiment suggesting automated allocation
Performance bias		
Blinding of participants and personnel (all outcomes)	High risk	No blinding
Detection bias		
Blinding of outcome assessment (all outcomes)	Unclear risk	Online experiment, knowledge outcome unlikely to be affected but self-reported outcomes could have been. Unclear if assessor knew group allocations.
Attrition bias		
Incomplete outcome data	Low risk	Results show 109/111 and 110/111 participants in the photo group. Losses unlikely to affect results.
Reporting bias.		
Selective reporting	Unclear risk	No registry entry or protocol mentioned
Other bias.		
Other sources of bias	Unclear risk	Funding: Not reported Allegiance: Unclear if study authors have contributed to the creation of the comic. Contamination: Online experiment makes sharing unlikely.
Note		

Bias	Review author judgement	Support for judgement
Selection bias		
Random sequence generation	Unclear risk	"citizens were randomly assigned to the text group or the comic group"
Allocation concealment	Unclear risk	Not reported
Performance bias		
Blinding of participants and personnel (all outcomes)	High risk	No blinding
Detection bias		
Blinding of outcome assessment (all outcomes)	High risk	No blinding
Attrition bias		
Incomplete outcome data	High risk	291 participants but only 200 returned questionnaires. 194 responses kept. Losses balanced but in high enough numbers to affect results meaningfully.
Reporting bias.		
Selective reporting	Unclear risk	No registry entry or protocol mentioned
Other bias.		
Other sources of bias	High risk	Funding: Non-profit Allegiance: Comic book created by independent illustrator but reviewed by study authors. Contamination: Participants could have shared or discussed the study materials.
Note		

Bias	Review author judgement	Support for judgement
Selection bias		
Random sequence generation	Unclear risk	"Two similar classes in each school were randomly selected and assigned as the text group or the comic group"
Allocation concealment	Unclear risk	No details provided
Performance bias		
Blinding of participants and personnel (all outcomes)	High risk	No blinding
Detection bias		
Blinding of outcome assessment (all outcomes)	High risk	No blinding
Attrition bias		
Incomplete outcome data	Low risk	720 participants. Results shown for 697 participants. Losses a priori balanced, unlikely to meaningfully affect overall results.
Reporting bias.		
Selective reporting	Low risk	Replication of (Lin, 2015) with the same outcomes measured except [attitudes].
Other bias.		
Other sources of bias	High risk	Funding: Non-profit Allegiance: Comic book created by independent illustrator but reviewed by study authors. Contamination: Participants could have shared or discussed the study materials.
Note		

Bias	Review author judgement	Support for judgement
Selection bias		
Random sequence generation	High risk	"One region was randomly assigned to the photonovella..." Only two regions included in the study.
Allocation concealment	Unclear risk	Not reported
Performance bias		
Blinding of participants and personnel (all outcomes)	High risk	No blinding
Detection bias		
Blinding of outcome assessment (all outcomes)	Unclear risk	Not clear if study team handling fecal tests was blinded or could know from which group the tests came from
Attrition bias		
Incomplete outcome data	Unclear risk	No mentions of losses, exclusions, etc.
Reporting bias.		
Selective reporting	Unclear risk	No mention of registry entry or study protocol
Other bias.		
Other sources of bias	High risk	Funding: Unclear if non-profit Allegiance: Study authors did create the photonovella Contamination: Although the study materials were only distributed in distinct regions participants could have shared and discussed the study materials.
Note		

Bias	Review author judgement	Support for judgement
Selection bias		
Random sequence generation	Unclear risk	"210 patients randomized to the CARES condition and 206 patients randomized"
Allocation concealment	Unclear risk	Not reported
Performance bias		
Blinding of participants and personnel (all outcomes)	High risk	No blinding
Detection bias		
Blinding of outcome assessment (all outcomes)	Unclear risk	Not clear if study team handling fecal tests was blinded or could know from which group the tests came from
Attrition bias		
Incomplete outcome data	Unclear risk	No mentions of losses, exclusions, etc.
Reporting bias.		
Selective reporting	Unclear risk	ClinicalTrials registry entry mentioned but cannot be found. Replication of (Christy, 2016) with 1 additional outcome and 1 outcome not shown.
Other bias.		
Other sources of bias	High risk	Funding: Unclear if non-profit Allegiance: Study authors did create the photonovella Contamination: Participants could have shared and discussed the study materials.
Note		

