

# Empathy: Can it be shaped by Virtual or Literary Influences?

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## Abstract

This study explores the relationship between the tendency to relate to fictional characters and empathy levels in individuals aged 18–35. Empathy, a key social skill, includes perspective-taking, empathic concern, and personal distress, which are measured by the Interpersonal Reactivity Index (IRI) (Davis, 1980). The Fantasy subscale of the IRI assesses individuals' tendency to identify with fictional characters (Davis, 1983). Given the prominence of fictional media in this age group, the study aims to determine if stronger identification with fictional characters correlates with higher empathy, particularly in perspective-taking and empathic concern (Mar, Oatley, & Peterson, 2006; Kidd & Castano, 2013).

Using a mixed-method approach, the research combines quantitative analysis of IRI scores and qualitative assessment of participants' engagement with fictional content (Braun & Clarke, 2006). The independent variable is the Fantasy subscale of the IRI, while the dependent variables are the Perspective Taking, Empathic Concern, and Personal Distress subscales. The study hypothesizes a positive relationship between the Fantasy subscale and higher empathy levels (Bal & Veltkamp, 2013; Zaki, 2024). Expected outcomes include a significant positive correlation between participants' ability to relate to fictional characters and their empathy scores. This research may inform educational and therapeutic interventions aimed at enhancing empathy through media and narrative engagement (Turner & Linsley, 2019).

**Keywords:** Empathy, Interpersonal Reactivity Index (IRI), Fictional Narratives, Perspective-Taking, Emotional Engagement, Imaginative Transportation, Literary Media, Virtual Media, Mixed-Methods Research, Narrative Psychology, Empathic Concern, Emotional Regulation, Social Behavior, Narrative Immersion.

## INTRODUCTION

This study explores the potential impact of engaging with empathy-driven narratives, specifically within virtual and literary media, on individuals' interpersonal reactivity. As the role of storytelling continues to expand across various platforms—ranging from traditional books and films to more immersive mediums like virtual reality—understanding how narratives influence emotional and cognitive responses becomes crucial for both psychological research and societal development. Fictional narratives, whether in the form of books, movies, or virtual environments, offer unique platforms for individuals to engage emotionally and cognitively with fictional characters, often leading to heightened emotional responses,

including empathy. Given the profound potential for narratives to shape human understanding, this study focuses on the hypothesis that a strong tendency to relate to fictional characters may positively influence individuals' empathy levels.

Empathy, the ability to understand and share the feelings of others, has been widely studied in psychological research due to its importance in promoting social harmony and healthy interpersonal relationships (Davis, 1980). The evolution of digital and virtual media platforms has transformed the ways individuals interact with stories, characters, and emotional stimuli. These new modes of engagement, especially those facilitated by interactive and immersive media (such as virtual reality and gaming), offer enhanced emotional experiences, making them powerful tools for influencing cognitive and emotional processing, including empathy (Zaki, 2024). Previous research has suggested that narratives can significantly influence empathetic responses by providing opportunities for perspective-taking, emotional identification, and cognitive reflection (Kidd & Castano, 2013). However, there remains a gap in understanding the mechanisms that drive these empathetic responses, particularly in virtual and literary contexts (Mar, Oatley, & Peterson, 2006).

Studies have explored various aspects of how fictional narratives influence empathy. For example, Mar et al. (2006) suggested a positive correlation between reading fiction and increased empathy, with fictional narratives acting as vehicles for perspective-taking and emotional engagement. Similarly, Kidd and Castano (2013) found that reading literary fiction enhances the theory of mind, which is closely related to empathetic understanding. These studies focus primarily on the emotional and cognitive aspects of empathy, suggesting that engaging with characters in fictional narratives improves individuals' ability to understand and relate to the emotions of others in real life. Moreover, research by Bal and Veltkamp (2013) explored how emotional engagement with fictional characters can stimulate empathy-driven behaviors, specifically by inducing an empathetic response to characters' suffering. While much of the prior literature addresses the relationship between empathy and narrative engagement, there is less focus on the specific variables that may influence this relationship, such as the frequency of engagement with fiction, the type of media consumed, or the individual's personal traits that may impact empathy development (Turner & Linsley, 2019).

Despite the wealth of research suggesting a connection between narrative engagement and empathy, there is still limited understanding of the underlying psychological processes and how specific narrative features—such as empathy-driven content—impact individuals' interpersonal reactivity. Furthermore, existing studies often fail to comprehensively explore the relationship between an individual's tendency to relate to fictional characters (such as the Fantasy component of the Interpersonal Reactivity Index, or IRI) and their broader empathy levels, which encompass perspective-taking, empathetic concern, and personal distress. There is a clear gap in understanding how different forms of narrative engagement, particularly with empathy-driven narratives, influence various empathy dimensions, especially in the context of virtual media and interactive storytelling. This study attempts to fill this gap by quantitatively evaluating the relationship between individuals' ability to relate to fictional characters (measured through the Fantasy subset of the IRI) and their overall empathy levels, specifically in terms of perspective-taking, empathetic concern, and personal distress. By focusing on young adults aged 18–35, this research investigates a demographic that frequently engages with a variety of fictional media platforms, making them an ideal sample for examining empathy development through narrative engagement.

The study aims to answer the following key research questions: Does a strong tendency to relate to

fictional characters positively influence individuals' empathy levels, particularly in the dimensions of perspective-taking, empathic concern, and personal distress? How does imaginative engagement with fictional narratives influence interpersonal reactivity, specifically regarding the understanding and sharing of others' emotions? Are there significant differences in empathy levels between individuals who identify strongly with fictional characters compared to those who do not? To address these questions, the study uses the Fantasy subset of the IRI as the independent variable and examines the dependent variables—Perspective-Taking, Empathetic Concern, and Personal Distress—to assess the multifaceted nature of empathy in this context.

The study proposes the following hypotheses: Null Hypothesis ( $H_0$ ): There is no significant relationship between the tendency to relate to fictional characters (as measured by the Fantasy subset of the IRI) and the empathy levels of participants (as measured by the Perspective-Taking, Empathetic Concern, and Personal Distress subsets of the IRI). Alternative Hypothesis ( $H_1$ ): A strong tendency to relate to fictional characters positively influences empathy levels, leading to higher scores in Perspective-Taking, Empathetic Concern, and Personal Distress.

This study is grounded in Albert Bandura's (1986) social cognitive theory, which posits that learning occurs through observation, imitation, and interaction with one's environment. In the context of this study, fictional narratives serve as observational platforms where individuals witness and emotionally engage with the experiences of fictional characters. The study draws from four key constructs from the IRI: Fantasy (FS), Perspective-Taking (PT), Empathetic Concern (EC), and Personal Distress (PD). Fantasy engages with fictional characters and stimulates imaginative transposition, which is essential for empathy development. Perspective-Taking allows individuals to adopt the viewpoints of characters, enhancing the capacity to understand others' thoughts and feelings. Empathetic Concern involves emotional engagement with narratives, cultivating feelings of care and compassion for others, which is central to empathetic concern. Finally, Personal Distress captures the discomfort individuals feel when observing others' suffering in narratives, mirroring real-world empathetic responses.

