To Be Empathetic or Not to Be: How Fiction vs. Nonfiction Reading Influences Empathy

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Abstract

This research examines whether empathy can be influenced by the belief that a text is fiction or nonfiction, as well as by the presentation of different types of discussion questions. Using the theory of fictional perception, it is hypothesized that individuals, who believe they are reading fiction and respond to engaging questions, will demonstrate higher empathy. One hundred and fifty-five participants were recruited via social media for this experiment. Participants were asked to read a text about a murder and respond to questions. There were 4 possible conditions to which participants could be randomly assigned, created by using all possible independent variable combinations: "Genre" (fiction, nonfiction) and "Question Type" (engaging, nonengaging). The story content was the same across groups, but participants were led to believe it was either a fictional story or a nonfictional report. The discussion questions either asked about participants' feelings or surface-level content. Empathy was measured on the Interpersonal Reactivity Index. The analysis showed no significant main or interaction effects of genre and question type on empathy. Future research should focus on understanding people's perceptions of fiction vs. nonfiction independent of narrative style in order to assess the real-world benefits of empathy as a result of fiction.

Keywords: Fiction, nonfiction, belief, engagement, empathy, theory of mind

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Why do we read fiction? Books like *Harry Potter* give us a way to escape reality; *Animal Farm* entertains us with a satirical commentary; and *Pride and Prejudice* shows us what being in love truly means. Fiction enables us to connect with characters in ways that are different from how we interact in real life: we are emotionally transported into stories to play out "what-if" scenarios (Traynor, 2019). Over the last decade, literary scholars and psychologists alike assert that reading fiction has significant impacts on readers and those around them. The mental journey people take when they read fiction and become invested in a story makes it possible for readers to change emotionally and improve their understanding of others (Matthijs & Veltkamp, 2013). Specifically, fiction readers have increased levels of empathy and improved Theory of Mind (ToM); skills helping them navigate the social world and improve their relationships. Researchers have tracked these emotional changes in the brain: while reading and listening to fiction, readers exhibit heightened brain activity associated with physical sensation and have greater changes in heartrate and fMRI-based activations (Oatley, 2016; Sleek, 2014).

Although some of my background research is grounded in philosophical models about imagination and truth, there exist psychologists scientifically investigating the effects of reading fiction on empathy (Mathies, 2019). In Keith Oatley's book summarizing the psychological effects of fiction (2011), one experiment found that the more fiction people read, the better they were at the Mind-in-the-Eyes test, considered a measure of empathy or ToM. These results held true when the researchers controlled for individual differences in personality traits across sample sizes of adults and children. To compare fiction and nonfiction readers, a Dutch study found that participants' empathy levels significantly increased 1 week after reading fictional murder mysteries compared to reading nonfiction newspaper texts (Matthijs & Veltkamp, 2013). Another

study assigned participants with differing levels of attachment to “art” and “control” conditions, where they read a story about an affair, expressed either stylistically or in the style of a courtroom account. The artistic qualities of the stylistic story caused greater emotional changes in high avoidantly-attached participants; a result of the empathy they felt for the characters in the story (Djikic et al., 2009). The central reason behind these emotional and social cognition changes was found to be the differences in narrative style between fiction and nonfiction texts. Readers more intimately engage with fictional characters from their surface-level textual features. For example, complication and exciting language makes villainous characters psychologically interesting to readers, giving a reason to why we often empathize with the enemy (Castano & Comer Kidd, 2016; Mar et al., 2019).

However, in this past research experimenters have portrayed fictional narratives as artistic and engaging, and nonfictional narratives as something “logico-scientific” that should not elicit emotion (Matthijs & Veltkamp, 2013). This operational definition creates an empathic bias towards fiction and this perception may predispose individuals to feel less empathy when reading nonfiction. Another theory why we might not feel the same emotional transportation while reading nonfiction is cognitive dissonance: individuals feel overwhelmed by world tragedies, which they cannot remedy and choose to distance themselves, resulting in lower empathy and a reduced willingness to help in the future. Additionally, when coming into contact with nonfiction, readers are primed with reduced attention and a lower empathic response because of their desensitization to news. (Green & Fitzgerald, 2017; Scharrer, 2008).