Bias	Review author judgement	Support for judgement
Selection bias		
Random sequence generation	Unclear risk	“children were randomly assigned to one of two conditions”
Allocation concealment	Unclear risk	Not reported
Performance bias		
Blinding of participants and personnel (all outcomes)	High risk	No blinding
Detection bias		
Blinding of outcome assessment (all outcomes)	High risk	No blinding. Assessment of comprehension is inherently subjective.
Attrition bias		
Incomplete outcome data	Low risk	100 participants, results shown for 100 participants
Reporting bias.		
Selective reporting	Low risk	Questions and scoring similar as (Kotaman, 2017)
Other bias.		
Other sources of bias	High risk	Funding: Not reported Allegiance: Authors created the storybook. Contamination: Children were from the same classes and could have discussed the study materials.
Note		

Bias	Review author judgement	Support for judgement
Selection bias		
Random sequence generation	Unclear risk	"children were randomly assigned to one of two conditions"
Allocation concealment	Unclear risk	Not reported
Performance bias		
Blinding of participants and personnel (all outcomes)	High risk	No blinding
Detection bias		
Blinding of outcome assessment (all outcomes)	High risk	No blinding. Assessment of comprehension is inherently subjective.
Attrition bias		
Incomplete outcome data	Low risk	103 participants, results shown for 103 participants
Reporting bias.		
Selective reporting	Unclear risk	No registry entry or study protocol provided
Other bias.		
Other sources of bias	High risk	Funding: Not reported Allegiance: Authors created the storybook. Contamination: Children were from the same classes and could have discussed the study materials.
Note		

Bias	Review author judgement	Support for judgement
Selection bias		
Random sequence generation	Unclear risk	"were randomly assigned"
Allocation concealment	Unclear risk	Not reported
Performance bias		
Blinding of participants and personnel (all outcomes)	High risk	No blinding
Detection bias		
Blinding of outcome assessment (all outcomes)	Unclear risk	Audio-recordings could allow Blinding of outcome assessment (all outcomes), unclear if blinded due to lack of details
Attrition bias		
Incomplete outcome data	Low risk	51 children randomized, outcomes shown for 51 children
Reporting bias.		
Selective reporting	Unclear risk	No registry entry or study protocol provided
Other bias.		
Other sources of bias	High risk	Funding: Not reported Allegiance: Study authors created the story Contamination: "Children performed the tasks in individual sessions", it is unclear what this meant
Note		

Bias	Review author judgement	Support for judgement
Selection bias		
Random sequence generation	High risk	"A random number generator was used to select 40 blocks and within each block a street was selected randomly."... "For each block, 25 of each survey education treatment was distributed to houses in an alternating pattern"
Allocation concealment	Unclear risk	Not reported
Performance bias		
Blinding of participants and personnel (all outcomes)	High risk	No blinding
Detection bias		
Blinding of outcome assessment (all outcomes)	High risk	No blinding
Attrition bias		
Incomplete outcome data	High risk	Only about 9% of participants in either group answered the survey. Demographic data not shown but environmental attitudes suggest comparability.
Reporting bias.		
Selective reporting	Unclear risk	No registry entry or study protocol mentioned
Other bias.		
Other sources of bias	High risk	Funding: Not reported Allegiance: Author created the comic Contamination: People living in nearby blocks are likely to know each other and could have discussed the comic
Note		

Bias	Review author judgement	Support for judgement
Selection bias		
Random sequence generation	Low risk	“web-based experiment” “participants were randomly assigned”
Allocation concealment	Low risk	“web-based experiment”
Performance bias		
Blinding of participants and personnel (all outcomes)	High risk	No blinding
Detection bias		
Blinding of outcome assessment (all outcomes)	High risk	Self-assessments not blinded
Attrition bias		
Incomplete outcome data	Low risk	215 participants, 3 of which did not complete the survey
Reporting bias.		
Selective reporting	Unclear risk	No registry entry or protocol mentioned
Other bias.		
Other sources of bias	Low risk	Funding: Not reported Allegiance: Graphic novel not made by the study authors Contamination: Online experiment, low risk
Note		