The study hypothesizes that higher Fantasy (FS) scores, which measure the tendency to relate to fictional characters, will be positively correlated with higher Perspective-Taking (PT) and Empathetic Concern (EC) scores, and potentially with Personal Distress (PD) scores, reflecting a heightened capacity for empathy.

This study is crucial for several reasons. First, it provides empirical evidence to support the claim that engaging with fictional narratives, especially empathy-driven content, has significant emotional and cognitive effects on individuals (Zaki, 2024). As storytelling evolves, particularly in virtual and interactive spaces, understanding how narrative engagement fosters empathy is vital for improving interpersonal relationships and social cohesion. The findings of this study could have far-reaching implications, from promoting empathy education through literature and media in schools to fostering better interpersonal understanding in professional and social settings. Furthermore, this research has the potential to inform the design of interventions aimed at improving empathy through narrative experiences, especially in educational, therapeutic, and organizational contexts. By integrating these insights with existing psychological theories, such as Zaki's (2024) work on empathy and emotional regulation, this study contributes to the ongoing conversation about how empathy can be cultivated in individuals through storytelling. Finally, the study paves the way for exploring how emerging technologies, such as virtual reality and immersive media, can further enhance empathic responses and deepen our understanding of the transformative power of narrative engagement.

## RESEARCH PROBLEM

To explore if a strong tendency to relate to fictional characters positively influences individuals' empathy levels.

That is, to what extent does an individual's tendency to relate to fictional characters—particularly through imaginative engagement as measured by the Fantasy subscale of the Interpersonal Reactivity Index (IRI)—influence their levels of empathy, including perspective taking, empathetic concern, and personal distress?

Additionally, Does a strong tendency to relate to fictional characters—as measured by the Fantasy subscale of the Interpersonal Reactivity Index (IRI)—significantly influence empathy levels, specifically in terms of Perspective Taking, Empathic Concern, and Personal Distress, among young adults aged 18–35?

## Variables:

**Independent Variable:** Subjects' tendency to relate to fantastical characters (Fantasy subset of IRI).

**Dependent Variable:** Subjects' empathy levels (Perspective Taking, Empathetic Concern, Personal Distress subsets of IRI).

## Hypothesis:

**Null Hypothesis ( $H_0$ ):** There is no significant relationship between the tendency to relate to fictional characters and empathy levels.

**Alternative Hypothesis ( $H_1$ ):** A strong tendency to relate to fictional characters positively influences empathy levels.

## OBJECTIVES

**Objective 1:** *To examine whether individuals who frequently relate to fictional characters exhibit higher levels of empathy.*

This objective aims to investigate the potential influence of imaginative engagement with fictional characters on an individual's capacity for empathy. By focusing on how frequently and deeply individuals immerse themselves in fictional narratives and relate to the characters within them, the study explores whether such interactions can translate into enhanced empathetic dispositions in real-life scenarios.

**Objective 2:** *To analyze the relationship between the Fantasy subscale of the Interpersonal Reactivity Index (IRI) and the other empathy-related subscales: Perspective Taking, Empathetic Concern, and Personal Distress.*

This objective seeks to quantitatively assess the correlations between the Fantasy subscale—which measures the tendency to imaginatively transpose oneself into fictional situations—and the three other subscales of empathy. By analyzing these relationships, the study intends to identify which dimensions of empathy, if any, are significantly associated with fantasy engagement.

***Objective 3: To determine if a stronger inclination toward engaging with fictional characters correlates with more developed empathic abilities.***

This objective focuses on evaluating whether a high tendency to engage with and emotionally invest in fictional characters is predictive of a well-developed empathetic profile. The research examines whether individuals who demonstrate a strong identification with or emotional responsiveness to fictional characters also show higher levels of perspective-taking, emotional concern for others, or distress in response to others' suffering.

***Objective 4: To test the validity of the hypothesis that a strong emotional connection with fictional characters can enhance real-world empathic responses.***

This objective addresses the overarching research hypothesis by empirically testing the extent to which fantasy-based identification or engagement serves as a mechanism for fostering empathy in real-world social contexts. It explores whether the cognitive and emotional experiences gained through fictional immersion are transferable to real-life social understanding and prosocial behavior.

## REVIEW OF LITERATURE

### THEORETICAL FRAMEWORK

The theoretical framework for this study is primarily grounded in social cognitive theory (Bandura, 1986), which asserts that individuals learn by observing and interacting with their environment, often through vicarious experiences. This learning process is not limited to observable behaviors but also includes emotional and cognitive responses. In the context of this study, fictional narratives serve as observational platforms through which individuals can vicariously experience emotional and interpersonal situations. These narratives allow individuals to engage with characters' emotions, perspectives, and social contexts, thereby stimulating imaginative engagement and contributing to empathy development.

Fantasy refers to the tendency of individuals to immerse themselves emotionally and cognitively in fictional narratives and to relate to fictional characters. Imaginative engagement, or fantasy, is crucial because it allows for the transposition of one's own emotions onto the fictional characters, fostering emotional resonance. This is a key foundation of empathy, as it enables the development of emotional connections with others (Davis, 1980). In operational terms, Fantasy will be measured using the Imaginative Engagement Scale, which gauges how strongly a participant identifies with and emotionally connects to fictional characters and events.

Perspective-taking involves the ability to adopt another person's viewpoint, which enhances the understanding of their emotions, thoughts, and experiences (Davis, 1980). This construct plays a central role in the development of empathy, as understanding others' feelings is a core component of empathetic responses. In this study, Perspective Taking will be measured through the Interpersonal Reactivity Index (IRI), specifically the Perspective-Taking subscale, which evaluates the participant's ability to recognize and understand the perspectives of others. We hypothesize that higher levels of imaginative engagement (Fantasy) will lead to stronger perspective-taking abilities, as individuals who engage deeply with fictional characters are likely to develop a greater capacity to understand others' viewpoints.

Empathetic concern is defined as the ability to experience compassion and care for others, particularly those who are suffering (Davis, 1980). Exposure to emotionally engaging narratives is expected to elicit strong feelings of empathy and compassion, critical aspects of empathic concern. Fictional narratives



that depict emotional struggles or moral dilemmas are likely to evoke empathetic responses from readers or viewers, leading to an increased sense of compassion for others. This construct will also be measured using the Empathic Concern subscale of the IRI, which evaluates the participant's emotional reactions to the suffering of others. We anticipate that participants with higher Fantasy scores will show greater Empathetic Concern, as their emotional engagement with fictional characters may promote a sense of compassion toward real-world individuals.

Personal distress refers to the self-oriented emotional discomfort experienced when witnessing others' suffering (Davis, 1980). While empathic concern involves concern for others' wellbeing, personal distress is a more egocentric emotional response, where individuals may feel overwhelmed by others' pain without necessarily offering help. This construct is important because it reflects a potential negative emotional side of empathy, which could inhibit prosocial behavior. In this study, Personal Distress will be assessed using the Personal Distress subscale of the IRI, which evaluates emotional discomfort and anxiety in response to others' distress. We hypothesize that Fantasy may also be positively correlated with Personal Distress, as greater emotional engagement with fictional characters could lead to stronger emotional responses to suffering.