Raymond Mar attempted to reduce this priming bias to nonfiction by randomly assigning participants to read fiction and nonfiction texts from The New Yorker, a publication deemed to have similar narrative styles and perceptions across the two genres. He found that the fiction

group scored higher on tests of social reasoning and posited that people put themselves into a frame of mind of thinking about the social world before reading (Oatley, 2011). In other words, when we read fiction, we emotionally transport ourselves in the text, prepare to meet new characters, and attempt to understand lifestyles that may be different from our own. This translates into higher social awareness and empathic feelings. With this theory of fictional perception in mind, if we simply believe something to be fictious, regardless of the truth, will this influence our empathy? Mar's previous research motivated me to study participant perceptions of fiction vs. nonfiction reading on empathy.

Hypotheses

This literature review leads me to hypothesize that reading about an event that is *believed* to be fiction increases empathy more so than reading about an event that is believed to be non-fiction. The text that participants read will be exactly the same across both conditions, but the instructions will either introduce a fictitious story or a nonfiction report. The content must be plausible and engaging and examples include mysteries, murders, and love stories. To add an interactive element and incite interest in participants who are assigned to read nonfiction, I hypothesize that participating in engaging discussion questions after reading will increase empathy more so than participating in nonengaging discussion questions, regardless of whether a text is believed to be fictitious or not. More specifically, I predict there to be a main effect of genre, such that the empathic means of the fiction condition will be higher than the means of the nonfiction condition. I predict there to be a main effect of question type, such that the empathic means of the engaging questions condition will be higher than the means of the nonengaging questions condition. I also predict there to be an interaction effect, so that the type of questions will have a stronger effect on empathy for those in the fiction group than in the nonfiction group.

Overall, I believe my study is distinct enough from previous research because it focuses on the perceptions of fiction vs. nonfiction and how participants' beliefs influence empathy. Since there is no actual difference between the fiction and nonfiction text in the study, if the belief that the content is fictional significantly increases empathy, I will provide evidence that literary qualities of stories are not the sole reasons for empathic changes and will urge psychologists to investigate our primed perceptions of genre. If I do not find a significant difference in empathy between those who believe they are reading fiction and nonfiction, I will show some support for experiments focused on narrative style but will also advocate that future studies should portray fiction and nonfiction texts without any empathic biases.

Method

Participants

I recruited 302 people from around the world to participate in my study. My exclusion criteria included any responses that were not completed in full or failed the attention check. 85 responses were not completed in full and 65 responses failed the attention check question; all of these were removed from analysis. The sample size of this study was 155 participants (male= 54, female= 101). Participation in this study was completely voluntary and individuals were not compensated for their involvement. Recruitment occurred through social media, namely Facebook, Instagram, and LinkedIn. I also contacted individuals directly through email and text and many participants forwarded and re-shared my post to their own contacts. Participants were told that the online Qualtrics survey would ask them to read a text about a murder and respond to some questions; it would take approximately 10 minutes. The age of participants varied from 14 to 85 years old.

Design

My hypotheses are as follows: (1) individuals who believe they are reading fiction will demonstrate higher levels of empathy than those who believe they are reading nonfiction, and (2) individuals who participate in engaging questions after reading will demonstrate higher levels of empathy than those who participate in nonengaging questions after reading. The two independent variables include "Genre" (fiction vs. nonfiction) and "Question Type" (engaging questions vs. nonengaging questions). The dependant variable is "Empathy", defined as the reactions of an individual to the observed experiences of another (Davis, 1983). The study was administered online via Qualtrics. There were 4 conditions to which participants could be randomly assigned. This study was a between-subjects design and participants could not be assigned to more than 1 condition.

Materials

Materials needed for this study include the story content, discussion questions for both groups, and the empathy scale. I wrote the story about the murder and both sets of discussion questions. Empathy was measured by the Interpersonal Reactivity Index, or IRI (Davis, 1983). Empathy scores were calculated for each participant by scoring and summing their responses to the scale. Survey materials can be accessed in the *Appendix*.

Measures

Genre. Genre was measured by whichever instruction screen participants saw.

Question Type. Question Type was measured by whichever discussion questions participants engaged in. For example, engaging questions include: *How do you believe any of the witnesses felt when they were being questioned?* Nonengaging questions include: *Was the text written in first or third person?* See *Appendix* for the full questions in each condition.

Genre Attention Check. To ensure that participants believed what they read was either fiction or nonfiction, participants were asked: *Is the text you read a fictional or nonfictional account?* Those who did not answer correctly (that is, in accordance with whatever instructions and text they were fed), were excluded from the study.