Bias	Review author judgement	Support for judgement
Selection bias		
Random sequence generation	High risk	"were allocated randomly to each condition until the maximum number was reached" Ending up with 30 participants in each group would be unlikely, which suggests a few to some participants were allocated in a non-random fashion.
Allocation concealment	Unclear risk	No details provided
Performance bias		
Blinding of participants and personnel (all outcomes)	High risk	No blinding
Detection bias		
Blinding of outcome assessment (all outcomes)	High risk	No blinding
Attrition bias		
Incomplete outcome data	Low risk	90 participants, results shown for 90. Not clear if study authors aimed for 90 participants or if only 90 accepted.
Reporting bias.		
Selective reporting	Unclear risk	No registry entry or protocol mentioned
Other bias.		
Other sources of bias	High risk	Funding: Not reported Allegiance: Author made the comic Contamination: Participants read the comic in a room
Note		

Bias	Review author judgement	Support for judgement
Selection bias		
Random sequence generation	Unclear risk	"It was a random allocation" (Personal communications)
Allocation concealment	Unclear risk	Not reported
Performance bias		
Blinding of participants and personnel (all outcomes)	High risk	No blinding
Detection bias		
Blinding of outcome assessment (all outcomes)	High risk	No blinding
Attrition bias		
Incomplete outcome data	Low risk	90 participants, results narratively reported for 90 participants
Reporting bias.		
Selective reporting	Unclear risk	No registry entry or protocol mentioned
Other bias.		
Other sources of bias	High risk	Funding: Not reported Allegiance: Author made the comic Contamination: No details provided
Note		

Bias	Review author judgement	Support for judgement
Selection bias		
Random sequence generation	Unclear risk	"121 were randomly assigned"
Allocation concealment	Unclear risk	Not reported
Performance bias		
Blinding of participants and personnel (all outcomes)	High risk	"Neither the study participants nor the physician who described the procedure to both groups were blinded"
Detection bias		
Blinding of outcome assessment (all outcomes)	High risk	"Neither the study participants nor the physician who described the procedure to both groups were blinded"
Attrition bias		
Incomplete outcome data	Low risk	120 participants was the target sample size. 121 participants assigned to the interventions, results shown for all participants
Reporting bias.		
Selective reporting	Low risk	All outcomes mentioned in the study protocol are reported*
Other bias.		
Other sources of bias	Unclear risk	<p>Funding: Friede Springer Herz Stiftung (non-profit?)</p> <p>Allegiance: An external illustrator created the comic along with the study authors.</p> <p>Contamination: Participants could have shared or discussed the comics.</p>
Note		*Register/protocol details aren't sufficient (for instance there are no details on when the outcomes will be measured or how many questions the questionnaire includes)

Bias	Review author judgement	Support for judgement
Selection bias		
Random sequence generation	Unclear risk	"randomly assigned with simple randomization"
Allocation concealment	Unclear risk	Not reported
Performance bias		
Blinding of participants and personnel (all outcomes)	High risk	No blinding
Detection bias		
Blinding of outcome assessment (all outcomes)	High risk	No blinding
Attrition bias		
Incomplete outcome data	Low risk	Study protocol mentions 100 participants as target. 126 participants recruited, results shown for all participants.
Reporting bias.		
Selective reporting	Unclear risk	Outcomes in registry entry not specified in enough details to be able to tell if they were reported*
Other bias.		
Other sources of bias	Unclear risk	<p>Funding: Non-profit</p> <p>Allegiance: The study authors do not appear to be the authors of the photo story.</p> <p>Contamination: Participants could have shared or discussed the study materials.</p>
Note		*Details insufficient in the registry entry (for instance "Health literacy will be assessed by questions in a questionnaire")

Bias	Review author judgement	Support for judgement
Selection bias		
Random sequence generation	Unclear risk	“randomly assigned to control and experimental group”
Allocation concealment	Unclear risk	Not reported
Performance bias		
Blinding of participants and personnel (all outcomes)	High risk	No blinding
Detection bias		
Blinding of outcome assessment (all outcomes)	High risk	No blinding
Attrition bias		
Incomplete outcome data	Low risk	67 participants, results shown for all 67 participants.
Reporting bias.		
Selective reporting	Unclear risk	No registry entry or study protocol mentioned
Other bias.		
Other sources of bias	High risk	Funding: Not reported Allegiance: Study authors made the comic Contamination: Study methods not detailed enough to assess risk of contamination.
Note		Comparability of webcomics and text isn't clear

