When Fiction is Better than Reality:
The Influence of Reading Fictional Narrative on Empathy

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The fictional narrative is a form of literature often found in everyday life, such as in novels or short stories, comic strips in newspapers, and in poetry. Reading fictional literature has a positive effect, however previous research had not as yet shown any conclusive evidence that such reading increases empathy. This research was aimed at testing the influence of reading fictional narratives on empathy, mediated by narrative engagement. The method used in the research was an experimental one, with a pretest post-test control group design. 194 undergraduate students were actively involved as the research participants. The results of the analysis of data, using a Wilcoxon signed-rank test and a causal step approach indicated that reading a fictional narrative may significantly increase the empathy of the reader, and that the relationship of these two variables were partially mediated by narrative engagement. This research provided supportive data to the idea that fictional narratives may raise levels of empathy and that that influence is mediated by the variable of narrative engagement.

Keywords: fictional narrative, empathy, narrative engagement, experiment

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Reading is an activity conducted in order to understand a written text (*Badan Pengembangan dan Pembinaan Bahasa* - Institute for the Development and Improvement of Language, 2016), and the ability to read is an ability which it is important to develop, principally because it reflects of the level of education of an individual (National Endowment for the Arts, 2004). The ability to read is closely related to the level of literacy, particularly to reading literacy, which is the ability of an individual to understand, capitalize upon and reflect upon a written text in the course of achieving the goals, and developing the knowledge and talents of, an individual, as well as for his or her participation in society (Organization for Economic Cooperation and Development, 2006). However, the survey, 'The World's Most Literate Nations" by the Central Connecticut State University (2016), shows that Indonesia holds 60th position out of 61 nations in literacy. Indonesia has the second lowest level of literacy of all nations surveyed. This indicates that Indonesia needs to raise the level of the literacy of its population, because literacy ability is one of the conditions for par-

ticipating in, and contributing to, a democratic society (National Endowment for the Arts, 2004).

Previous research has found that one method which may be used to raise the level of literacy is by the introduction of a reading for pleasure, or reading according to one's desires, program (Boswell & Seegmiller, 2016; Paulson, 2006), which normally involves the reading of fictional narratives, or fictional literature (Nell, 1988). The fictional narrative is a narration having agents with intensity and autonomy, and who interact amongst each other (Mar & Oatley, 2008). The reading of fictional narratives, to this time, is still viewed by the public as being only a source of entertainment, according to Mar and Oatley (2008), whereas much research has proven the benefits of such reading.

Mar et al. (2006) discovered that the reading of fictional narratives is positively correlated with having social skills ($r = .34$, $p < .05$), whilst Mar et al. (2009) found that reading fictional narratives is also positively correlated with having empathy ($r = .21$, $p < .05$). Bal and Veltkamp (2013) conducted an experiment about the influence of reading fictional narratives on empathy. This research indicated that the reading of fictional narratives influenced empathy in a positive fashion ($\beta = 0.09$, $p < .05$).

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When it is linked to the fictional narrative genre of literature, to this time there has been no research which has concretely proven that the genre can influence empathy. Empathy is the ability of a person to comprehend and feel the emotional condition of another (Cohen & Strayer, 1996). Fong et al. (2013) discovered that the fictional literature genre is correlated to interpersonal sensitivity, however this cannot yet be applied with certainty to the variable of empathy. Experiments by Bal and Veltkamp (2013) used two different genres of fiction, i.e., those of mystery and tragedy, in two separate pieces of research. Bal and Veltkamp found that the influence of fictional literature on empathy was not limited by the literary genre. These afore-stated facts indicate that the activity of reading fictional narratives of various genres has positive benefits, particularly related to empathy.

The researchers are certain that fictional narratives can contribute to empathy. In theory, fictional narratives provide simulations of real-world social situations (Mar & Oatley, 2008). When a person reads fictional literature, they automatically implement a suspension of disbelief, i.e., ignores literary facts which are in contradiction with the facts in the real world (Coleridge, as cited in Goldstein, 2009), so that the reader may be immersed in the simulation evoked by the literature. The experience of being immersed, or "lost", in the literature is termed narrative engagement (Green & Brock, 2000), and is one of the factors influencing a change in the beliefs of a person after reading (Green & Brock, 2000).

Narrative engagement is the experience of being "lost" in a book, as a unique and organized mental process, a mixture of attention, feelings and imagery (Green & Brock, 2000; Nell, 1988). The reader who experiences great narrative engagement is more easily involved emotionally with the story, and also more easily identifies with the characters therein, so as to increase his or her ability as a perspective-taking reader, and in so doing raises their empathetic abilities. Perspective-taking is one of the components of empathy, according to Davis (1980), and is defined as the ability of a person to comprehend the perspective, or thinking pattern, of another. However, on the other hand, the reader who experiences low narrative engagement also experiences a reduction in empathy, because they cannot become involved in the story, or experiences dis-, which gives rise to feelings of frustration, distracting them from the story (Pelowski & Akiba, 2011). This causes an inability to empathize with the characters.

One of the pieces of research studying the relationship between reading fictional narratives and empathy mediated by narrative engagement is the experiment by Bal and Veltkamp (2013). This research indicated that the reader of a fictional story experienced an increase in empathy levels when emotionally carried into the story provided in that research (Bal & Veltkamp, 2013). Similar research was also performed to examine the influence of fictional literature on empathy (Ayu, 2017), however this research produced different results. This research indicated the experimental group and the control group both experienced an increase in empathy (Ayu, 2017). For this reason, the findings of research into the influence on empathy of reading fictional narratives are not as yet conclusive.

This present research was intended to perform a replication of the previous research (Bel & Veltkamp, 2013). The previous authors applied the advice concerning research, i.e., by limiting the quantity of fictional literature given to the participants, that is to just one type of literature only. Further, the literature given out had to include all sections, from the beginning to the conclusion, of the story. To answer the research question as to whether reading fictional narratives influences an increase in empathy, mediated by narrative engagement, the authors advanced two research hypotheses.

Hypothesis 1: Reading fictional narratives increases empathy.

Hypothesis 2: Narrative engagement plays a role as a mediator in relationships between reading fictional narratives and empathy.

Method

Research Design

Information concerning the research design is presented in Table 1. This research used the pretest post-test control group experiment design, with measurement made at three stages, i.e., Pretest, Post-test 1, and Post-test 2. Data collection was conducted at two stages, as may be seen in Figure 1.

In the first stage, the participants were requested to complete an online questionnaire, as a form of Pretest. In this Pretest, an informed consent form was included, explaining the flow of the experiment, the rights of the participants, such as the right to request information related to the experiment, as well as to withdraw from participation, and clarifying the confidentiality of the research data. After participants had

Table 1

Experiment Design

Group	Pretest	Treatment	Post-test 1	Post-test 2
Experimental	O1	X1	O2	O3
Control	O1	X2	O2	O3

Note.   X1 = *fiction*; X2 = *nonfiction*.

completed the questionnaires, they were divided into experimental groups and control groups, by random assignment. The participants in the experimental groups were given fictional literature, whilst those in the control groups were given nonfictional literature, to read. When they had finished reading, participants were asked to complete another online questionnaire, as their Post-test 1. The questions in this Post-test 1, for the experimental group and the control group, were different, because they were related to the content of the recently-read literature, as a form of manipulation control. As an example, the experimental group participants were given the question, "*Just who is Violet Evergarden?*", whilst the control group participants were given the question, "*What form of cancer has the highest number of sufferers?*". One week after the first stage, the participants were asked to complete a final online questionnaire, to complete Post-test 2. This time interval was in line with the experimental design by Bal and Veltkamp (2013).