Engagement Manipulation Check. Engagement was measured through a manipulation check crafted for this experiment. Participants rated their level of engagement to the text they read on a 7-point Likert scale ranging from *Very engaging* to *Very unengaging*. See *Appendix* for the full question.

Interpersonal Reactivity Index. Empathy was measured on a 28-item 5-point Likert scale ranging from A (Does not describe me very well) to E (Describes me very well). Items from this index include: "I daydream and fantasize, with some regularity, about things that might happen to me" and "Other people's misfortunes do not usually disturb me a great deal." 9 items were reserve scored. See *Appendix* for the full questions and scoring instructions.

Procedure

Upon launching the Qualtrics survey, participants read and signed a consent form. Next, participants were randomly assigned to 1 of 2 genre condition groups. The instructions differed for each condition and informed participants that they would either read a fictional story about a murder drawn from an anthology of "Classic Detective Stories," or a nonfiction account of a murder drawn from the "Westchester County" Crime and Incidents Police Report. The following screen had participants read the text about the murder and it repeated the corresponding fiction or nonfiction source at the bottom of the page. After reading– participants could proceed after spending at least 1 minute on this page– participants were randomly assigned to 1 of 2 question condition groups. They either participated in engaging questions that had them reflect on how the

characters in the story felt and any personal connections they might have had, or in nonengaging questions that were surface level and did not incite emotional reflection.

The next set of questions asked participants whether the text they read was fictional or nonfictional, their level of engagement, and for their age and gender identity. Here, the first question was used as an attention check to see whether or not participants could recall the instructions and believe the source. The second question was a manipulation check to see if those who participated in the engaging questions self-reported higher engagement than those fed the nonengaging questions. Then, participants were presented with the IRI and had to indicate how well 28 individual statements described them on a scale. To distract from the purpose of the study, participants were told their responses on this scale would be used to understand their attitudes towards criminal proceedings. Lastly, they were shown a debriefing statement, which revealed the true intentions of the study. Participants who were told that they read a nonfiction text were told that it was purely fiction.

Results

The goal of this study was to evaluate if people who believed that they were reading a fictional story and participated in engaging discussion questions, would demonstrate higher empathy than those who believed that they were reading nonfiction and participated in nonengaging discussion questions. I predicted there to be main and interaction effects of genre and question type on empathy.

Before any analyses were performed, I coded my variables of interest: Genre, Question Type, Condition, and Gender Identity. Additionally, I scored my Engagement Level Scale and the items on the IRI (9 were reverse scored). The Cumulative Empathy Score for each participant was calculated by summing each item. The highest possible score was 112 and recorded scores

ranged from 5 to 107. I ran a reliability analysis on this index to measure the internal consistency. The Cronbach's alpha was high (α= .89), indicating the IRI items are highly correlated with one another.

Next, I needed to check that my manipulation worked and that people who participated in the engaging questions were, on average, more engaged in the text than those who participated in the nonengaging questions. Since all participants rated their engagement level in the survey, I ran an independent samples t-test to see which groups' means were higher (engaging questions group vs. nonengaging questions groups on engagement level). The results showed a statistically significant difference between both groups' means. On average, participants who respond to engaging questions after reading (M= 1.12) show more overall engagement in the text than participants who respond to nonengaging questions after reading (M= 0.70), (t(153)= 2.05, p= .42).

Having shown a significant relationship between different types of discussion questions and engagement level, I conducted a factorial analysis of variance (ANOVA) to compare the main effects of genre and question type on empathy and the subsequent interaction effect. The ANOVA revealed no effects at the .05 significance level between the variables and was unable to support my research hypotheses. There was no main effect of genre: participants who believed they were reading fiction did not increase in empathy more so than participants who believed they were reading nonfiction (F(1, 234.79)= 1.47, p= .23). There was no main effect of question type: participants who answered engaging questions after reading did not increase in empathy more so than participants who answered nonengaging questions (F(1, 234.79)= 2.57, p= .11). Lastly, there was no significant interaction effect and I cannot conclude that the effect of genre on empathy depends on the type of question (F(1, 234.79)= 1.15, p= .29). However, regardless of

which genre condition the participant was assigned, the overall means of those who answered engaging questions were higher than the means of those who answered unengaging questions, suggesting that my data leans towards the predicted trend of the interaction effect (*Figure 1)*.