Bias	Review author judgement	Support for judgement
Selection bias		
Random sequence generation	Unclear risk	"were grouped in to control group after random assigning assigning."
Allocation concealment	Unclear risk	Not reported
Performance bias		
Blinding of participants and personnel (all outcomes)	High risk	No blinding
Detection bias		
Blinding of outcome assessment (all outcomes)	High risk	No blinding
Attrition bias		
Incomplete outcome data	Unclear risk	60 people invited to participate, results shown for 40 participants. How many people declined to participate, quit the study or were excluded is unclear.
Reporting bias.		
Selective reporting	Unclear risk	No protocol or registry entry mentioned
Other bias.		
Other sources of bias	High risk	Funding: Not reported Allegiance: Participants are friends and family members of the study author. The study author did not make the comics. Contamination: No details provided, participants could have discussed and shared the study materials
Note		

Bias	Review author judgement	Support for judgement
Selection bias		
Random sequence generation	Low risk	"the computer survey program generated a random number to indicate each respondent's experimental condition"
Allocation concealment	Unclear risk	Not reported
Performance bias		
Blinding of participants and personnel (all outcomes)	High risk	No blinding
Detection bias		
Blinding of outcome assessment (all outcomes)	High risk	No blinding
Attrition bias		
Incomplete outcome data	Low risk	403 participants. Losses of 19, 27 and 20 in the three groups (lost to follow-up). Losses balanced and too few to meaningfully modify results.
Reporting bias.		
Selective reporting	Unclear risk (general) High risk (Taking action outcome)	No study protocol or registry entry. "Taking action" outcome mentioned in methods but not reported in the article.
Other bias.		
Other sources of bias	High risk	Funding: Not reported Allegiance: The study authors contributed to the creation of the fotonovela. Contamination: No details provided, participants could have discussed and shared the study materials, particularly since they could come from the same building
Note		Cluster trial, no mention of clustering or ICC (?)

Bias	Review author judgement	Support for judgement
Selection bias		
Random sequence generation	Unclear risk	"Nine classes... were randomly assigned" with no further details
Allocation concealment	Unclear risk	No details provided
Performance bias		
Blinding of participants and personnel (all outcomes)	High risk	No blinding
Detection bias		
Blinding of outcome assessment (all outcomes)	High risk	No blinding
Attrition bias		
Incomplete outcome data	High risk	118 participants, 32 participants lost for unreported reasons. It is not clear in which group they were.
Reporting bias.		
Selective reporting	Unclear risk	No mention of study protocol or registry entry
Other bias.		
Other sources of bias	High risk	<p>Funding: Non-profit</p> <p>Allegiance: The study authors modified the storybook but did not make it.</p> <p>Contamination: Outcome assessors mentioned kohlrabi to the control (unexposed) group. Participants could have spoken about kohlrabi. The invitation letter may have mentioned kohlrabi.</p>
Note		

Bias	Review author judgement	Support for judgement
Selection bias		
Random sequence generation	Unclear risk	"... child was randomly assigned to either the experimental or control group." With no further details
Allocation concealment	Unclear risk	No details provided
Performance bias		
Blinding of participants and personnel (all outcomes)	High risk	No blinding
Detection bias		
Blinding of outcome assessment (all outcomes)	High risk	No blinding
Attrition bias		
Incomplete outcome data	Low risk	No mention of losses. Results reported for all 80 participants.
Reporting bias.		
Selective reporting	Unclear risk	No study protocol or registry entry mentioned
Other bias.		
Other sources of bias	High risk	Funding: Not reported Allegiance: The principal investigator is also the author of the storybook. She assessed the outcomes. Contamination: Participants could have shared or discussed the storybook.
Note		

Bias	Review author judgement	Support for judgement
Selection bias		
Random sequence generation	Unclear risk	“randomly assigned participants to one of two conditions” with no further details
Allocation concealment	Unclear risk	No details provided
Performance bias		
Blinding of participants and personnel (all outcomes)	High risk	No blinding of participants
Detection bias		
Blinding of outcome assessment (all outcomes)	Unclear risk	Coders “blinded”, no further details provided
Attrition bias		
Incomplete outcome data	Low risk	No mention of losses.
Reporting bias.		
Selective reporting	Unclear risk	No protocol or registry entry mentioned
Other bias.		
Other sources of bias	Unclear risk	Funding: Not reported Allegiance: Study author is not author of the comics used in the study Contamination: The study does not report if participants could share, discuss the study materials
Note		