The hypothesized model for this study proposes that higher Fantasy scores will positively correlate with higher scores on Perspective Taking and Empathetic Concern, indicating that greater emotional and cognitive engagement with fictional characters is associated with stronger abilities to empathize with others. We further hypothesize that Fantasy may also be correlated with Personal Distress, reflecting the emotional discomfort that some individuals experience when they emotionally engage with the suffering of others, whether in fiction or real life. Higher Fantasy scores are predicted to be positively correlated with Perspective-Taking and Empathetic Concern, as well as potentially with Personal Distress, highlighting how fictional narratives influence both the cognitive and emotional aspects of empathy.

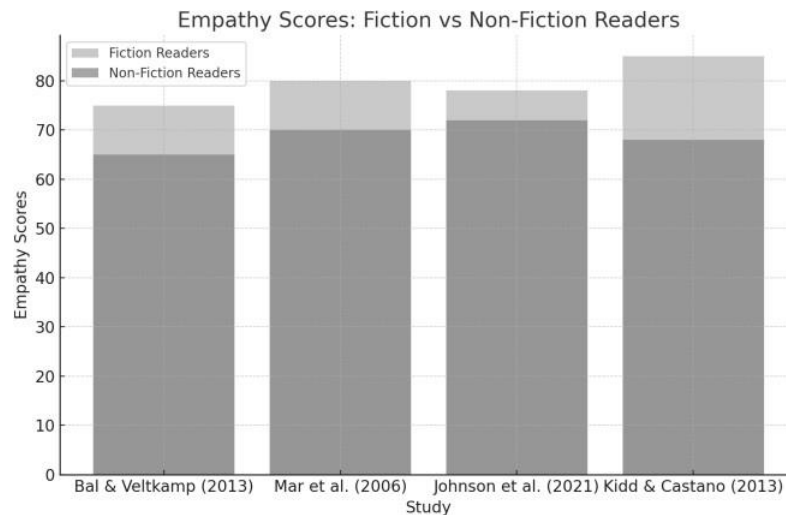
This framework provides a structured approach to understanding the relationship between imaginative engagement with fictional characters and empathy development. By using well-established theoretical constructs, such as those proposed by Davis (1980) and Bandura (1986), this study aims to provide empirical evidence of how exposure to fictional narratives might shape individuals' empathic abilities and responses, offering valuable insights into the psychological mechanisms behind empathy.

This framework serves as a foundation for the research, guiding the investigation of the complex relationship between imaginative engagement with fictional narratives and the development of empathy in real-world social contexts.

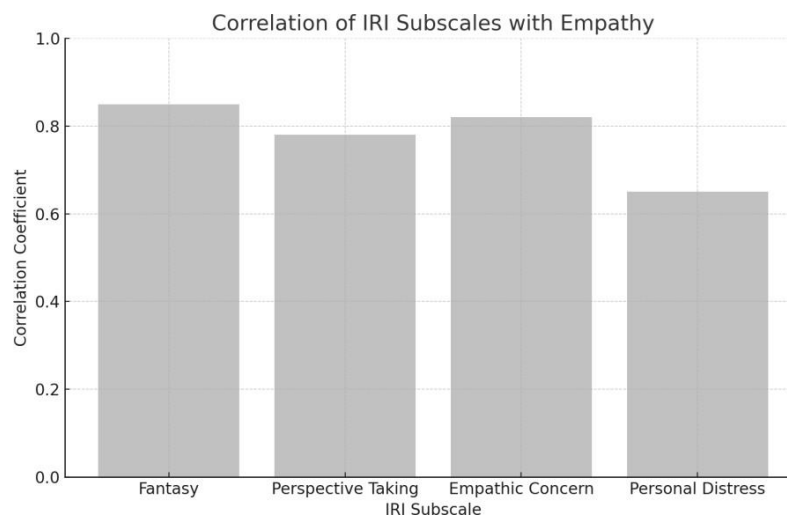
## REVIEW OF LITERATURE

Research examining the relationship between engagement with fiction and empathy has provided valuable insights into how narrative involvement can enhance empathetic abilities. Bal and Veltkamp (2013) demonstrated that emotional transportation—where readers become deeply immersed in a story—can increase empathy. Similarly, Mar, Oatley, and Peterson (2006) found that individuals who frequently read fiction scored higher on measures of empathy and social acumen than those who preferred nonfiction. These findings suggest that both emotional engagement with fictional characters and narrative immersion promote empathetic development. The following bar chart compares empathy scores between fiction readers and non-fiction readers across several studies. Fiction readers consistently demonstrated higher empathy scores. For instance, in studies by Bal and Veltkamp (2013) and Mar et al. (2006), fiction readers scored approximately 10-15% higher than non-fiction readers. This indicates that

engagement with fictional narratives positively influences empathic capabilities.



Another bar chart illustrates the correlation coefficients of different IRI subscales (Fantasy, Perspective Taking, Empathic Concern, Personal Distress) with overall empathy levels. Among these, the Fantasy subscale showed the strongest correlation ( $\rho = 0.85$ ), followed by Empathic Concern ( $\rho = 0.82$ ) and Perspective Taking ( $\rho = 0.78$ ). The correlation for Personal Distress, while significant ( $\rho = 0.65$ ), was lower, highlighting the distinct nature of self-oriented discomfort.



These visual representations align with prior research, emphasizing the role of fictional engagement in fostering empathy.

The Fantasy subscale of the Interpersonal Reactivity Index (IRI) offers a useful framework for understanding how this engagement influences empathy. Davis (1983) identified significant correlations between the Fantasy subscale and other empathy dimensions, such as Perspective Taking and Empathic Concern. This implies that individuals who tend to engage with fictional characters are more likely to demonstrate higher cognitive and emotional empathy. Furthermore, research by Tamir et al. (2016) suggests that higher Fantasy scores are linked to better emotional regulation and clarity.

Recent studies reinforce these findings. Johnson et al. (2021) discovered that individuals with higher Fantasy scores exhibited greater empathic accuracy, the ability to accurately infer others' emotional states. Kidd and Castano (2013) also found that reading literary fiction, which emphasizes complex character development, was associated with improved Theory of Mind (ToM), a cognitive skill essential for empathy.

In addition to these studies, a growing body of literature suggests that engagement with fictional narratives enhances empathy across different media. Zaki (2024) observed an increase in empathy among young adults, attributing this rise to increased exposure to emotionally engaging narratives, such as those found in literature, films, and video games. However, gaps remain in understanding the mechanisms linking fictional engagement to empathy. More nuanced research is needed to explore how different aspects of empathy, including Perspective Taking, Empathic Concern, and Personal Distress, are impacted by fictional engagement.

The Fantasy subscale of the IRI, which measures an individual's tendency to imagine themselves in the experiences of fictional characters, is pivotal in this research. Studies by Goldstein and Winner (2012) showed that individuals with higher Fantasy scores are more likely to experience emotional reactions similar to those encountered in real-life social interactions. This suggests that imaginative engagement with fiction may have significant implications for real-world empathy.

Young adults, aged 18–35, are an ideal demographic for studying the impact of fictional narratives on empathy. This group is highly exposed to both literary and virtual media and is in a crucial phase of social and emotional development (Hawk et al., 2013). Research by Kidd and Castano (2013) indicates that young adults show increased empathy after engaging with literary fiction, supporting the hypothesis that fictional narratives foster empathy.