To investigate whether any simple effects were significant, I ran Tukey Post-Hoc analyses on my ANOVA data. The pair-wise comparisons showed no significant effects, implying that empathy levels between the means of each of the 4 conditions do not differ. For example, those in the fiction condition who read engaging questions did not have higher empathy levels than those in the nonfiction condition who read engaging questions (p= .11). Note that this Post-Hoc analysis did not run pair-wise comparisons between fiction & engaging questions and fiction & nonengaging questions, nor nonfiction & engaging questions and nonfiction & nonengaging questions; I ran an independent sample t-test analysis to calculate those effects. *Table 1* reports these pair-wise comparison means.

To assess the impact of my demographic data on empathy levels, I ran an independent samples t-test on gender and empathy levels. Analysis showed a significant effect of gender on empathy such that females (M= 68.08), on average, are more empathetic than males (M= 61.78), (t(153)= -2.45, p= .02). Since there were more females than males in my sample, I was uncertain if there was equal distribution of genders across the 4 conditions. I ran a Chi-Square Test of Independence between gender and condition and failed to reject the null hypothesis that the variables are independent X^2(3, N= 155) = 5.93, p= .12). Thus, I conclude that gender and condition *are* independent of each other and my t-test data remains significant. Lastly, I ran a correlation between age and empathy scores to show a significant, negative correlation between the two variables (r(153) = -.21, p= .01). As participants get older, they become less empathetic (*Figure 2*).

Discussion

You may still be questioning: why *do* we read fiction? Although my data analysis does not show significant support for my hypotheses that (1) reading something that is believed to be fiction increases empathy more so than reading something that is believed to be nonfiction, nor (2) that engaging questions increase empathy, the descriptive statistics show a trend that reading fiction improves empathy and, thus, has social benefits for those around readers. To summarize this supporting evidence, regardless of genre, the means of the participants who answered engaging questions were higher than the means of the participants who answered unengaging questions. Essentially, my data analyses do not show that empathy is influenced by the belief that a text is fiction or nonfiction, nor by the presentation of different types of discussion questions. Presenting nonfiction information as being fictional in newspapers or reports and asking engaging and personal questions of readers will not stir more empathy in these individuals.

In past studies, reading fiction and engaging with stories has been shown to increase empathy. Leading researchers Castano and Comer Kidd (2013) ran 5 experiments to show that reading literary fiction, as opposed to reading nonfiction or not reading at all, led to improved performance on affective and cognitive ToM tests. Oatley (2011) summarized the effects of many related studies and established that reading fiction increases empathy. He highlights Mar's theory that people extend more empathy after reading fiction because the fiction itself prompts readers to put themselves at the forefront of the lives and decisions of imaginary characters. Not only does this re-framing act yield higher self-reported empathy, but also enables us to become more critical readers, develop a stronger sense of self, and build more intimate relationships. Nonfiction has not been shown to cause empathic effects and the way researchers have previously operationalized the distinction between fiction and nonfiction is one potential cause.

My insignificant findings show that reading fiction or answering engaging questions does not prompt greater empathy than reading nonfiction or answering unengaging questions. Although I do not show statistically significant support for the theory of fictional perception, I am motivated by the existing literature that suggests otherwise. Again, the means of the empathy scores were highest for participants who read fiction and answered engaging questions. This implies a trend where people, who believe they are reading something fictional and engage in questions that ask for their personal opinions about the content, have greater levels of empathy. This finding is relevant for future research and have I more time and the ability to conduct this experiment in person, I would like to create manipulations with real-world implications. One meta-analysis of the psychological study of fiction found emotional effects as a result of reading fiction to be a small, statistically significant improvements. It specifically called for research to focus on whether or not these empathic transferred into real-world situations (Dodell-Feder & Tamir, 2018). Future studies should investigate whether or not participants in the fiction and engaging questions group demonstrate higher empathy scores in a simulated empathy activity than the nonfiction and unengaging questions group. In order to replicate this study with higher success, I have identified some limitations that may have impeded any significant results.