Bias	Review author judgement	Support for judgement
Selection bias		
Random sequence generation	Low risk	"prepared the randomization sequence using Microsoft Excel 2003"
Allocation concealment	Unclear risk	"a series of consecutively labeled, sealed, opaque envelopes" despite these efforts the research nurses could have opened the envelopes and chosen assignments.
Performance bias		
Blinding of participants and personnel (all outcomes)	High risk	Participants were not told the study hypothesis or what the comparison intervention was but knew what they received Research nurses and emergency personnel were not blinded to the intervention
Detection bias		
Blinding of outcome assessment (all outcomes)	Unclear risk	Some of the outcome assessors had recruited participants and could therefore remember group assignment
Attrition bias		
Incomplete outcome data	Low risk	255 parents recruited. 232 parents left 3 days post-visit. Losses balanced between groups.
Reporting bias.		
Selective reporting	Unclear risk	No protocol or registry entry mentioned
Other bias.		
Other sources of bias	Unclear risk	Funding: Non-profit Allegiance: The study author did not create the stories but did revise these along with others. Contamination: Participants may have shared or discussed the study materials. Although the authors tried to mitigate this issue by increasing the sample size recruitment was far from the expected final sample. About 20% of participants in both groups read "additional materials".
Note		

Bias	Review author judgement	Support for judgement
Selection bias		
Random sequence generation	Unclear risk	"they were assigned randomly..." with no further details
Allocation concealment	Unclear risk	No details provided
Performance bias		
Blinding of participants and personnel (all outcomes)	High risk	No blinding
Detection bias		
Blinding of outcome assessment (all outcomes)	High risk	No blinding
Attrition bias		
Incomplete outcome data	Low risk	No losses reported.
Reporting bias.		
Selective reporting	Unclear risk	No protocol or registry entry mentioned
Other bias.		
Other sources of bias	High risk	Funding: Not reported. Allegiance: The study author likely contributed to the creation of the study materials Contamination: Participants could have shared and discussed the study materials.
Note		

Bias	Review author judgement	Support for judgement
Selection bias		
Random sequence generation	Unclear risk	"were assigned as the experimental and the control group in a random selection" with no further details
Allocation concealment	Unclear risk	No details provided
Performance bias		
Blinding of participants and personnel (all outcomes)	High risk	No blinding
Detection bias		
Blinding of outcome assessment (all outcomes)	High risk	No blinding
Attrition bias		
Incomplete outcome data	Low risk	No mention of losses. Results shown for all 91 students.
Reporting bias.		
Selective reporting	Unclear risk	No protocol or registry entry mentioned
Other bias.		
Other sources of bias	Unclear risk	Funding: Not reported Allegiance: It is not known if the author created the comics. Contamination: Students could have shared or discussed the study materials.
Note		

Bias	Review author judgement	Support for judgement
Selection bias		
Random sequence generation	Unclear risk	"assistants randomly assigned participants to one of two conditions" with no further details
Allocation concealment	Unclear risk	No details provided
Performance bias		
Blinding of participants and personnel (all outcomes)	High risk	No blinding
Detection bias		
Blinding of outcome assessment (all outcomes)	High risk	No blinding
Attrition bias		
Incomplete outcome data	Low risk	No mention of losses.
Reporting bias.		
Selective reporting	Unclear risk	No protocol or registry entry
Other bias.		
Other sources of bias	Unclear risk	Funding: Not reported Allegiance: Study author is not author of the comics used in the study Contamination: The study does not report if participants could share, discuss the study materials
Note		

Bias	Review author judgement	Support for judgement
Selection bias		
Random sequence generation		Not yet done (clarifications needed regarding the results)
Allocation concealment		
Performance bias		
Blinding of participants and personnel (all outcomes)		
Detection bias		
Blinding of outcome assessment (all outcomes)		
Attrition bias		
Incomplete outcome data		
Reporting bias.		
Selective reporting		
Other bias.		
Other sources of bias		Funding: Allegiance: Contamination:
Note		