Participants

The participants in this research were 194 in number, and were undergraduate students from various universities in Surabaya, East Java, Indonesia. 101 of the 194 participants were placed in the experimental group, whilst the other 93 were assigned to the control group. The majority of the participants were drawn from the various Faculties of Psychology (88.7%), and (75.3%) of all participants were female.

The Instruments

Reading material.   The experimental group participants were given fictional reading, in the form of the first chapter of a fiction novel, entitled, "Violet Evergarden", written by Akatsuki (2014). This excerpt was chosen because it tells of incidents experienced by the principle character, and thus gives the reader the opportunity to understand the viewpoint of this character, and helps the reader to become involved in the story. This novel also contains a complete story, from beginning to end, in each chapter, which fulfils the recommendation of the previous research. The first chapter, which was the reference for the authors, is the official version of the translation from English of the novel "Violet Evergarden", translated by the author into Indonesian. The reading contains 6,652 words, and takes between 20 and 30 minutes to read. The control group participants were given nonfiction reading, in the form of an article containing statistics of cancer sufferers, and tips to prevent cancer. This article was a collection of a number of different articles related to the same topic, and taken from an online news website. The length of the article was 2,790 words, and required 10 to 20 minutes to read.

Empathy.   This research utilized the Basic Empathy Scale, formulated by Jolliffe and Farrington (2006), to measure the level of empathy of the participants, at the times they completed their Pretest, Post-test 1, and Post-test 2 questionnaires. This measurement instrument comprises two dimensions, i.e., that of affective empathy, consisting of 11 items, and that of cognitive empathy, consisting of nine items, giving a total of 20 items. Affective empathy is defined as the ability to comprehend and to feel the emotions of others. An example of an item from the affective empathy dimension was, "*After being with a friend who is sad, I normally also become sad.*" On the other hand, cog-
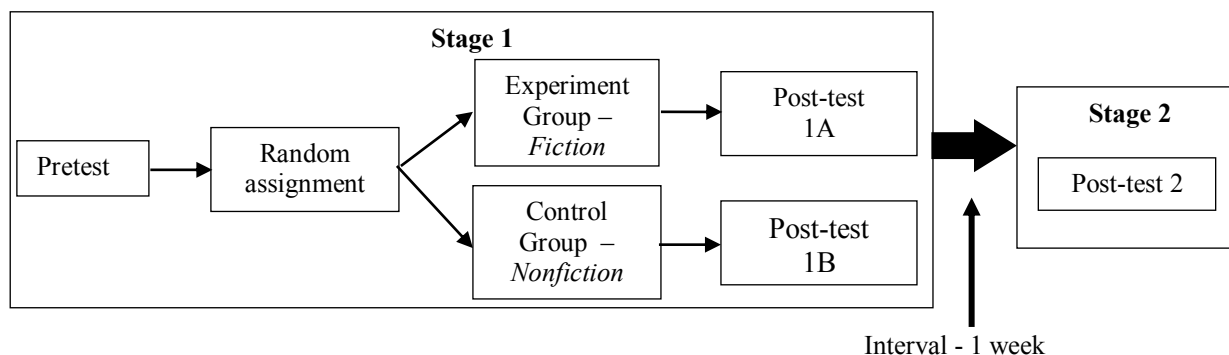
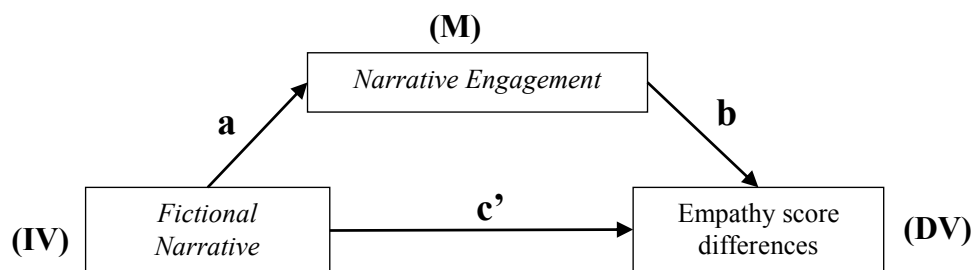

Figure 1. Flow of the experiment.

Figure 2. Regression model.

nitive empathy is the ability to understand the emotional condition of another. An example of an item from the dimension of cognitive empathy was, "*I can understand the joy of my friend, when he succeeds in doing something well.*" This measurement instrument has good reliability, with $\alpha = .82$ for the affective dimension, and $\alpha = .80$ for the cognitive dimension. This Basic Empathy Scale measurement instrument is completed using a Likert scale, of from "1 (*Greatly Disagree*)" to "6 (*Greatly Agree*)", with the total score obtained by adding up the scores of all 20 items.

Narrative engagement. This variable was measured at the time the participants completed Post-test 1, after they had read the reading material supplied. The research used the Narrative Engagement Scale, compiled by Busselle and Bilandzic (2009). This measurement instrument comprises four dimensions, three items on narrative understanding ($\alpha = .74$), three items on narrative presence ($\alpha = .64$), three items on attentional focus ($\alpha = .40$), and three items on emotional engagement ($\alpha = .67$). Examples of the items in this measurement instrument are, "*I could not really understand the character in the story.*", for the dimension of narrative understanding; "*When I was reading the story, I was actually thinking of other things.*", for the dimension of attentional focus; "*When I read the story, it was as if I had entered the world of that story.*", for the dimension of narrative presence; and, "*When the main character in the story was successful, I felt happy, and when they were suffering, I too felt sad.*", for the dimension of emotional engagement. This measurement instrument was completed using a Likert scale of "1 (*Greatly Disagree*)" to "6 (*Greatly Agree*)", with a score total obtained by adding all scores from the 12 items.

Data Analysis Method

Hypothesis 1. The first hypothesis was analyzed using the Wilcoxon signed-rank test, which is a nonparametric form of the paired sample t-test. The Wilcoxon signed-rank test was selected because the data from this research did not fulfil one of the test assumptions, i.e., homogeneity, meaning that these data were non-homogenous in character, thus needing a nonparametric test. The Wilcoxon signed-rank test was used to test the significance of the differences between the measurement results obtained at two different times, but on the same subject. The differences between the measurement results may be said to be significant if $p < .05$.

Hypothesis 2. The second hypothesis was tested with a mediator test, using a causal step approach (Baron & Kenny, 1986). According to the proposition made by Baron and Kenny (1986), a variable may be said to be a mediator variable, if it fulfils three conditions. Firstly, a free variable (IV) must influence a mediator variable (M) significantly. Secondly, a mediator variable (M) must also influence a tied variable (DV) significantly. Finally, a free variable (IV), with respect to a tied variable (DV), becomes insignificant after it controls a mediator variable (M). These three conditions may be tested using staged linear regression. This hypothesis was tested with the model supplied in Figure 2.

Results

Hypothesis 1

The first hypothesis of this research was that reading fictional narratives raises the level of empathy. The research data were analyzed with the Wilcoxon signed-rank test, with the results provided in Tables 2 and 3.

On the basis of Table 2, there is a significant difference between the levels of empathy in the Pretest and Post-test 1 scores from the experimental group, which was given fictional reading, whilst the empathy levels of the control group, which was given non-fictional reading, did not undergo a significant change. This meant that the experimental group experienced

significant changes in levels of empathy, whilst the control group did not. Table 3 shows whether these differences were positive or negative. In the experimental group, 64 of 101 participants had a higher Post-test 1 score than that of their Pretest, meaning that the majority of these participants experienced an increase in their scores of empathy. On the other hand, 48 of the 93 participants in the control group had a lower Post-test 1 score, compared with that of their Pretest, meaning that more than half of the control group experienced a lowering of their empathy scores. This difference was caused by there being a significant increase in the empathy scores of the participants who read the fiction, so it may be said that the first hypothesis may be accepted.