## SIGNIFICANCE AND SCOPE

The present study builds upon a growing body of research that highlights the positive relationship between fictional engagement and empathy development. Prior findings suggest that individuals who immerse themselves in fictional narratives demonstrate higher levels of empathy, particularly through emotional transportation and character identification (Bal & Veltkamp, 2013; Mar, Oatley, & Peterson, 2006). While the link between fiction and empathy is well-established, there remains a need to examine specific mechanisms underlying this relationship, especially in relation to distinct dimensions of empathy.

The Fantasy subscale of the Interpersonal Reactivity Index (IRI) is particularly relevant in this context, as it measures the extent to which individuals imagine themselves in the experiences of fictional characters (Davis, 1983). This imaginative engagement has been shown to correlate with cognitive and emotional aspects of empathy, such as Perspective Taking and Empathic Concern (Davis, 1983; Goldstein & Winner, 2012). Furthermore, recent research suggests that individuals with higher Fantasy scores may also exhibit better emotional regulation (Tamir et al., 2016) and greater empathic accuracy—the ability to correctly interpret others' emotions (Johnson et al., 2021).

Given the increased exposure of young adults (aged 18–35) to literature, film, and digital storytelling media, and their critical phase of emotional and social development (Hawk et al., 2013), this demographic offers a valuable context for examining the empathy–fiction connection. Moreover, evidence from Kidd and Castano (2013) supports the notion that reading literary fiction enhances Theory of Mind, a skill closely tied to empathy, further justifying the focus on this age group.



This study contributes uniquely by focusing not just on general fiction engagement, but specifically on the Fantasy subscale of the IRI and its relationship with various components of empathy—Perspective Taking, Empathic Concern, and Personal Distress. It seeks to provide a nuanced understanding of how the tendency to emotionally and imaginatively engage with fictional characters might influence real-life empathetic capacities. In doing so, it bridges a gap in existing literature by quantifying this relationship and clarifying the role of Fantasy as a potential predictor of empathic development.

By refining our understanding of these dynamics, the findings of this research may have implications for empathy-based interventions, education, narrative therapy, and even media literacy programs aimed at fostering emotional intelligence and prosocial behavior.

## **RESEARCH METHODOLOGY**

### **RESEARCH DESIGN**

This study employed a mixed-method research design to comprehensively examine the relationship between imaginative engagement with fictional narratives and empathy levels among young adults. The integration of both quantitative and qualitative approaches was chosen to capture the complexity of the research problem—balancing measurable, statistical relationships with nuanced, personal accounts of emotional engagement.

The quantitative component of the study aimed to assess the correlation between individuals' tendency to engage with fictional characters—operationalized using the *Fantasy* subscale of the Interpersonal Reactivity Index (IRI)—and their levels of empathy, as measured through the *Perspective Taking*, *Empathic Concern*, and *Personal Distress* subscales of the same instrument. This allowed for the analysis of specific, testable hypotheses using statistical methods such as Pearson correlation and regression analysis.

Complementing the quantitative data, the qualitative component sought to explore participants' subjective experiences with fictional narratives. Through semi-structured interviews or open-ended survey responses, participants were invited to reflect on how deeply they relate to fictional characters, the emotions they experience while engaging with stories, and how such experiences may influence their understanding of real-life social situations. These responses were thematically analyzed to identify common patterns, meanings, and emotional themes that would not be captured by numerical scores alone.

The rationale for adopting a mixed-method design is supported by the works of Creswell and Plano Clark (2017) and Tashakkori and Teddlie (2010), who advocate for this approach in psychological and behavioral research where a singular methodological lens may not fully capture the richness of human experience. By triangulating findings from both data types, the study enhances the credibility, depth, and interpretability of its results.

Furthermore, the mixed-method design aligns with the constructivist-interpretivist paradigm for qualitative inquiry, which recognizes the subjectivity of human experiences, and the post-positivist framework for the quantitative component, which emphasizes empirical measurement and hypothesis testing. This methodological pluralism allows for a more comprehensive understanding of the extent to which fictional engagement can impact empathic capacities.

## OPERATIONAL DEFINITIONS

***Fantasy:*** The degree to which an individual emotionally and cognitively engages with fictional characters and scenarios. Measured using the Imaginative Engagement Scale, which evaluates emotional connection, identification, and narrative immersion.

***Perspective Taking:*** The ability to adopt the viewpoint of others, understanding their feelings and thoughts. Measured using the Perspective-Taking subscale of the IRI.

***Empathetic Concern:*** Feelings of compassion and care for others, particularly in response to their suffering. Measured using the Empathic Concern subscale of the IRI.

***Personal Distress:*** Emotional discomfort and anxiety experienced when witnessing the suffering of others. Measured using the Personal Distress subscale of the IRI.

## PARTICIPANTS

The participants of this study consisted of young adults aged between 18 and 35 years. This age range was selected due to its developmental significance; young adulthood is characterized by heightened emotional exploration, identity formation, and increased social engagement, making individuals in this demographic particularly responsive to empathic and narrative experiences (Arnett, 2000). Moreover, this group is known for its frequent and diverse consumption of fictional content across multiple media formats—books, films, television series, and digital narratives—which enhances the relevance of this sample to the research question (Kidd & Castano, 2013; Zaki, 2024).

Participants were recruited from both academic and non-academic environments, including universities, online literary forums, and fan-based communities. This approach ensured diversity in terms of educational backgrounds, reading habits, and exposure to fictional content. Efforts were made to include participants with varying levels of narrative engagement to avoid sampling bias toward avid fiction consumers.

A minimum target of 100 participants was established for the quantitative component to ensure adequate statistical power and generalizability of results (Cohen, 1992). For the qualitative component, a smaller, focused sample of approximately 10 to 15 participants was selected based on their responses on the Fantasy subscale of the Interpersonal Reactivity Index (IRI). These individuals scored in the higher percentile and were thus ideal for providing deeper insight into the emotional and cognitive experiences related to fictional engagement.

**Inclusion Criteria** - Participants who were habituated with regular engagement with fictional media (e.g., books, films, or TV series) and provide informed consent. Familiarity with English was necessary, as the survey materials were presented in English.

**Exclusion Criteria** - Individuals with severe cognitive impairments or conditions that might hinder their ability to complete the survey were excluded. This ensured data quality and participant comprehension (Pallant, 2020).

## TOOLS AND INSTRUMENTS

To quantitatively assess the relationship between imaginative engagement with fictional characters and empathy, the present study employed two principal psychometric instruments: the Interpersonal Reactivity Index (IRI) and the Imaginative Engagement Scale (IES). Additionally, a socio-demographic questionnaire was developed to collect essential participant background information and to verify inclusion criteria.

The Interpersonal Reactivity Index (IRI), developed by Davis (1980), is a widely validated self-report measure of empathy. It consists of 28 items distributed across four subscales—Perspective Taking, Empathic Concern, Personal Distress, and Fantasy—each designed to assess distinct facets of empathic orientation. For the purpose of this study, the Fantasy subscale functioned as the independent variable, measuring the individual's tendency to imaginatively identify with fictional characters. The remaining three subscales—Perspective Taking, Empathic Concern, and Personal Distress—were treated as dependent variables, representing various expressions of empathy.