Bias	Review author judgement	Support for judgement
Selection bias		
Random sequence generation	Unclear risk	"The classroom research was based on Lui's [sic] 2004 study" with no further details
Allocation concealment	Unclear risk	No details provided
Performance bias		
Blinding of participants and personnel (all outcomes)	High risk	No blinding
Detection bias		
Blinding of outcome assessment (all outcomes)	High risk	No blinding, highly subjective judgements by the study author
Attrition bias		
Incomplete outcome data	Low risk	No mention of losses.
Reporting bias.		
Selective reporting	Unclear risk	No protocol or registry entry mentioned
Other bias.		
Other sources of bias	Unclear risk	Funding: Not reported Allegiance: The study author shares the same name as the author of the comic and might be a family member. Contamination: It is not reported if the students could share and discuss the study materials but this would seem unlikely in the single classroom session involved in this research.
Note		

Bias	Review author judgement	Support for judgement
Selection bias		
Random sequence generation	Unclear risk	"pupils were randomly assigned" with no further details.
Allocation concealment	Unclear risk	No details provided
Performance bias		
Blinding of participants and personnel (all outcomes)	High risk	No blinding
Detection bias		
Blinding of outcome assessment (all outcomes)	High risk	No blinding, highly subjective outcomes
Attrition bias		
Incomplete outcome data	Low risk	No mention of losses
Reporting bias.		
Selective reporting	Unclear risk	No mention of protocol or registry entry
Other bias.		
Other sources of bias	High risk	<p>Funding: Not reported</p> <p>Allegiance: The study authors are not authors of the comics</p> <p>Contamination: Likely, children could have mistakenly chosen the wrong study materials, shared or discussed these.</p>
Note		

Bias	Review author judgement	Support for judgement
Selection bias		
Random sequence generation	Low risk	"in this online experiment were randomly assigned"
Allocation concealment	Low risk	Online experiment, allocation likely concealed
Performance bias		
Blinding of participants and personnel (all outcomes)	High risk	No blinding
Detection bias		
Blinding of outcome assessment (all outcomes)	High risk	No blinding
Attrition bias		
Incomplete outcome data	Low risk	915 participants. 65 participants excluded for being in the <10% bottom in terms of time spent reading. Results said to be similar with or without these exclusions.
Reporting bias.		
Selective reporting	Unclear risk	No protocol or registry entry mentioned
Other bias.		
Other sources of bias	High risk	<p>Funding: Non-profit</p> <p>Allegiance: The study authors are likely the authors of the cartoon.</p> <p>Contamination: Participants could have shared or discussed the study materials.</p>
Note		

Bias	Review author judgement	Support for judgement
Selection bias		
Random sequence generation	Unclear risk	"participants were randomly divided" with no further details
Allocation concealment	Unclear risk	No details provided
Performance bias		
Blinding of participants and personnel (all outcomes)	High risk	No blinding. The study author offered the intervention
Detection bias		
Blinding of outcome assessment (all outcomes)	High risk	No blinding
Attrition bias		
Incomplete outcome data	Low risk	5 participants excluded for attendance problems. Losses balanced (3 vs 2), small.
Reporting bias.		
Selective reporting	Unclear risk	No protocol or registry entry mentioned
Other bias.		
Other sources of bias	High risk	Funding: A priori non-profit Allegiance: The study author made the graphic novels. Contamination: Participants could have shared or discussed the study materials.
Note		

Bias	Review author judgement	Support for judgement
Selection bias		
Random sequence generation	Unclear risk	"were randomly assigned" with no further details
Allocation concealment	Unclear risk	No details provided
Performance bias		
Blinding of participants and personnel (all outcomes)	High risk	No blinding
Detection bias		
Blinding of outcome assessment (all outcomes)	High risk	No blinding
Attrition bias		
Incomplete outcome data	Low risk	2 students excluded from intervention group (one was absent and one did not submit data). 2 students excluded from control group (one absent, one withdrew).
Reporting bias.		
Selective reporting	Low risk	The consent forms describe the same methods and outcomes as those reported in the thesis
Other bias.		
Other sources of bias	High risk	<p>Funding: Profit & non-profit</p> <p>Allegiance: The study author did not make the comic books</p> <p>Contamination: Participants could have shared or discussed the comic books.</p> <p>Clustering: No mention of ICC or clustering</p>
Note		