Hypothesis 2

The second hypothesis of the research was that narrative engagement plays a role as a mediator in the connection between reading fictional narratives and empathy. Testing of the mediator used the causal step approach, in accord with the regression model in Figure 2, and had the results provided in Table 4.

Table 4 shows that fictional reading significantly influences narrative engagement (R^2 = .590; p < .001; β = .348), whilst narrative engagement also significantly influences empathy scores (R^2 = .094; p < .001; β = .307). Finally, the influence, from reading fiction, on the differences between empathy scores, is not significant (β = .054, ns.) after controlling the variable of narrative engagement (β = .275, p <.001). The three conditions having thus been fulfilled, narrative engagement may be said to be a mediator variable to the influence on empathy of reading fictional narratives, so that the second hypothesis was accepted.

Discussion

The reading of fictional works, to date, has been considered as merely a form of entertainment, however this research was aimed at proving that one of the positive benefits of reading fiction was the raising of levels of empathy. The first hypothesis of the research was that reading fiction can raise levels of empathy. Analysis conducted with the Wilcoxon signed-rank test indicated that the group which read the fiction experienced a significant rise in empathy scores (p < .05), whilst the group which read nonfiction experienced an insignificant fall in empathy scores (p > .05). The results obtained in this research were in ac-

Table 2

Results of the Wilcoxon Signed-Rank Test

Measurement	Group	*Sig.*	Notes
Pretest to	Experimental	.002	Significant
Post-test 1	Control	.751	Not significant

Table 3

Average Results of Wilcoxon Signed-Rank Test

Measurement	Group	Total	Notes	Nos
			Pretest >Post-test 1	36
	E	101	Pretest <Post-test 1	64
Pretest -			Pretest =Post-test 1	1
Post-test 1			Pretest >Post-test 1	48
	C	93	Pretest <Post-test 1	44
			Pretest =Post-test 1	1

Table 4

Results of Mediator Testing on Experimental Group

Lane	IV – DV	R Square	*Sig.* ANOVA	Standardized Coefficient Beta	
a	FN – NE	.590	.000		.348***
b	NE – E	.094	.000		.307***
c'	FN & NE – E	.096	.000	FN:	.054
				NE:	.275***

Note. FN = Fictional Narrative; NE = Narrative Engagement; E = Difference in empathy scores; *** = $p \leq$ .001

cord with the research which was replicated (Bal & Veltkamp, 2013), which also discovered that the group which read fiction experienced an increase in empathy, whilst the group which read nonfiction experienced a reduction.

These changes in empathy were caused by the characteristics of fictional literature, i.e., interaction between the characters within it. As a concrete example, in the reading material "Violet Evergarden", which was used in the research, interaction between the characters Violet and Oscar constituted the simulation of a social situation which could occur in the real world, in line with the opinions expressed by Mar and Oatley (2008). Interaction between characters in a piece of reading material may give rise to a process of perspective-taking, which is a factor influencing the ability of a person to experience empathy (Argyle, 2017). This can explain why the experimental group, which read the fiction, experienced a rise in empathy.

Besides this, an interesting finding of this research was the reduction in the level of empathy of the control group, which read the article on the statistics of cancer sufferers. Something which may explain why the control group experienced a reduction in empathy

levels is the theory of psychic numbing (Slovic, 2007; 2020). Figures and statistics concerned with the victims of a natural disaster, or illness, can indeed encourage readers to "close the doors of their hearts" (Fogel, 2018). This is because humanity is not designed to be empathetic on a large scale, such as towards millions or billions of victims (Slovic, 2007; 2020), so that figures and statistics about numbers of victims may reduce empathy levels. The statistical data read by the participants of the control group, about the number of cancer sufferers, encouraged the members of that group to become unfeeling. Because of this, the control group, which read the nonfictional reading material containing statistics of cancer sufferers, had the potential to suffer a reduction in empathy.

The second hypothesis of this research, concerning narrative engagement as a mediator of the relationship between reading fictional narratives and empathy, was proven, accepting narrative engagement as the mediator variable. This was in line with the results of previous research (Bal & Veltkamp, 2013; Johnson, 2012) wherein it was also discovered that narrative engagement plays a role as a mediator. This was caused by the readers being 'swept away' in the literature, more easily identifying with the characters, and also being involved in the emotions felt by those characters (Oatley, 1999), so that they could more easily study the viewpoints of others, and increase their abilities at perspective-taking (Green & Brock, 2000).

In this research, there were several limitations needing to be improved for subsequent research. One of these was the difference in the lengths of the reading materials supplied to the participants. The fictional reading material was twice as long, compared to the nonfiction. This could have been a confounding variable, which influenced the research results, by causing cognitive fatigue (Jensen et al., 2013). However, what needs to become a consideration is that non-fiction reading material, particularly that containing figures and statistics, tends to give rise to a low level of narrative engagement, to the extent that there is a risk that the participants may not fully comprehend the material, owing to feelings of boredom or ennui. Subsequent research needs to consider the topics of the reading material given, so as to minimize that risk. Subsequent research also could use reading material written originally in a language and context understood by the research participants (in this case, Indonesian), and avoid material which has undergone the process of translation.

These matters aside, another limitation in this research was the use of the measurement instrument, the Narrative Engagement Scale, which was not entirely accurate. This measurement instrument was designed to measure the narrative engagement in fictional material, so that several items in it were appropriate, if used to measure narrative engagement in nonfictional reading material, in descriptive form. The authors recommend that subsequent research utilizes a narrative engagement measurement instrument designed to be used with nonfiction. One of the alternatives, which might be used, would be to measure the reading engagement, consisting of the enjoyment in reading, variety in the types of reading material, and the level of reading material online (Ho & Lau, 2018).

Another thing which formed a limitation to this research was the unrepresentative gender balance of the participants. This was caused by 75.3% of the participants being female, so there was an under-representation of males. Other limitations were the research not as yet being able to differentiate between the influences on empathy of narrative fictional and narrative factual reading, because it made comparisons between only narrative fictional and descriptive factual reading material. It is hoped that subsequent research will be able to clarify if there are differences caused by fictional/factual or writing style (narrative/descriptive) factors.

Conclusion

The conclusion from this research was that the reading of fictional material can increase the empathy of a person, and the relationship between the two stated variables is mediated by narrative engagement. This implies that the individual can increase their empathy by reading fiction, such as a novel, comic, or even a short story. This research was conceived owing to concern over the degree of literacy of Indonesian citizens, and the fact that there was a gap between the two previous pieces of research (Ayu, 2017; Bal & Vetkamp, 2013). The authors hope this research may support the awareness of the public of the need for a desire to read. This need for the desire to read is supported by the findings that the activity of reading carries many benefits, and that one of these is an increase in empathy, in line with the research by Bal and Veltkamp (2013).