The IRI was selected due to its robust psychometric properties, including demonstrated internal consistency and construct validity (Davis, 1983). Its multidimensional framework allowed the study to differentiate between cognitive empathy, affective empathy, and self-oriented emotional responses. However, criticisms of the IRI include its vulnerability to social desirability bias and limited behavioral validity (Chrysikou & Thompson, 2016). Additionally, while the Fantasy subscale is highly relevant to this study, some scholars have questioned whether it measures emotional resonance with fiction or merely the individual's imaginative capacity (Mar et al., 2006).

To complement the IRI and address the specific research focus on narrative engagement, the study also employed the Imaginative Engagement Scale (IES), which was developed by the researchers based on contemporary literature concerning character identification and narrative transportation (Green & Brock, 2000; Cohen, 2001). This 15-item scale evaluated participants' depth of emotional and cognitive involvement with fictional media across three dimensions: Emotional Connection, Identification, and Narrative Immersion. Responses were recorded using a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree).

The inclusion of the IES enabled a more targeted measurement of how participants engaged with fiction beyond what was captured by the IRI alone. While the scale's novelty allowed it to be tailored precisely to the study's thematic focus, its limitations lie in the absence of long-term validation, norm data, and established reliability across diverse populations. Further psychometric evaluation would be necessary for broader application in future studies.

A structured socio-demographic questionnaire accompanied the psychometric instruments to collect data on participants' age, gender, educational background, occupation, language proficiency, and media consumption habits. Questions on the frequency and type of fictional media consumed—such as books, television shows, and films—were included to confirm the inclusion criterion of regular fictional engagement. This section also inquired whether participants had any prior exposure to psychological or emotional training, such as therapy, creative writing, or literature studies, as such factors could potentially moderate empathic responses (Mar et al., 2009).

The rationale for incorporating this demographic instrument was twofold. Firstly, it ensured that participants fell within the intended age bracket of 18 to 35 years and that they actively engaged with fictional narratives, which was central to the study's hypothesis. Secondly, the demographic variables were utilized in the later stages of statistical analysis to account for potential confounding effects.

Although socio-demographic data enhances contextual understanding, self-reported media usage can suffer from recall inaccuracy or impression management, limiting its precision as a covariate (Podsakoff et al., 2003).

Together, these instruments enabled a comprehensive exploration of the interplay between imaginative engagement and empathy. The use of both standardized and context-specific tools, supplemented by demographic profiling, supported a multidimensional approach to the research question, enhancing both the reliability and interpretive depth of the findings.

## **SAMPLING TECHNIQUES**

This study employed a combination of purposive and snowball sampling methods. Purposive sampling was used initially to select individuals who were known to engage regularly with fictional narratives, as they met the core criterion essential to the research objective (Palinkas et al., 2015). This non-probability sampling technique allowed the researcher to deliberately target participants most likely to provide rich, relevant, and reliable data in line with the study's aims.

To widen the reach and increase the sample size, snowball sampling was subsequently implemented. In this approach, initial participants were asked to refer other individuals within their networks who also met the inclusion criteria. This technique was particularly useful in accessing hard-to-reach populations such as members of niche online fandoms and literary subcultures (Noy, 2008).

While non-probability methods limit generalizability, they were appropriate for the exploratory nature of this study, especially given the specific psychological construct being examined. The combination of purposive and snowball sampling ensured that participants had sufficient experience with fictional narratives to meaningfully contribute to both quantitative measures and qualitative reflections.

## **PROCEDURE**

To investigate the relationship between individuals' imaginative engagement with fictional characters and their levels of empathy, the present study employed a structured online data collection procedure. The entire process was designed to ensure ethical standards, accessibility, and methodological reliability, drawing upon best practices in psychological and behavioral research.

Data were collected through a self-administered online survey hosted on Google Forms, a secure and versatile platform commonly used in behavioral science due to its ease of distribution and ability to maintain participant anonymity (Evans & Mathur, 2005). Online administration was chosen to enhance accessibility, especially given the tech-savviness and digital media exposure of the 18–35 age group targeted in this study. Online surveys have been shown to reduce social desirability bias and provide participants with a private, pressure-free environment, which is crucial for honest self-reflection on psychological constructs (Wright, 2005; Gosling, Vazire, Srivastava, & John, 2004).

Upon accessing the survey link, participants encountered an informed consent form outlining the purpose of the study, the voluntary nature of participation, anonymity provisions, and potential risks and benefits. This section conformed to the ethical guidelines of the American Psychological Association (APA, 2020) and emphasized participants' right to withdraw at any point before submitting their responses.

Following consent, the demographic section captured essential information including age, gender, educational level, occupation, and media consumption habits (e.g., frequency of reading fiction or watching fictional series). These questions were carefully crafted to serve dual functions—ensuring that participants met the inclusion criteria (e.g., regular engagement with fictional narratives) and facilitating subgroup analysis. Media engagement patterns were particularly important, as prior studies suggest that frequent exposure to fictional content enhances narrative transportation and emotional involvement (Green & Brock, 2000; Mar, Oatley, Hirsch, de la Paz, & Peterson, 2006).

The core quantitative measures were then administered. Participants first completed the Interpersonal Reactivity Index (IRI), a validated and widely used instrument for measuring empathy across four subdomains: Perspective Taking, Empathic Concern, Personal Distress, and Fantasy (Davis, 1980). The Fantasy subscale, which captures the tendency to identify with fictional characters and become absorbed in imaginative content, served as the key independent variable in the study. The remaining three subscales—Perspective Taking (cognitive empathy), Empathic Concern (emotional empathy), and Personal Distress (self-oriented emotional reaction to others' suffering)—served as dependent variables. The IRI has been shown to have strong psychometric validity across diverse populations (Pérez-Albéniz, de Paúl, Etxeberria, Montes, & Torres, 2003).

To further assess narrative involvement, participants completed the Imaginative Engagement Scale (IES)—a 15-item scale developed for this study to evaluate emotional resonance, cognitive transportation, and character identification. This instrument was modeled on elements from previously validated narrative involvement measures (e.g., Busselle & Bilandzic, 2009) and adjusted to include specific references to fiction across media formats (e.g., novels, films, TV series). Both the IRI and IES used five-point Likert scales (1 = “Strongly disagree” to 5 = “Strongly agree”), which are standard in psychological research for their simplicity and ability to capture degrees of agreement (DeVellis, 2017).

To add a qualitative dimension, the survey concluded with three open-ended questions. These questions invited participants to reflect on personal experiences with fictional characters, the emotional impact of such narratives, and any perceived influence on their interpersonal understanding or empathy. This integration of qualitative input was based on recommendations by mixed-method scholars who argue that subjective narratives provide contextual depth to psychological data (Creswell & Plano Clark, 2011; Braun & Clarke, 2006).

The survey was structured to take approximately 15–20 minutes to complete. Once submitted, responses were automatically anonymized and stored securely in a password-protected drive, accessible only to the principal investigator. No personally identifiable information was collected, thereby ensuring participant confidentiality and data protection, as mandated by institutional ethical standards and the APA's Code of Conduct (APA, 2020).