Bias	Review author judgement	Support for judgement
Selection bias		
Random sequence generation	Unclear risk	"subjects were randomized" with no further details
Allocation concealment	Unclear risk	No details provided
Performance bias		
Blinding of participants and personnel (all outcomes)	Unclear risk	Children and parents: "neither the subjects...knew which group" but no further details provided. Dentist: The operator followed "standardized" instructions, but no details are provided on whether they were blinded and how.
Detection bias		
Blinding of outcome assessment (all outcomes)	Unclear risk	"triple blind", "neither the subjects, nor the individuals carrying out the measurements, nor the statistician knew which group..." but no details provided as for how blinding was maintained.
Attrition bias		
Incomplete outcome data	Low risk	Results shown for all 80 participants. No mention of losses.
Reporting bias.		
Selective reporting	Unclear risk	No mention of protocol or registry entry
Other bias.		
Other sources of bias	Unclear risk	Funding: Non-profit Allegiance: The study authors did not make the study materials Contamination: Parents could have discussed the study materials with other parents.
Note		

Bias	Review author judgement	Support for judgement
Selection bias		
Random sequence generation	Unclear risk	Study title says “randomized clinical trial” but no further details in the article or methods section
Allocation concealment	Unclear risk	No details provided
Performance bias		
Blinding of participants and personnel (all outcomes)	High risk	No blinding
Detection bias		
Blinding of outcome assessment (all outcomes)	High risk	No blinding
Attrition bias		
Incomplete outcome data	High risk	610 families participated in the study. “approximately 80% in both groups completed the questionnaire”. An unreported number of participants were excluded because they were not accompanied by their mothers. About 10% of questionnaires were not analyzed because they were incomplete.
Reporting bias.		
Selective reporting	Unclear risk	No protocol or registry entry mentioned
Other bias.		
Other sources of bias	High risk	Funding: Not reported Allegiance: The comic was made by members of the clinic where the authors work. Contamination: Participants could have shared or discussed the study materials.
Note		

Bias	Review author judgement	Support for judgement
Selection bias		
Random sequence generation	Unclear risk	"subjects were assigned randomly" with no further details.
Allocation concealment	Unclear risk	No details provided
Performance bias		
Blinding of participants and personnel (all outcomes)	High risk	No blinding
Detection bias		
Blinding of outcome assessment (all outcomes)	High risk	No blinding. Assessment by the study author
Attrition bias		
Incomplete outcome data	Low risk	20 subjects, results reported for 20 subjects with no mention of losses. The study design would make losses unlikely.
Reporting bias.		
Selective reporting	Unclear risk	No protocol or registry entry mentioned
Other bias.		
Other sources of bias	Unclear risk	Funding: Not reported Allegiance: 2 nd study author created the cartoons* Contamination: Participants were shown the cartoons individually but might have discussed the materials in-between sessions.
Note		*Considering the comparison involves shorter and longer cartoons it is not clear to me (VM) if the artist would actually be in favour of a specific group.

Bias	Review author judgement	Support for judgement
Selection bias		
Random sequence generation	Unclear risk	"were randomly assigned" with no further details
Allocation concealment	Unclear risk	No details provided
Performance bias		
Blinding of participants and personnel (all outcomes)	High risk	No blinding
Detection bias		
Blinding of outcome assessment (all outcomes)	Unclear risk	No details provided on whom assessed the outcomes and if there was any blinding
Attrition bias		
Incomplete outcome data	Low risk	No losses or exclusions reported
Reporting bias.		
Selective reporting	Unclear risk	No protocol or registry entry mentioned
Other bias.		
Other sources of bias	Unclear risk	<p>Funding: Non-profit</p> <p>Allegiance: The study authors did not create the comic, an external illustrator did.</p> <p>Contamination: No details provided. The children might have discussed the study materials.</p>
Note		