When Fiction is Better than Reality:
Pengaruh Membaca *Fictional Narrative* terhadap Empati

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Fictional narrative merupakan jenis bacaan yang sering ditemui dalam kehidupan sehari-hari, seperti buku novel atau cerita pendek, komik panel di surat kabar, maupun puisi. Membaca bacaan fiktif membawa dampak positif, akan tetapi penelitian terdahulu belum menunjukkan bukti yang konklusif bahwa membaca bacaan fiktif meningkatkan kemampuan empati. Penelitian ini bertujuan untuk menguji pengaruh membaca *fictional narrative* terhadap empati dengan dimediasi oleh *narrative engagement*. Metode yang digunakan dalam penelitian ini adalah eksperimen dengan *pretest post-test control group design*. Terdapat 194 orang mahasiswa S1 aktif terlibat sebagai partisipan penelitian ini. Hasil analisis data dengan *Wilcoxon signed-rank test* dan *causal step approach* menunjukkan bahwa membaca *fictional narrative* dapat meningkatkan empati pembacanya secara signifikan, serta hubungan kedua variabel tersebut dimediasi secara parsial oleh *narrative engagement*. Penelitian ini menjadi dukungan data bahwa *fictional narrative* dapat meningkatkan empati serta pengaruh tersebut dimediasi variabel *narrative engagement*.

Kata kunci: *fiction narrative*, empati, *narrative engagement*, eksperimen

Kegiatan membaca adalah aktivitas yang dilakukan untuk memahami suatu teks tertulis (Badan Pengembangan dan Pembinaan Bahasa, 2016), dan kemampuan membaca merupakan kemampuan yang penting untuk dikembangkan, terutama dikarenakan kemampuan membaca merefleksikan tingkat pendidikan individu (National Endowment for the Arts, 2004). Kemampuan membaca berkaitan erat dengan tingkat literasi, secara khusus, dengan *reading literacy*, yang merupakan kemampuan individu untuk memahami, memanfaatkan, dan merefleksikan teks tertulis dalam rangka mencapai tujuan, mengembangkan pengetahuan dan bakat individu, serta berpartisipasi dalam masyarakat (Organization for Economic Cooperation and Development, 2006). Akan tetapi, survei '*The World's Most Literate Nations*'' oleh Central Connecticut State University (2016) menunjukkan Indonesia berada di peringkat 60 dari 61 negara. Indonesia memiliki tingkat literasi kedua terendah dibandingkan semua negara yang disurvei. Hal ini mengindikasikan bahwa Indonesia perlu meningkatkan tingkat literasi masyarakatnya karena kemampuan literasi merupakan salah satu syarat untuk berpartisipasi dan berkontribusi dalam masyarakat yang demokratis (National Endowment for the Arts, 2004).

Penelitian-penelitian terdahulu menemukan bahwa salah satu metode yang dapat digunakan untuk meningkatkan tingkat literasi adalah dengan melakukan *reading for pleasure* atau membaca sesuai minat (Boswell & Seegmiller, 2016; Paulson, 2006), yang biasanya melibatkan membaca *fictional narrative* atau literatur fiksi (Nell, 1988). *Fictional narrative* adalah narasi dengan agen-agen yang memiliki intensi dan otonomi, serta interaksi di antara mereka (Mar & Oatley, 2008). Membaca *fictional narrative* sampai saat ini masih dipandang oleh masyarakat hanya sebagai sumber hiburan saja, menurut Mar dan Oatley (2008), padahal banyak penelitian yang telah membuktikan manfaat positif dari membaca *fictional narrative*.

Mar et al. (2006) menemukan bahwa membaca *fictional narrative* berkorelasi positif dengan kemampuan sosial ($r = 0{,}34$, $p < 0{,}05$), sedangkan Mar et al. (2009) menemukan bahwa membaca *fictional narrative* juga berkorelasi positif dengan empati ($r = 0{,}21$, $p < 0{,}05$). Bal dan Veltkamp (2013) melakukan eksperimen mengenai pengaruh membaca *fiction narrative* terhadap empati. Penelitian tersebut menunjukkan bahwa membaca *fictional narrative* memengaruhi empati secara positif ($\beta = 0{,}09$, $p < 0{,}05$).

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Apabila dikaitkan dengan genre bacaan *fictional narrative*, sejauh ini belum ada penelitian yang membuktikan secara konkret bahwa genre bacaan dapat memengaruhi empati. Empati adalah kemampuan seseorang untuk memahami dan merasakan kondisi emosional orang lain (Cohen & Strayer, 1996). Fong et al. (2013) menemukan bahwa genre bacaan fiksi berkorelasi dengan *interpersonal sensitivity*, namun fakta tersebut belum tentu dapat diaplikasikan pada variabel empati. Penelitian eksperimen Bal dan Veltkamp (2013) menggunakan dua genre bacaan fiksi yang berbeda, yaitu genre misteri dan tragedi, dalam dua penelitian yang terpisah. Bal dan Veltkamp menemukan bahwa pengaruh bacaan fiksi terhadap empati tidak dibatasi oleh genre bacaan tersebut. Fakta-fakta yang telah dipaparkan menunjukkan bahwa kegiatan membaca *fictional narrative* dari berbagai genre memiliki banyak manfaat positif, terutama berkaitan dengan empati.

Penelitian ini meyakini bahwa *fictional narrative* dapat berkontribusi pada empati. Menurut teori, *fictional narrative* merupakan simulasi dari situasi sosial di dunia nyata (Mar & Oatley, 2008). Ketika seseorang membaca literatur fiksi, pembaca secara otomatis melakukan *suspension of disbelief*, yaitu mengabaikan fakta yang berkontradiksi dengan fakta di dunia nyata (Coleridge, sitat dalam Goldstein, 2009), sehingga pembaca dapat terlarut dalam simulasi yang dimunculkan bacaan tersebut. Pengalaman terlarut atau terhilang dalam bacaan tersebut diistilahkan sebagai *narrative engagement* (Green & Brock, 2000) serta merupakan salah satu faktor yang memengaruhi perubahan belief seseorang setelah membaca bacaan (Green & Brock, 2000).

Narrative engagement adalah pengalaman terhilang dalam buku sebagai proses mental yang unik dan tersusun dari campuran antara perhatian, perasaan, serta imagery (Green & Brock, 2000; Nell, 1988). Pembaca yang mengalami *narrative engagement* tinggi lebih mudah terlibat secara emosional dengan bacaan tersebut dan juga lebih mudah mengidentifikasi diri mereka dengan karakter dalam bacaan, sehingga meningkatkan kemampuan *perspective-taking* pembaca, dan dengan demikian meningkatkan kemampuan empati. *Perspective-taking* merupakan salah satu komponen empati menurut Davis (1980) dan didefinisikan sebagai kemampuan seseorang untuk memahami perspektif atau pola pikir orang lain. Namun di sisi lain, pembaca yang mengalami *narrative engagement* rendah mengalami penurunan empati karena pembaca tidak dapat terlibat dengan bacaan, atau mengalami *disengagement*, yang memunculkan rasa frustrasi yang mendistrak

pembaca dari bacaan (Pelowski & Akiba, 2011), dan dengan demikian menyebabkan pembaca tidak dapat berempati dengan karakter.

Salah satu penelitian yang mengkaji hubungan antara membaca *fictional narrative* dan empati yang dimediasi oleh *narrative engagement* adalah eksperimen Bal dan Vetkamp (2013). Penelitian tersebut menunjukkan bahwa pembaca cerita fiksi mengalami peningkatan empati apabila pembaca tersebut terbawa secara emosi ke dalam cerita yang disajikan pada riset tersebut (Bal & Vetkamp, 2013). Penelitian serupa juga dilakukan untuk menelusuri pengaruh bacaan fiksi terhadap empati (Ayu, 2017) namun penelitian tersebut menunjukkan hasil yang berbeda. Penelitian tersebut menunjukkan kelompok eksperimen dan kelompok pembanding sama-sama mengalami peningkatan empati (Ayu, 2017). Oleh karena itu, temuan penelitian tentang pengaruh membaca *fictional narrative* terhadap empati belum konklusif.