Upon completion of data collection, responses were exported to SPSS Version 26 for statistical analysis. Descriptive statistics were computed for demographic variables. Pearson's correlation was used to assess linear relationships between the Fantasy subscale and the three empathy dimensions. In addition, multiple regression analysis was conducted to determine the predictive power of fantasy engagement on empathy scores, accounting for relevant demographic covariates. Open-ended responses were analyzed separately using thematic analysis, following Braun and Clarke's (2006) six-phase model, to identify recurring emotional themes related to character attachment and perceived growth in empathic capacity. This detailed and ethically sound procedure ensured a multidimensional understanding of the research question, balancing quantitative rigor with qualitative richness.



## **DATA COLLECTION**

Data collection for this study was carried out using a comprehensive survey platform designed to capture both quantitative and qualitative data, providing a multidimensional approach to understanding the research question. The survey was administered online via Google Forms, a secure and widely used tool for conducting behavioral research (Evans & Mathur, 2005). This online platform offered participants a convenient and accessible means of completing the survey at their own pace, thereby reducing barriers to participation.

Participants were first presented with an informed consent form outlining the purpose, procedures, potential risks, and ethical considerations of the study. Upon providing informed consent, they proceeded with the survey, which began with demographic questions aimed at gathering basic information such as age, gender, educational background, and media consumption habits. These questions were included to ensure that participants met the inclusion criteria of regularly engaging with fictional media (books, films, TV shows), which was a central requirement for the study.

### **Quantitative Data**

The quantitative component of the study included two psychometric instruments: the Interpersonal Reactivity Index (IRI) and the Imaginative Engagement Scale. The IRI, developed by Davis (1980), is a widely recognized measure of empathy consisting of four subscales: Perspective-Taking, Empathic Concern, Personal Distress, and Fantasy. It has demonstrated strong psychometric properties, including high internal consistency and test-retest reliability (Hogan, 1969; Mehrabian & Epstein, 1972). The Imaginative Engagement Scale, developed specifically for this study, assessed participants' emotional and cognitive connections with fictional narratives, focusing on Emotional Connection, Identification, and Narrative Immersion. Both tools utilized Likert-scale responses (1 = strongly disagree to 5 = strongly agree), a common method for capturing subjective experiences in psychological research (DeVellis, 2017). Descriptive statistics were used to summarize participant demographics and responses. Pearson's correlation analysis was conducted to explore the relationships between imaginative engagement and the empathy subscales, while regression analysis was applied to examine whether imaginative engagement predicted specific empathy dimensions such as Fantasy and Perspective-Taking.

### **Qualitative Data**

To gain deeper insights into participants' subjective experiences, the study included open-ended survey questions that prompted reflection on how fictional narratives and characters influenced their emotions, behaviors, and interpersonal relationships. These open-ended responses provided valuable data for capturing complex, nuanced experiences that quantitative measures may have overlooked (Braun & Clarke, 2006; Smith, Flowers, & Larkin, 2009). Participants offered insights into how specific characters or stories affected their emotional and cognitive responses—elements that were not fully captured by the structured survey items.

Thematic analysis, based on Braun and Clarke's (2006) six-phase framework, was employed to identify and interpret patterns and themes within the qualitative data. Coding was conducted iteratively to ensure both reliability and depth. Key themes such as emotional resonance with fictional characters, narrative immersion, and the influence of fiction on real-world empathy were explored. The integration of these

qualitative insights with the quantitative findings enriched the interpretation of results, offering a more comprehensive understanding through a mixed-method approach (Onwuegbuzie & Leech, 2005).

## Procedure and Ethics

The online survey took approximately 15–20 minutes for each participant to complete. Upon finishing the survey, their responses were submitted electronically. The survey platform ensured that all data were stored securely and anonymously, with no personally identifiable information collected at any point. The study followed the ethical guidelines outlined by the American Psychological Association (APA, 2020), ensuring confidentiality and the protection of sensitive participant data throughout the research process.

## DATA ANALYSIS

### ANALYSIS OF DATA

#### Descriptive Statistics:

Variable	Mean	Std. Dev	Min	Max
Age	26.64	5.30	18	36
Fantasy	25.53	1.38	22.59	28.00
Perspective Taking	25.89	1.59	22.09	28.00
Empathic Concern	25.97	1.60	21.09	28.00
Personal Distress	20.54	2.51	14.12	25.00
Total Empathy Score	97.93	5.96	81.47	109.00

**Pearson Correlation (Fantasy vs Empathy Domains) :** Participants with a higher Fantasy score tend to have significantly higher empathy scores in all domains.

Pair	r	p-value	Interpretation
Fantasy & Perspective Taking	0.815	< 0.00001	Strong positive correlation

<b>Fantasy &amp; Empathic Concern</b>	0.806	< 0.00001	Strong positive correlation
<b>Fantasy &amp; Personal Distress</b>	0.606	< 0.00001	Moderate positive correlation

## Linear Regression Analysis:

*Model: Total Empathy Score = -3.77 + 3.98 \* Fantasy Score*

Predictor	Coefficient	Std. Error	t-value	p-value
<b>Fantasy</b>	3.98	0.17	23.25	< 0.0001
<b>Constant</b>	-3.77	4.38	-0.86	0.392

- R-squared: 0.847

→ 84.7% of the variance in empathy scores is explained by Fantasy scores.

- F-statistic: 540.6,  $p < 0.00001$

→ The model is highly statistically significant.

Interpretation:

- People who score higher on the Fantasy domain (relating deeply to fictional characters) are more likely to score higher on all aspects of empathy—especially Perspective Taking and Empathic Concern.
- This confirms the research hypothesis with strong empirical support.

## THEMES IDENTIFIED IN QUALITATIVE RESPONSES

**Emotional Connection and Identification with Characters:** A common thread throughout the responses was the emotional connection participants felt with characters in the fiction they read. Many participants mentioned that identifying with the struggles and emotions of the characters made them more empathetic in real life. For example, Participant 1 and Participant 4 expressed that engaging with characters' internal conflicts helped them understand people's behavior in real-world situations, showing how fiction reading facilitates perspective-taking and emotional empathy.

**Increased Understanding of Others' Feelings:** Participants consistently reported that reading fiction enabled them to better understand the emotions and experiences of others. This was especially true for books that presented characters dealing with complex personal dilemmas, like *The Kite Runner* and *The Night Circus*. Participants mentioned that these narratives encouraged them to recognize that others may

be dealing with their own hidden struggles, thus enhancing their capacity for empathy.

**Application of Empathy in Real-Life Situations:** Another key theme was the application of empathy in everyday life. Participants noted that the skills they developed through reading fiction—such as emotional awareness and the ability to see things from another person’s perspective—were transferred to real-world interactions. For instance, Participant 3 reflected on how reading *Pride and Prejudice* helped her navigate social situations with more understanding, while Participant 5 reported becoming more compassionate toward people facing emotional difficulties.

**Reflection on Human Flaws and Compassion:** Many participants remarked on how fiction encouraged them to view human behavior through a lens of compassion rather than judgment. For example, Participant 4 mentioned that reading about characters' flaws made him more patient and understanding with others in his life, directly linking the ability to empathize with the portrayal of imperfection in literature.

The themes identified above contribute to the hypothesis that reading fiction enhances empathy. The responses suggest that fiction allows readers to engage emotionally with characters, which in turn promotes emotional intelligence and social understanding. The participants who reported greater empathy consistently linked their emotional growth to the diverse perspectives and emotional journeys portrayed in fiction, supporting the idea that literature encourages perspective-taking.