First, there were issues with the story content that participants read. Any responses that failed the attention check– that is, reported they were reading fiction when they were told the text was nonfiction and vice versa– were removed. However, there were at least 12 participants in my study, who were randomly assigned the nonfiction condition and passed the attention check, but believed they were reading fiction. Participants reached out via email to inform me of this. In other words, they followed the instructions, but their responses were influenced by their perception of the text being fictional. Thus, these participant's scores might have increased the

average empathy of the nonfiction group in general, making the differences in means between the fiction and the nonfiction group smaller and not significant. I believe the story could have been checked by more people who were unaware of my study before initiating the survey. I asked 3 colleagues to read the story, but told them it was fictional, thereby eliminating the ability to check my genre manipulation. Additionally, the story was fairly descriptive; future iterations should focus on balancing the narrative between fiction and a nonfiction police report to make it more believable.

Another limitation centered around the central theory of my study. Before reading fiction, people emotionally transport themselves into a story and prepare to connect and empathize with characters. This is thought to be an intentional process. However, participants in my study did not enter with the intention of reading something and reflecting upon it. Taking an online Qualtrics survey is not the same as unwinding with a good book, and this perception limits the experimental realism of my study. Although the reading activities were outlined in my consent form and instructions, I did not heavily stress the level the attention participants should pay to the text. Moreover, participants in psychology studies typically bypass consent forms and blindly click-through agreement forms (Bartlett & Plaut, 2012). Since participants approached the reading, especially the fiction text, without preparing themselves for emotional transportation, their subsequent empathy scores may have been reduced. This theory stemmed from Mar's experiment which operationalized fiction vs. nonfiction without an empathic bias; however, I recognize that most studies conclude that the narrative style and textual elements of fiction stories increases empathy. To more appropriately match my study to the former theory, I would stress the importance of taking the study in an environment where one would typically read and to pay closer attention to the content.

Lastly, I believe my manipulations for the question type conditions could have been stronger. An example of more robust manipulations could include 3 or more condition groups: for instance, no questions, nonengaging questions, and engaging questions. If this study were in person, individual vs. group discussion questions could influence empathy levels too; however, these manipulation changes will likely introduce procedural confounds. Overall, to make this manipulation stronger, I would like to see if the addition of any type of questions influences empathy.

Outside of my main hypotheses, I found statistically significant evidence that females and younger people are more empathetic than males and older people, respectively. Across countries, education levels, and socioeconomic groups, the study of gender differences in empathy confirms that females are more empathetic than males. One reason specific to this research is that women read more fiction than men. Therefore, women are more accustomed to translating social awareness skills from reading into empathy for others (Oatley, 2011). Introducing the construct of empathy to younger children, especially boys, and having them read more fiction, could help balance the gender differences. A 12-year longitudinal study found that older cohorts reported lower levels of empathy than younger cohorts, which aligns with my findings about age distributions (Grühn et al., 2008). This finding is relevant to those who wish to evoke empathy in others; for example, marketing departments in non-profit companies. Marketers can focus their efforts on advertising to younger generations, who are more likely to feel higher levels of empathy. My sample size was weighted towards young adult women (ages 14-34) and I would like to see if a more balanced demographic of age and gender still supports that younger cohorts and females are more empathetic.

Furthermore, participants who believed they were reading fiction and answered engaging questions had the highest means of all the groups. Participants in the engaging questions group were significantly more engaged in the text than participants in the unengaging questions group. The purpose of the different discussion questions in my study was to stimulate even more engagement with the text, have readers connect with the characters, and rouse empathy. Although I did not demonstrate increased empathy levels (the dependent variable of interest), I found that the engaging type questions made participants significantly more engaged or interested in the text. In academic settings, engaged forms of reading were found to improve comprehension, analytical, and self-awareness skills in young students. Just as previous fiction and empathy research has been used to improve ToM and emotional development with prisoners, my findings here show how academic and governmental institutions can use the relationship between discussion questions and engagement to develop teaching styles and curriculum materials (Castano & Comer Kidd, 2016; Johnston & Ivey, 2013).

We read fiction and engage with texts to increase empathy and develop our understanding of others in a complex social world. Previous research has concluded that nonfiction is unable to influence empathy in this way, even when it is presented to readers in a narrative form similar to that of fiction. Therefore, I sought to investigate further the perception of fiction vs. nonfiction on empathy by manipulating the beliefs of participants concerning what they were reading and what type of questions they were answering. My Qualtrics experiment did not provide statistically significant evidence that there are main or interaction effects of genre or type of question on empathy. By overcoming the limitations of my study, conducting more research into this fairly new field, and creating more believable survey materials, this experiment could

provide us with more information on the perceptions of fiction vs. nonfiction and types of discussion questions on empathy.