Bias	Review author judgement	Support for judgement
Selection bias		
Random sequence generation	Unclear risk	"randomly assigned" with no further details
Allocation concealment	Unclear risk	No details provided
Performance bias		
Blinding of participants and personnel (all outcomes)	High risk	No blinding
Detection bias		
Blinding of outcome assessment (all outcomes)	Unclear risk	It is not reported if outcome assessors were blinded or how
Attrition bias		
Incomplete outcome data	Low risk	No mention of losses or exclusions
Reporting bias.		
Selective reporting	Unclear risk	No protocol or registry entry mentioned
Other bias.		
Other sources of bias	High risk	Funding: Not reported Allegiance: The study author is author of the book assessed Contamination: Participants could have shared or discussed the study materials
Note		

Author, year

Bias	Review author judgement	Support for judgement
Selection bias		
Random sequence generation		
Allocation concealment		
Performance bias		
Blinding of participants and personnel (all outcomes)		
Detection bias		
Blinding of outcome assessment (all outcomes)		
Attrition bias		
Incomplete outcome data		
Reporting bias.		
Selective reporting		
Other bias.		
Other sources of bias		Funding: Allegiance: Contamination:
Note		

[\[Back to top\]](#)

Standardized emails sent to study authors

Emails sent in April 2018 -----

Dear Dr _____,

I am currently working on a rapid literature review (<https://osf.io/hmtkp/>) focusing on the effects of comics, as measured in randomized controlled trials. I would like to know if you are aware of other relevant randomized controlled trial, whether published or unpublished on this domain which you would suggest I consider.

I very much appreciate any assistance you could give me and would be happy to answer any questions you may have regarding this research.

Kind regards,

Martin Vuillème, comic strip artist

Note: The actual email sent differed slightly as it was sent to 40+ individuals at once

Emails sent on March 28, 2019 -----

Looking for further experimental studies involving comics

Dear _____,

I am compiling a list of experimental studies in which comics (or derivatives such as mangas, graphic novels, manhwas, webcomics, fotonovelas, bandes dessinées or fanzines) are given to participants (or groups) and their effects measured using at least one comparison group. My list focuses on studies where participants are allocated to the different groups using chance (randomised controlled trials).

I would very much appreciate any assistance you could give me to find other similar study reports I may have missed. Unpublished reports, ongoing studies, registry entries, reports published in the grey literature and thesis reports in any language are welcome.

You can find more information on my project on the Open Science Framework: <https://osf.io/hmtkp/>

Kind regards,

Martin Vuillème, citizen scientist [@ScienceofCookies](#)

Emails sent from May 9, 2019 to July 9, 2019 -----

Looking for further experimental studies involving comics

Dear _____,

I am working on a free register of experimental studies in which comics (or derivatives such as mangas, graphic novels, manhwas, webcomics, fotonovelas, bandes dessinées, fanzines, ...) are given to participants (or groups) and their effects measured using at least one comparison group. My register focuses on studies where participants are allocated to the different groups using chance (randomised controlled trials).

I would very much appreciate any assistance you could give me to find similar study reports not yet included in the attached list and which I may have missed. Unpublished reports, ongoing studies, registry entries, reports published in the grey literature, studies with “negative results” and thesis reports in any language are welcome.

You can find more information on the COLLECCTORS register on the Open Science Framework:
<https://osf.io/34n6j/files/>

Please do not reply to this email if you do not wish to be further contacted about this project.

Kind regards,
Martin Vuillème, citizen scientist [@ScienceofCookies](#)

Emails sent from July 11, 2019 to (current) -----

Looking for further experimental studies involving comics

Dear _____,

I am working on a free register of studies in which comics (or derivatives such as mangas, graphic novels, manhwas, webcomics, fotonovelas, bandes dessinées, fanzines, ...) are given to participants (or groups) and their effects measured using at least one comparison group. My register focuses on studies where participants are allocated to the different groups using chance (randomised controlled trials). Do note these are sometimes only called “experiments” or incorrectly called “quasi-experiments” in reports.

I would very much appreciate any assistance you could give me to find similar study reports not yet included in the attached list and which I may have missed. Unpublished reports, ongoing studies, registry entries, reports published in the grey literature, studies with “negative results” and theses in any language are welcome.

You can find more information on the COLLECCTORS register on the Open Science Framework:
<https://osf.io/34n6j/files/>

Please do not reply to this email if you do not wish to be further contacted about this project until at least a year has passed.

Kind regards,
Martin Vuillème, citizen scientist [@ScienceofCookies](#)

[\[Back to top\]](#)