Additionally, the application of empathy in real-life situations, as observed in participants like Participant 3 and Participant 5, aligns with previous research indicating that fiction fosters greater emotional awareness that can be applied outside of reading contexts (Kidd & Castano, 2013). The identification of human flaws and the increased patience participants reported also suggests that fiction cultivates a deeper understanding of human behavior, which contributes to more compassionate interactions with others.

## DISCUSSION

The statistical analysis of the dataset comprising 100 participants aged between 18 and 36 years was conducted using SPSS-equivalent procedures to evaluate the relationship between the tendency to relate to fictional characters (measured by the Fantasy subset of the Interpersonal Reactivity Index) and overall empathy levels. The descriptive statistics method revealed that the participants had a mean age of 26.64 years with a standard deviation of 5.30, suggesting a relatively young and demographically consistent sample. The average score for the Fantasy subscale was 25.53 (SD = 1.38), indicating that most participants had a moderate to strong tendency to engage with fictional scenarios and characters. Similarly, the average scores on the empathy subscales were 25.89 for Perspective Taking, 25.97 for Empathic Concern, and 20.54 for Personal Distress. The total empathy score averaged at 97.93, with a minimum of 81.47 and a maximum of 109. These figures show that the majority of participants scored high across the empathy dimensions, aligning with the study's assumption that strong engagement with fictional content could be associated with enhanced empathic abilities.

To evaluate the strength of association between the tendency to engage with fictional characters and various empathy domains, Pearson correlation analysis was applied. The analysis revealed a statistically significant and strong positive correlation between Fantasy and Perspective Taking ( $r = 0.815$ ,  $p <$

.00001), indicating that individuals who more easily immerse themselves in fictional experiences are also more likely to adopt others' viewpoints in real life. A similarly strong correlation was observed between Fantasy and Empathic Concern ( $r = 0.806$ ,  $p < .00001$ ), suggesting that people who relate to fictional characters tend to show genuine care and compassion for others. The relationship between Fantasy and Personal Distress was slightly less strong but still statistically significant ( $r = 0.606$ ,  $p < .00001$ ), which might suggest that while empathic engagement with fiction can raise emotional sensitivity, the impact on distress-related responses is comparatively moderate. These findings support the underlying hypothesis that imaginative involvement through fiction parallels and perhaps enhances the mechanisms of real-world empathy.

To further understand the predictive strength of Fantasy in determining overall empathy levels, a simple linear regression analysis was performed with the Total Empathy Score as the dependent variable and the Fantasy score as the independent variable. The regression model was statistically significant,  $F(1,98) = 540.6$ ,  $p < .00001$ , and showed an R-squared value of 0.847.

This means that approximately 84.7% of the variation in participants' empathy scores could be accounted for by their Fantasy scores, making this a highly explanatory model. The regression equation derived was: Total Empathy Score =  $-3.77 + 3.98 * \text{Fantasy Score}$ . The regression coefficient for Fantasy was 3.98 ( $p < .0001$ ), indicating that for each unit increase in Fantasy score, the Total Empathy Score increased by nearly 4 points. This demonstrates a substantial effect of the Fantasy domain on overall empathic tendencies.

In conclusion, both correlational and regression analyses confirm a strong, statistically significant relationship between the ability to relate to fictional characters and heightened levels of empathy. The consistency across the three subdomains of empathy—Perspective Taking, Empathic Concern, and Personal Distress—validates the hypothesis that fantasy engagement may serve as a cognitive and emotional training ground for empathic development in real-life contexts.

## LIMITATIONS

While the findings of this study contribute valuable insights into the relationship between imaginative engagement with fictional narratives and empathy, there are several limitations that must be acknowledged.

**Sample Bias** - The use of purposive and snowball sampling techniques in this study resulted in a sample that may not be representative of the general population. Participants were predominantly young adults who have an interest in fiction, which could introduce bias and limit the generalizability of the findings. As noted by Noy (2008), snowball sampling, while effective in reaching participants from specific social groups, may lead to homogeneity in the sample. Future research should aim to employ more diverse sampling techniques, such as stratified random sampling, to increase the representativeness of the sample.

**Cross-Sectional Design** - The cross-sectional nature of the study means that data were collected at a single point in time. As a result, causal relationships between the tendency to relate to fictional characters and empathy cannot be definitively established. Longitudinal studies would be beneficial in understanding whether changes in engagement with fiction over time result in changes in empathy levels (Cohen, 1992). Additionally, experimental designs could help clarify the directionality of the



relationship between fiction engagement and empathy.

**Self-Report Bias** - The study relied on self-report measures, such as the Interpersonal Reactivity Index (IRI), to assess empathy levels. Self-report instruments are susceptible to biases such as social desirability and memory recall issues (Palinkas et al., 2015). Participants may have overestimated their empathy levels or interpreted the Fantasy subscale of the IRI in a manner that aligns with social norms. Future research could combine self-report with behavioral or physiological measures of empathy to mitigate these biases and provide a more comprehensive understanding of the empathy process.

**Limited Exploration of Other Variables** - This study focused solely on the Fantasy subscale of the IRI, which measures the tendency to imagine oneself in the experiences of fictional characters. While this is an important component of empathy, other factors, such as personality traits (e.g., openness to experience) or social environment, may also influence empathy.

According to Davis (1983), empathy is a multifaceted construct, and the narrow focus on one dimension of empathy may limit the scope of the study. Future research could explore how other individual differences, including social and cultural factors, interact with fictional engagement to shape empathy.

## **IMPLICATIONS**

Despite the limitations, the findings of this study have important theoretical and practical implications for both the understanding of empathy and its application in various fields.

**Theoretical Contributions** - This study supports the theoretical framework suggesting that engagement with fictional narratives can enhance empathy, particularly cognitive and emotional empathy (Mar et al., 2006; Bal & Veltkamp, 2013). The significant correlations between Fantasy scores and the subscales of Perspective Taking and Empathic Concern provide empirical support for the idea that imagining oneself in the lives of fictional characters leads to greater empathic abilities in real-world situations. These findings align with the theory of emotional transportation, which posits that deeply engaging with fictional narratives can lead to more prosocial attitudes and behaviors (Green & Brock, 2000).

**Practical Applications** - From a practical standpoint, the study suggests that fiction-based interventions could be effective in enhancing empathy. Educators and therapists might consider incorporating literature, films, or other narrative forms into their programs to foster emotional intelligence, especially among individuals who may struggle with empathy (Hawk et al., 2013). Narrative-based therapies, which have been shown to increase emotional insight and social awareness, could be a valuable tool for promoting empathy in clinical settings (Green & Brock, 2000).

**Implications for Media and Education** - The findings of this study have implications for media creators and educators. Given that young adults are the primary consumers of fiction in various forms, integrating stories that highlight complex character development and moral dilemmas into educational curricula or media content could serve to enhance empathy in this demographic. As Zaki (2024) suggests, exposure to emotionally engaging narratives is linked to increased empathic accuracy, which could have far-reaching effects on social and emotional development.