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Tables and Figures

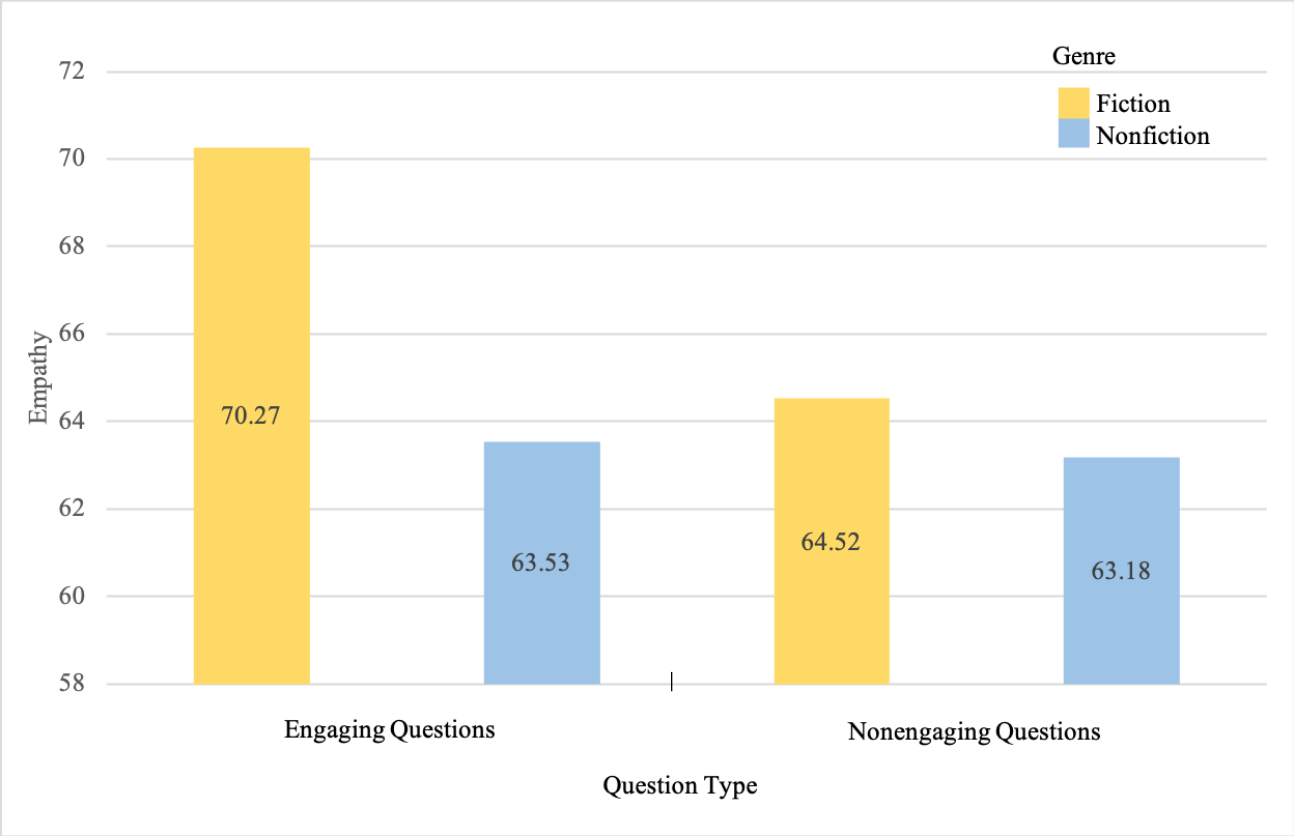
Table 1

Descriptive Statistics for Empathy

Genre	Question Type	Mean	Std Deviation	N
Fiction	Engaging	70.27	15.62	52
	Nonengaging	83.53	16.58	32
	Total	67.70	16.25	86
Nonfiction	Engaging	64.52	15.99	29
	Nonengaging	63.18	13.18	40
	Total	63.74	14.33	69