Penelitian ini hendak melakukan replikasi dari penelitian sebelumnya (Bel & Vetkamp, 2013). Penulis sebelumnya mengaplikasikan saran penelitian yaitu dengan membatasi jumlah bacaan fiksi yang diberikan kepada partisipan yaitu sejumlah satu jenis bacaan saja. Kemudian, bacaan yang diberikan harus mencakup bagian awal hingga akhir dari cerita tersebut. Untuk menjawab pertanyaan penelitian apakah membaca *fictional narrative* memengaruhi peningkatan empati dengan dimediasi oleh *narrative engagement*, penulis mengajukan dua hipotesis penelitian.

Hipotesis 1: Membaca *fictional narrative* meningkatkan empati.

Hipotesis 2: *Narrative engagement* berperan sebagai mediator dalam hubungan antara membaca *fictional narrative* dengan empati.

Metode

Desain Penelitian

Informasi mengenai desain penelitian tersedia di Tabel 1. Penelitian ini menggunakan *pretest post-test control group experiment design*, dengan tiga kali pengukuran yaitu *pretest*, *post-test* 1, dan *post-test* 2. Pengambilan data dilakukan dalam dua tahap, seperti terlihat dalam Gambar 1.

Pada tahap pertama, partisipan diminta mengisi kuesioner daring sebagai bentuk *pretest*. Dalam *pretest* tersebut juga disertakan *informed consent*

Tabel 1

Desain Eksperimen

Kelompok	*Pretest*	Perlakuan	*Post-test* 1	*Post-test* 2
Ekperimen	O1	X1	O2	O3
Kontrol	O1	X2	O2	O3

Keterangan. X1 = *fiction*; X2 = *nonfiction*.

yang menerangkan alur eksperimen, hak partisipan seperti meminta informasi terkait eksperimen maupun menolak keikutsertaan, dan kerahasiaan data penelitian. Setelah partisipan mengisi kuesioner, partisipan dibedakan menjadi kelompok eksperimen dan kelompok kontrol dengan *random assignment*. Partisipan dalam kelompok eksperimen diberi bacaan fiksi sementara partisipan dalam kelompok kontrol diberi bacaan nonfiksi. Ketika partisipan selesai membaca, partisipan diminta mengisi kuesioner daring lagi sebagai bentuk *post-test* 1. Pertanyaan dalam *post-test* 1 untuk kelompok eksperimen dan kelompok kontrol berbeda dikarenakan mengandung pertanyaan terkait konten bacaan yang telah dibaca sebagai bentuk kontrol manipulasi. Sebagai contoh, partisipan kelompok eksperimen mendapat pertanyaan "*Siapakah Violet Evergarden?*" sedangkan partisipan kelompok kontrol mendapat pertanyaan "*Jenis kanker mana yang memiliki jumlah penderita tertinggi?*" Satu minggu setelah tahap pertama, partisipan diminta mengisi kuesioner daring terakhir sebagai bentuk *post-test* 2. Jeda waktu tersebut sesuai dengan desain eksperimen Bal dan Veltkamp (2013).

Partisipan

Partisipan dalam penelitian ini berjumlah 194 orang dan merupakan mahasiswa S1 dari berbagai universitas di Surabaya. 101 dari 194 partisipan tersebut termasuk dalam kelompok eksperimen sedangkan 93

orang lainnya tergolong sebagai kelompok kontrol. Mayoritas partisipan berasal dari Fakultas Psikologi (88,7%) dan (75,3%) dari seluruh partisipan berjenis kelamin perempuan.

Instrumen

Materi Bacaan. Partisipan kelompok eksperimen diberi bacaan fiksi berupa bab pertama dari novel fiksi berjudul "Violet Evergarden" yang ditulis oleh Akatsuki (2014). Bacaan tersebut dipilih karena menceritakan peristiwa-peristiwa yang dialami oleh tokoh utama, dengan demikian memberi pembaca kesempatan untuk memahami sudut pandang tokoh tersebut dan membantu pembaca ikut terlibat dalam cerita. Novel ini juga memiliki cerita yang utuh dari awal hingga akhir di setiap bab sehingga memenuhi saran dari penelitian terdahulu. Bab pertama yang menjadi rujukan penulis merupakan versi resmi terjemahan Bahasa Inggris novel "Violet Evergarden" dan diterjemahkan oleh penulis ke dalam Bahasa Indonesia. Panjang bacaan tersebut adalah 6.652 kata dan membutuhkan waktu sekitar 20-30 menit untuk dibaca. Partisipan kelompok kontrol diberi bacaan nonfiksi berupa artikel berisi statistik penderita kanker dan tips-tips untuk mencegah penyakit kanker. Artikel tersebut merupakan gabungan dari beberapa artikel berbeda terkait topik yang sama dan diambil dari situs berita daring. Panjang bacaan ini adalah 2.790 kata dan membutuhkan waktu 10-20 menit untuk dibaca.

Empati. Penelitian ini menggunakan *Basic Empathy Scale* yang disusun oleh Jolliffe dan Farrington (2006) untuk mengukur tingkat empati partisipan saat *pretest*, *post-test* 1, dan *post-test* 2. Alat ukur ini terdiri dari dua dimensi, yaitu *affective empathy* yang memiliki 11 butir dan *cognitive empathy* yang memiliki sembilan butir, dengan total 20 butir. *Affective em-*
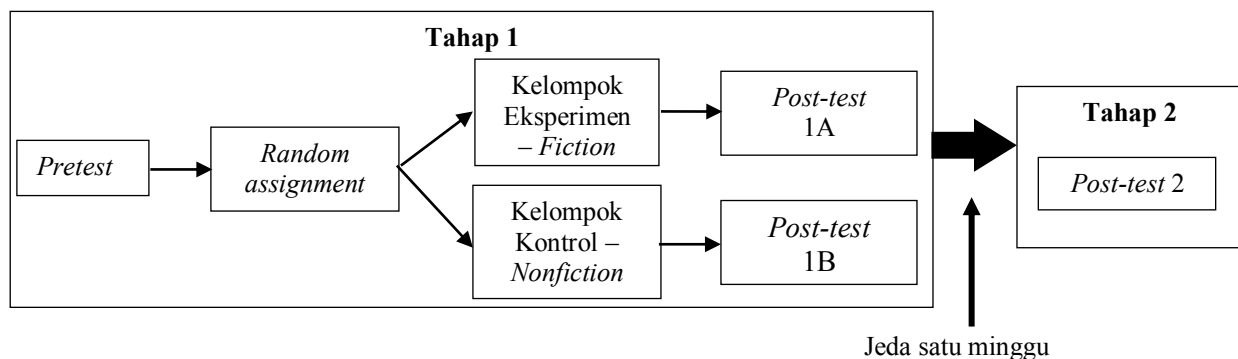
Gambar 1. Alur eksperimen.