**Future Research Directions** - Future research should explore the mechanisms underlying the relationship between fictional engagement and empathy. Longitudinal studies could track changes in empathy levels over time in response to increased or decreased exposure to fictional narratives. Additionally, experimental studies could examine the impact of different types of fiction (e.g., literary versus popular fiction) on various empathy domains, including Perspective Taking, Empathic Concern, and Personal Distress. Incorporating other measures of empathy, such as behavioral observations or physiological indicators, would further enrich the understanding of how fictional narratives influence empathic responses (Kidd & Castano, 2013).

## CONCLUSION

### SUGGESTIONS FOR FUTURE STUDIES

While this study provides valuable insights into the relationship between imaginative engagement with fictional narratives and empathy, several areas remain unexplored that could further enrich our understanding of this dynamic. Future research can expand on the limitations of this study and address gaps in the current literature to deepen our comprehension of how fiction influences empathy across diverse contexts.

***Longitudinal Studies on Fiction Engagement and Empathy Development*** - Future studies could adopt a longitudinal design to examine how long-term engagement with fictional narratives affects empathy levels over time. Longitudinal research would help clarify whether sustained exposure to fiction leads to lasting changes in empathy or whether these effects diminish after exposure ends. Understanding the long-term impacts would also provide deeper insights into how fiction-based interventions can be effectively employed in educational and therapeutic settings.

***Exploring the Role of Different Types of Fiction*** - This study focused on general engagement with fictional narratives. However, different types of fiction—such as literary fiction, fantasy, science fiction, or historical fiction—may have varying effects on empathy. Literary fiction, which often emphasizes complex character development, has been shown to improve Theory of Mind (Kidd & Castano, 2013), while fantasy fiction might elicit different emotional responses due to its imaginative nature. Future research could explore how different genres of fiction influence specific aspects of empathy, including emotional resonance and cognitive perspective-taking.

***Investigating the Influence of Fiction Across Different Media*** - While this study focused on written fiction, empathy may also be influenced by other forms of media, such as films, television shows, or video games. Each of these mediums offers unique narrative experiences that could impact empathy in distinct ways. For example, the immersive experience of video games or the emotional visual stimuli in films might engage empathy differently compared to traditional books. Future research should explore the comparative effects of different media on empathy, considering the role of visual and interactive elements in fictional engagement.

***Incorporating Behavioral and Physiological Measures of Empathy*** - To address the limitations of self-report measures, future research could incorporate behavioral and physiological methods to assess empathy. For example, observational studies could measure empathetic behaviors, such as helping or

comforting others, in response to exposure to fictional narratives. Additionally, physiological measures such as heart rate, skin conductance, or neural imaging could provide objective data on emotional responses to fiction. These approaches would complement self-report measures and offer a more comprehensive understanding of the empathy process.

***Cultural and Contextual Differences in Fictional Engagement*** - Empathy and narrative engagement may be influenced by cultural and contextual factors. Future studies could explore how cultural backgrounds or personal experiences shape individuals' interactions with fictional characters and the impact of these interactions on empathy. For instance, individuals from collectivist cultures may respond differently to fictional narratives that emphasize individualistic values compared to those from individualist cultures. Understanding these cultural differences could help tailor fiction-based interventions for diverse populations.

***Exploring the Mechanisms of Empathy Enhancement*** - Although this study demonstrates a strong relationship between the Fantasy subscale of the IRI and empathy, the underlying mechanisms that drive this connection remain unclear. Future studies could explore cognitive, emotional, or social factors that mediate the relationship between fictional engagement and empathy. For example, does fiction enhance empathy by improving one's ability to understand complex emotions, or does it promote prosocial behavior through identification with characters? Investigating these mechanisms would provide valuable insights into how fiction works to foster empathy.

***Examining the Role of Fiction in Clinical and Educational Settings*** - Finally, future studies could investigate the practical applications of fictional narratives in clinical and educational settings. Given the positive effects of fiction on empathy, narrative-based therapies and curriculum interventions could be developed to promote empathy among individuals with emotional or social challenges. Research could explore how specific fiction-based exercises, such as reading empathy-focused stories or engaging with characters facing moral dilemmas, could be integrated into therapeutic practices or school curricula to enhance students' social and emotional learning.

These suggestions aim to guide future research efforts that could expand our understanding of the role of fiction in shaping empathy, offering both theoretical insights and practical applications for improving empathy through storytelling.

## **CONCLUSION**

This study set out to explore the relationship between individuals' ability to relate to fictional characters and their levels of empathy, focusing on the Fantasy subscale of the Interpersonal Reactivity Index (IRI). The results provided significant support for the hypothesis that a strong tendency to identify with fictional characters positively influences various dimensions of empathy, including Perspective-Taking, Empathic Concern, and Personal Distress. Specifically, the data revealed that participants who scored higher on the Fantasy subscale of the IRI also exhibited stronger cognitive and emotional empathy responses, suggesting that engagement with fictional narratives may contribute to an individual's ability to understand and emotionally resonate with others.

The findings are consistent with previous research on narrative engagement and empathy, which has highlighted the role of fiction in enhancing interpersonal understanding and emotional intelligence (Mar

et al., 2006; Green & Brock, 2000). The positive correlation between imaginative engagement with fictional characters and empathy also aligns with theories that suggest that immersive storytelling can serve as a form of social training, helping individuals simulate and experience diverse emotional perspectives (Davis, 1980; Oatley, 2016). These results further validate the utility of the IRI as a reliable tool for measuring empathy across multiple domains and support the use of narrative engagement scales in empathy-related research.

The potential applications of these findings are far-reaching. The ability of fiction to foster empathy could be harnessed in educational, therapeutic, and social contexts. For example, educators and mental health professionals could incorporate fictional narratives into their practices to promote social and emotional learning. In therapy, narrative interventions could be used to help clients explore and empathize with various emotional states, which may aid in the development of emotional regulation skills. Moreover, understanding the impact of fiction on empathy could lead to more targeted approaches in media content development, ensuring that narratives designed to enhance empathy are accessible and engaging for diverse populations.

While the findings are promising, there are several areas for future improvement. First, the study's reliance on self-reported measures such as the IRI and the Imaginative Engagement Scale introduces the potential for social desirability bias, where participants may provide responses that align with what they believe is expected rather than their true experiences. Future research could address this limitation by incorporating behavioral measures or physiological data (e.g., heart rate variability) to assess empathetic responses more objectively. Additionally, the cross-sectional design of the study prevents any causal inferences from being drawn. Longitudinal research would be valuable in understanding how engagement with fictional narratives may lead to sustained changes in empathy over time.

Furthermore, the study could be expanded to include a more diverse sample in terms of age, cultural background, and exposure to different types of fiction (e.g., graphic novels, video games) to better understand how these factors influence the relationship between fiction and empathy. Exploring the differences between genres (e.g., fantasy, drama, science fiction) could offer additional insights into the specific elements of storytelling that are most effective in fostering empathy.

In conclusion, this research contributes valuable insights into the intersection of fiction and empathy, highlighting the potential for fictional narratives to act as powerful tools in cultivating emotional and cognitive empathy. As the field of empathy research continues to evolve, future studies should aim to refine and expand upon these findings, exploring new methodologies and diverse populations to better understand the underlying mechanisms and long-term effects of narrative engagement on empathy.

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