Figure 1

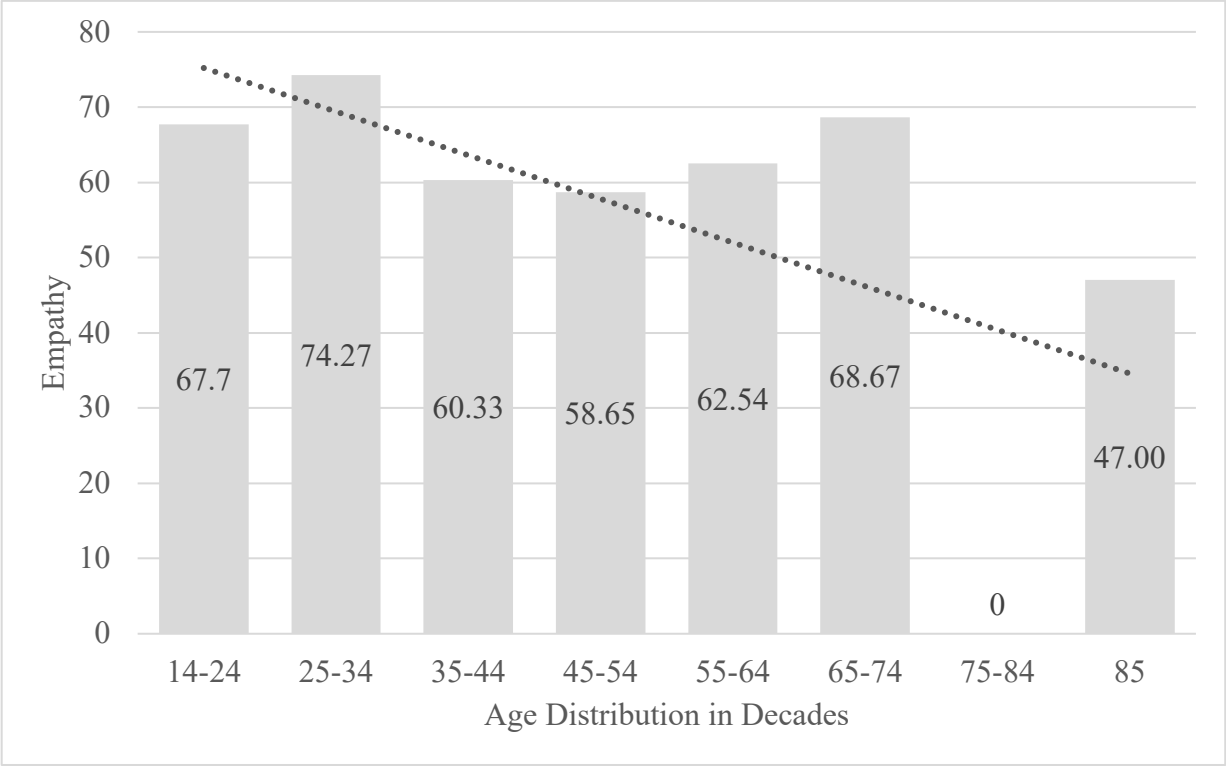
Marginal Means of Empathy per Condition



Note. Figure showing the marginal means of Empathy for each condition. The ANOVA showed no significant main effects of Genre or Question Type on Empathy.

Figure 2

Mean Empathy Scores of Age Distributions



Note. Graph showing the mean Empathy scores of age distributions in decades (age ranged from 14 to 85). Correlation between Age and Empathy shows a significant, negative correlation ($r(153) = -.21$, $p = .01$). As participants get older, they become less empathetic.

Appendix

SCENARIO

The 3 bodies were found at exactly 3:55 in the morning. When she saw the mangled mess of human limbs, Mrs. Dorothy Thatcher of 45 Westchester Bar screamed, alerting 4 neighbors and dropping her garbage bag. It tore open and spilled the contents of her fridge into the alley: chicken bones, bread, and empty bottles of alcohol.

The police took 13 minutes to arrive. At this point, the 4 neighbors, the bar owner, and 2 remnant customers were gathered around a petrified Dorothy. They watched an officer stretch yellow tape around the quivering glob of mass and bones. Arms and legs were slashed 50 times over. 3 open eyes screamed “help” as the police scanned the alley for any witnesses. The bodies were starting to decompose and smelt sickly-sweet, like rotting fruit. The floor, walls, and garbage cans were covered in blood.

Officers recorded the witness’ statements:

Dorothy Thatcher, female, 35: I was just closing up the bar… we didn’t hear anything at all, I promise; the music was playing loud.

Adyss Lee, female, 23: We were just leaving Westchester. Dorothy suddenly screamed and we ran out and saw everything. I haven’t seen anything like this before.

Kevin Lee, male, 21: I didn’t notice anything suspicious, no, I didn’t see anyone here before it got dark.