(M)
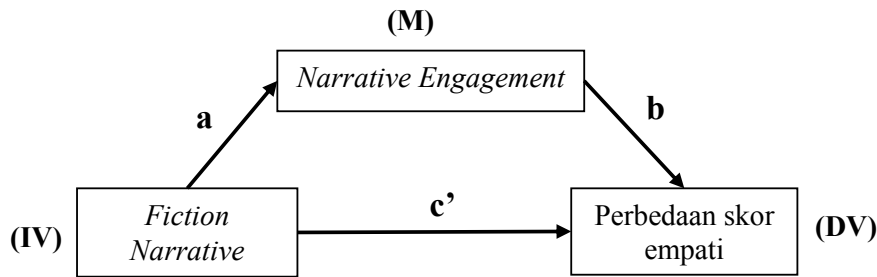
Gambar 2. Model regresi.

pathy didefinisikan sebagai kemampuan untuk mengenali dan merasakan emosi orang lain. Contoh butir dari dimensi *affective empathy* adalah "*Setelah bersama dengan teman yang sedang sedih, saya biasanya ikut menjadi sedih.*". Di sisi lain, *cognitive empathy* adalah kemampuan untuk memahami kondisi emosional orang lain. Contoh butir untuk dimensi *cognitive empathy* adalah "*Saya bisa memahami kebahagiaan teman saya ketika ia berhasil melakukan sesuatu dengan baik.*". Alat ukur ini memiliki reliabilitas yang baik, dengan $\alpha = 0{,}82$ untuk dimensi *affective* dan $\alpha = 0{,}80$ untuk dimensi *cognitive*. Alat ukur *Basic Empathy Scale* ini diisi menggunakan skala Likert "1 (*Sangat Tidak Setuju*)" – "6 (*Sangat Setuju*)", dengan total skor yang diperoleh dengan cara menjumlahkan skor dari 20 butir tersebut.

Narrative engagement. Variabel ini diukur saat *post-test* 1, setelah partisipan membaca bacaan yang diberikan. Penelitian ini memakai *Narrative Engagement Scale* yang disusun oleh Busselle dan Bilandzic (2009). Alat ukur ini terdiri dari empat dimensi, yaitu tiga butir *narrative understanding* ($\alpha = 0{,}74$), tiga butir *narrative presence* ($\alpha = 0{,}64$), tiga butir *attentional focus* ($\alpha = 0{,}40$), dan tiga butir *emotional engagement* ($\alpha = 0{,}67$). Contoh butir-butir dalam alat ukur ini adalah: "*Saya kurang dapat memahami tokoh dalam cerita tersebut.*" untuk dimensi *narrative understanding*."; "*Saat saya sedang membaca cerita tersebut, saya justru memikirkan hal yang lain.*" untuk dimensi *attentional focus*."; "*Ketika saya membaca sebuah cerita, saya seolah ikut masuk ke dalam dunia cerita tersebut, dan ketika selesai membaca, saya kembali ke dunia nyata.*" untuk dimensi *narrative presence*; dan "*Ketika tokoh utama dalam cerita mengalami keberhasilan, saya merasa senang, dan ketika tokoh utama tersebut menderita, saya turut merasa sedih.*" untuk dimensi *emotional engagement*. Alat ukur ini diisi menggunakan skala Likert "1 (*Sangat Tidak Setuju*)" – "6 (*Sangat Setuju*)", dengan total skor yang

diperoleh dengan cara menjumlahkan skor dari 12 butir tersebut.

Metode Analisis Data

Hipotesis 1. Hipotesis pertama dianalisa menggunakan *Wilcoxon signed-rank test* yang merupakan versi nonparametrik dari *paired sample t-test*. *Wilcoxon signed-rank test* dipilih karena data penelitian ini tidak memenuhi salah satu uji asumsi, yaitu uji homogenitas, yang berarti bahwa data ini bersifat tidak homogen sehingga diperlukan uji nonparametrik. *Wilcoxon signed-rank test* digunakan untuk menguji signifikansi perbedaan antar hasil pengukuran yang dilakukan di dua waktu yang berbeda, namun dengan subjek yang sama. Perbedaan antar hasil pengukuran dapat dikatakan signifikan apabila $p < 0{,}05$.

Hipotesis 2. Hipotesis kedua diuji dengan uji mediator menggunakan *causal step approach* (Baron & Kenny, 1986). Menurut usulan Baron dan Kenny (1986), suatu variabel dapat dikatakan sebagai variabel mediator apabila variabel tersebut memenuhi tiga syarat. Pertama, variabel bebas (*IV*) harus memengaruhi variabel mediator (*M*) secara signifikan. Kedua, variabel mediator (*M*) juga harus memengaruhi variabel terikat (*DV*) secara signifikan. Terakhir, pengaruh variabel bebas (*IV*) terhadap variabel terikat (*DV*) menjadi tidak signifikan setelah mengontrol variabel mediator (*M*). Ketiga syarat tersebut dapat diuji menggunakan regresi linear bertahap. Hipotesis ini diuji dengan model yang tersedia di Gambar 2.

Hasil

Hipotesis 1

Hipotesis pertama penelitian ini adalah membaca *fictional narrative* meningkatkan empati. Data pene-

litian ini dianalisis dengan *Wilcoxon signed-rank test* dengan hasil yang tersedia di Tabel 2 dan Tabel 3.

Berdasarkan Tabel 2, terdapat perbedaan yang signifikan antara tingkat empati pada skor *pretest* dan skor *post-test* 1 untuk kelompok eksperimen yang mendapat bacaan fiksi, sedangkan kelompok kontrol yang mendapat bacaan nonfiksi tidak mengalami perbedaan tingkat empati yang signifikan. Hal ini berarti kelompok eksperimen mengalami perubahan tingkat empati yang signifikan, sedangkan kelompok kontrol tidak mengalami perubahan tingkat empati yang signifikan. Tabel 3 menunjukkan apakah perubahan tersebut bersifat positif atau negatif. Pada kelompok eksperimen, 64 dari 101 partisipan memiliki skor *post-test* 1 yang lebih tinggi daripada skor *pretest*, yang berarti bahwa mayoritas partisipan kelompok eksperimen mengalami peningkatan skor empati. Di sisi lain, 48 dari 93 partisipan kelompok kontrol memiliki skor *post-test* 1 yang lebih rendah dibandingkan skor *pretest*, yang berarti bahwa lebih dari separuh kelompok kontrol mengalami penurunan skor empati. Dengan demikian, dikarenakan adanya peningkatan skor empati yang signifikan pada partisipan yang membaca bacaan fiksi, hipotesis pertama dapat diterima.

Tabel 2

Hasil Uji Wilcoxon Signed-Rank

Pengukuran	Kelompok	*Sig.*	Keterangan
Pretest –	Eksperimen	0,002	Signifikan
Post-test 1	Kontrol	0,751	Tidak Signifikan

Tabel 3

Hasil Rata-Rata Uji Wilcoxon Signed-Rank

Pengukuran	K*	Total N	Keterangan	N
Pretest – *Post-test* 1	E	101	*Pretest* > *Post-test* 1	36
			Pretest < *Post-test* 1	64
			Pretest = *Post-test* 1	1
	C	93	*Pretest* > *Post-test* 1	48
			Pretest < *Post-test* 1	44
			Pretest = *Post-test* 1	1

Keterangan. K* = Kelompok

Tabel 4

Hasil Uji Mediator pada Kelompok Eksperimen

Jalur	IV – DV	R Square	*Sig.* ANOVA	*Standardized Coefficient Beta*
a	FN – NE	0,590	0,000	0,348***
b	NE – E	0,094	0,000	0,307***
c'	FN & NE – E	0,096	0,000	FN: 0,054 NE: 0,275***

Keterangan. IV = *Independen Variable*; DV = *Dependent Variable*; FN = *Fictional Narrative*; NE = *Narrative Engagement*; E = *Difference in empathy scores*; *** = $p \leq 0{,}001$

Hipotesis 2

Hipotesis kedua penelitian ini adalah *narrative engagement* berperan sebagai mediator dalam hubungan antara membaca *fictional narrative* dengan empati. Pengujian mediator menggunakan *causal step approach* sesuai model regresi pada Gambar 2 dan memiliki hasil yang tersedia di Tabel 4.