Andrew Gloucester, male, 49: The scream woke us up, that’s when we– me and Soph– saw the body, uh… bodies, on the ground from our window.

At 5 am, Inspector Carolyn Smith arrived and escorted the civilians into police cars for further questioning. Many remained fearful and peppered the officers with questions. The police closed the alleyway to unauthorized parties. Smith grimly approached the bodies and began the Westchester homicide investigation.

Story Source:
Westlake, D. E., & Davis, J. M. (1998). “Murderous Schemes: An Anthology of Classic Detective Stories.” Oxford University Press.

Report Source:
Westchester County Department of Public Safety, Crime and Incidents Report, 2012. Accessed via LexisNexis Police Reports.

QUESTIONS

Engaging Questions

1. What was Mrs. Dorothy Thatcher's reaction when she discovered the bodies?

   She was scared / She was indifferent / She was excited / She was angry / She was sad

2. Describe what you think might have happened to the bodies.

3. On the below scale, please rate how much you agree or disagree with the statement: I am afraid of blood

   Strongly agree / Agree / Somewhat agree / Neither agree nor disagree / Somewhat disagree / Disagree / Strongly disagree

4. How do you believe any of the witnesses felt when they were being questioned?

5. What are the pieces of evidence you believe the Inspector needs to continue on in the investigation?

Nonengaging Questions

1. Did you understand that the overall text was regarding a murder?

   Yes / No

2. What type of source was the text drawn from?

3. Approximately how long did it take you to read the entire text?

4. Was the test written in first or third person?

   First person / Third person / Neither

5. How many witness statements did the police take?

   1 / 2 / 3 / 4

MANIPULATION CHECK QUESTION – LEVEL OF ENGAGEMENT

1. How engaging did you find the text to be?

   Very engaging / Engaging / Somewhat engaging / Neither engaging nor unengaging / Somewhat unengaging / Unengaging / Very unengaging

INTERPERSONAL REACTIVITY INDEX

For each item, indicate how well it describes you by choosing the appropriate letter on the scale for each question: A, B, C, D, or E. Read each item carefully and please answer as honestly as you can.

A – DOES NOT DESCRIBE ME VERY WELL / B / C / D / E – DESCRIBES ME VERY WELL

1. I daydream and fantasize, with some regularity, about things that might happen to me.
2. I often have tender, concerned feelings for people less fortunate than me
3. I sometimes find it difficult to see things from the "other guy's" point of view. (-)
4. Sometimes I don't feel very sorry for other people when they are having problems. (-)
5. I really get involved with the feelings of the characters in a novel.
6. In emergency situations, I feel apprehensive and ill-at-ease.
7. I am usually objective when I watch a movie or play, and I don't often get completely caught up in it. (-)
8. I try to look at everybody's side of a disagreement before I make a decision.
9. When I see someone being taken advantage of, I feel kind of protective towards them.
10. I sometimes feel helpless when I am in the middle of a very emotional situation.
11. I sometimes try to understand my friends better by imagining how things look from their perspective.
12. Becoming extremely involved in a good book or movie is somewhat rare for me. (-)
13. When I see someone get hurt, I tend to remain calm. (-)
14. Other people's misfortunes do not usually disturb me a great deal. (-)
15. If I'm sure I'm right about something, I don't waste much time listening to other people's arguments. (-)
16. After seeing a play or movie, I have felt as though I were one of the characters.
17. Being in a tense emotional situation scares me.

18. When I see someone being treated unfairly, I sometimes don't feel very much pity for them. (-)

19. I am usually pretty effective in dealing with emergencies. (-)

20. I am often quite touched by things that I see happen.

21. I believe that there are two sides to every question and try to look at them both.

22. I would describe myself as a pretty soft-hearted person.

23. When I watch a good movie, I can very easily put myself in the place of a leading character.

24. I tend to lose control during emergencies.

25. When I'm upset at someone, I usually try to "put myself in his shoes" for a while.

26. When I am reading an interesting story or novel, I imagine how I would feel if the events in the story were happening to me.

27. When I see someone who badly needs help in an emergency, I go to pieces.

28. Before criticizing somebody, I try to imagine how I would feel if I were in their place.

SCORING DETAILS

A= 0
B= 1
C= 2
D= 3
E= 4

NOTE:(-) denotes item to be scored in reverse fashion

Reverse-scored items:

A= 4
B= 3
C= 2
D= 1
E= 0