Tabel 4 menunjukkan bahwa bacaan fiksi memengaruhi *narrative engagement* secara signifikan (R^2 = 0,590; $p < 0{,}001$; $\beta = 0{,}348$), sedangkan *narrative engagement* memengaruhi perbedaan skor empati juga secara signifikan ($R^2 = 0{,}094$; $p < 0{,}001$; $\beta = 0{,}307$). Terakhir, pengaruh bacaan fiksi terhadap perbedaan skor empati menjadi tidak signifikan ($\beta = 0{,}054$, ns.) setelah mengontrol variabel *narrative engagement* ($\beta = 0{,}275$, $p < 0{,}001$). Dengan terpenuhinya tiga syarat tersebut, *narrative engagement* dapat dikatakan sebagai variabel mediator untuk pengaruh membaca *fictional narrative* terhadap empati sehingga hipotesis kedua diterima.

Diskusi

Membaca bacaan fiksi selama ini dianggap hanya sebagai bentuk hiburan, namun penelitian ini bertujuan untuk membuktikan salah satu manfaat positif membaca bacaan fiksi, yaitu meningkatkan empati. Hipotesis pertama dari penelitian ini adalah membaca bacaan fiksi dapat meningkatkan empati. Analisis yang dilakukan dengan *Wilcoxon signed-rank test* menunjukkan bahwa kelompok yang membaca bacaan fiksi mengalami peningkatan skor empati yang signifikan ($p < 0{,}05$), sedangkan kelompok yang membaca bacaan non-fiksi mengalami penurunan skor empati yang tidak signifikan ($p > 0{,}05$). Hasil yang didapatkan pada penelitian ini sejalan dengan penelitian yang direplikasi (Bal & Veltkamp, 2013) yang juga menemukan bahwa kelompok yang membaca bacaan fiksi mengalami peningkatan empati, sedangkan kelompok yang membaca bacaan nonfiksi mengalami penurunan empati.

Perubahan tingkat empati ini dikarenakan adanya karakteristik yang dimiliki oleh bacaan fiksi, yaitu interaksi antarkarakter dalam bacaan. Secara konkret, dalam bacaan "Violet Evergarden" yang digunakan pada penelitian ini, interaksi antara tokoh Violet dan Oscar merupakan simulasi dari situasi sosial yang dapat terjadi di dunia nyata, sesuai dengan pendapat Mar dan Oatley (2008). Interaksi antarkarakter dalam bacaan dapat memunculkan proses *perspective-taking* yang merupakan faktor yang memengaruhi kemam-

puan empati seseorang (Argyle, 2017). Hal ini dapat menjelaskan mengapa kelompok eksperimen yang membaca bacaan fiksi mengalami peningkatan empati.

Di sisi lain, temuan menarik penelitian ini adalah penurunan tingkat empati kelompok kontrol yang membaca artikel statistik penderita kanker. Hal yang dapat menjelaskan mengapa kelompok kontrol mengalami penurunan empati adalah teori *psychic numbing* (Slovic, 2007; 2020). Angka dan statistik mengenai korban suatu bencana alam atau penyakit justru mendorong pembaca untuk "menutup pintu hati" mereka (Fogel, 2018). Hal ini dikarenakan manusia tidak didesain untuk berempati pada skala yang besar seperti pada jutaan atau miliaran korban (Slovic, 2007; 2020), sehingga angka dan statistik mengenai jumlah korban justru menurunkan empati seseorang. Data-data statistik yang dibaca oleh partisipan kelompok kontrol mengenai jumlah penderita kanker mendorong anggota di kelompok tersebut mengalami mati rasa. Oleh karena itu, kelompok kontrol yang membaca bacaan nonfiksi berisi statistik penderita kanker berpotensi mengalami penurunan empati.

Hipotesis kedua pada penelitian ini mengenai *narrative engagement* sebagai mediator pada hubungan antara membaca *fictional narrative* dan empati terbukti menerima *narrative engagement* sebagai variabel mediator. Hal ini sejalan dengan penelitian terdahulu (Bal & Veltkamp, 2013; Johnson, 2012) yang juga menemukan bahwa *narrative engagement* berperan sebagai mediator. Hal ini dikarenakan pembaca yang terlarut dalam bacaan lebih mudah mengidentifikasi diri dengan karakter dalam bacaan dan juga ikut terlibat dengan emosi yang dirasakan oleh karakter tersebut (Oatley, 1999), sehingga pembaca dapat mempelajari sudut pandang orang lain dengan lebih mudah dan meningkatkan kemampuan *perspective-taking* pembaca tersebut (Green & Brock, 2000).

Pada penelitian ini terdapat beberapa batasan yang perlu diperbaiki pada penelitian berikutnya. Salah satunya adalah perbedaan panjang bacaan dan konteks bacaan yang diberikan pada partisipan. Panjang bacaan fiksi dua kali lebih panjang dibandingkan panjang bacaan nonfiksi. Hal ini dapat menjadi *confounding variable* yang memengaruhi hasil penelitian berupa *cognitive fatigue* atau kelelahan kognitif (Jensen et al., 2013). Akan tetapi, hal yang perlu menjadi pertimbangan adalah bacaan nonfiksi, terutama yang berisi angka dan statistika, cenderung menimbulkan *narrative engagement* yang rendah sehingga terdapat risiko partisipan tidak sepenuhnya memahami bacaan dikarenakan rasa bosan atau jenuh. Penelitian berikutnya perlu mempertimbangkan topik bacaan dan gaya

penulisan bacaan yang diberikan agar meminimalkan risiko tersebut. Penelitian selanjutnya juga dapat menggunakan bahan bacaan yang sejak awal ditulis sesuai dengan bahasa dan konteks yang dipahami oleh partisipan penelitian (dalam hal ini Bahasa Indonesia), dan tidak menggunakan bacaan yang melalui proses penerjemahan.

Selain itu, keterbatasan lain dalam penelitian ini adalah penggunaan alat ukur *Narrative Engagement Scale* yang kurang tepat. Alat ukur tersebut didesain untuk mengukur *narrative engagement* pada bacaan fiksi, sehingga beberapa butir dalam alat ukur tersebut tidak cocok bila digunakan mengukur *narrative engagement* pada bacaan nonfiksi yang berupa eksposisi. Peneliti menyarankan agar penelitian berikutnya menggunakan alat ukur *narrative engagement* yang memang didesain untuk digunakan pada bacaan nonfiksi. Salah satu alternatif yang dapat digunakan adalah mengukur *reading engagement* yang terdiri dari kenikmatan selama membaca, keberagaman jenis bacaan, dan tingkat bacaan secara daring (Ho & Lau, 2018).

Hal lain yang juga merupakan batasan penelitian ini adalah jenis kelamin partisipan yang belum representatif. Hal ini dikarenakan 75,3% partisipan berjenis kelamin perempuan, sehingga kurang mewakili populasi berjenis kelamin laki-laki. Batasan lainnya adalah penelitian ini belum dapat membandingkan perbedaan pengaruh bacaan fiktif naratif dan faktual naratif terhadap empati, dikarenakan penelitian ini hanya membandingkan antara bacaan fiktif naratif dan faktual deskriptif. Diharapkan bahwa penelitian berikutnya dapat memperjelas apakah perubahan pada empati disebabkan oleh faktor fiksi/faktual atau faktor gaya penulisan (naratif/deskriptif).

Simpulan

Simpulan penelitian ini adalah membaca bacaan fiksi dapat meningkatkan empati seseorang, dan hubungan antara kedua variabel tersebut dimediasi oleh *narrative engagement*. Hal ini mengimplikasikan bahwa individu dapat meningkatkan empatinya dengan membaca bacaan fiksi seperti novel, komik, maupun cerita pendek. Penelitian ini lahir dari keprihatinan terkait tingkat literasi warga Indonesia serta adanya celah penelitian dari dua penelitian terdahulu (Ayu, 2017; Bal & Vetkamp, 2013). Penulis berharap penelitian ini mendorong kesadaran masyarakat untuk meningkatkan minat membaca. Minat untuk membaca ini didukung oleh temuan bahwa aktivitas membaca membawa banyak manfaat, dan salah satunya adalah peningkatan empati sesuai dengan riset Bal dan Vetkamp (2013).

References

Akatsuki, K. (2014). *Violet evergarden.* Kyoto Animation Co., Ltd.

Argyle, M. (2017). *Social interaction: Process and products* (2nd ed.). Routledge.

Ayu, A. (2017). Pengaruh membaca cerita fiksi pada peningkatan empati [Effects of reading fiction on increasing empathy] (Unpublished Bachelor's final research paper, Universitas Sanata Dharma). Repository Universitas Sanata Dharma Yogyakarta. https://repository.usd.ac.id/12981/

Badan Pengembangan dan Pembinaan Bahasa. (2016). *Membaca.* KBBI Daring.
https://kbbi.kemdikbud.go.id/entri/membaca

Bal, P. M., & Veltkamp, M. (2013). How does fiction reading influence empathy? An experimental investigation on the role of emotional transportation. *PLoS ONE*, *8*(1), e55341.
https://doi.org/10.1371/journal.pone.0055341

Baron, R. M., & Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*, 51(6), 1173-1182.
https://doi.org/10.1037/0022-3514.51.6.1173

Boswell, H. C., & Seegmiller, T. (2016). Reading fiction in biology class to enhance scientific literacy. *The American Biology Teacher*, *78*(8), 644-650.
https://doi.org/10.1525/abt.2016.78.8.644

Busselle, R., & Bilandzic, H. (2009). Measuring narrative engagement. *Media Psychology*, *12*(4), 321-347.
https://doi.org/10.1080/15213260903287259

Central Connecticut State University. (2016, March 7). World's most literate nations ranked (for release: March 9, 2016). Central Connecticut State University.
https://webcapp.ccsu.edu/?news=1767&data

Cohen, D., & Strayer, J. (1996). Empathy in conduct-disordered and comparison youth. *Developmental Psychology*, *32*(6), 988-998.
https://doi.org/10.1037/0012-1649.32.6.988

Davis, M. H. (1980). A multidimensional approach to individual differences in empathy. *Journal of Personality and Social Psychology/JSAS Catalog of Selected Documents in Psychology*, *10,* 85.
https://www.uv.es/~friasnav/Davis_1980.pdf

Fogel, S. J. (2018). The not-so-new normal. *Families in Society: The Journal of Contemporary Social Sciences*, *99*(2), 91-92.
https://doi.org/10.1177/1044389418773730

Fong, K., Mullin, J. B., & Mar, R. A. (2013). What you read matters: The role of fiction genre in predicting interpersonal sensitivity. *Psychology of Aesthetics, Creativity, and the Arts*, *7*(4), 370-376.
https://doi.org/10.1037/a0034084

Goldstein, T. R. (2009). The pleasure of unadulterated sadness: Experiencing sorrow in fiction, nonfiction, and "in Person". *Psychology of Aesthetics, Creativity, and the Arts*, *3*(4), 232-237.
https://doi.org/10.1037/a0015343

Green, M. C., & Brock, T. C. (2000). The role of transportation in the persuasiveness of public narratives. *Journal of Personality and Social Psychology*, *79*(5), 701-721.
https://doi.org/10.1037/0022-3514.79.5.701

Ho, E. S. C., & Lau, K. -L. (2018). Reading engagement and reading literacy performance: Effective policy and practices at home and in school. *Journal of Research in Reading*, *41*(4), 657-679.
https://doi.org/10.1111/1467-9817.12246

Jensen, J. L., Berry, D. A., & Kummer, T. A. (2013). Investigating the effects of exam length on performance and cognitive fatigue. *PLoS ONE*, *8*(8), e70270.
https://doi.org/10.1371/journal.pone.0070270

Johnson, D. R. (2012). Transportation into a story increases empathy, prosocial behavior, and perceptual bias toward fearful expressions. *Personality and Individual Differences*, *52*(2), 150-155.
https://doi.org/10.1016/j.paid.2011.10.005

Jolliffe, D., & Farrington, D. P. (2006). Development and validation of the Basic Empathy Scale. *Journal of Adolescence*, *29*(4), 589-611.
https://doi.org/10.1016/j.adolescence.2005.08.010

Mar, R. A., & Oatley, K. (2008). The function of fiction is the abstraction and simulation of social experience. *Perspectives on Psychological Science*, *3*(3), 173-192.
https://doi.org/10.1111/j.1745-6924.2008.00073.x

Mar, R. A., Oatley, K., & Peterson, J. B. (2009). Exploring the link between reading fiction and empathy: Ruling out individual differences and examining outcomes. *Communications*, 34, 407-428.
https://doi.org/10.1515/COMM.2009.025

Mar, R. A., Oatley, K., Hirsh, J., dela Paz, J., & Peterson, J. B. (2006). Bookworms versus nerds: Exposure to fiction versus non-fiction, divergent associations with social ability, and the simulation of fictional social worlds. *Journal of Research in Personality*, *40*(5), 694-712.

https://doi.org/10.1016/j.jrp.2005.08.002

National Endowment for the Arts. (2004). *Reading at risk: A survey of literary reading in America*. National Endowment for the Arts. https://www.arts.gov/publications/reading-risk-survey-literary-reading-america-0

Nell, V. (1988). The psychology of reading for pleasure: Needs and gratifications. *Reading Research Quarterly, 23*(1), 6-50. https://doi.org/10.2307/747903

Oatley, K. (1999). Why fiction may be twice as true as fact: Fiction as cognitive and emotional simulation. *Review of General Psychology*, *3*(2), 101-117. https://doi.org/10.1037/1089-2680.3.2.101

Organization for Economic Co-operation and Development. (2006). Assessing scientific, reading, and mathematical literacy: A framework for PISA 2006. OECD Publication. http://www.oecd.org/education/school/assessingscientificreadingandmathematicalliteracyaframeworkforpisa2006.htm

Paulson, E. J. (2006). Self-selected reading for enjoyment as a college developmental reading approach. *Journal of College Reading and Learning*, *36*(2), 51-58. https://doi.org/10.1080/10790195.2006.10850187

Pelowski, M., & Akiba, F. (2011). A model of art perception, evaluation, and emotion in transformative aesthetic experience. *New Ideas in Psychology*, *29*(2), 80-97. https://doi.org/10.1016/j.newideapsych.2010.04.001

Slovic, P. (2007). "If I look at the mass I will never act": Psychic numbing and genocide. *Judgment and Decision Making*, *2*(2), 79-95. http://journal.sjdm.org/jdm7303a.pdf

Slovic, P. (2020). The more who die, the less we care: Confronting the deadly arithmetic of compassion. *MDM Policy & Practice*, *5*(1), 1-9. https://doi.org/10.1177/2381468320914310