

“It’s Kind of a Funny Story”: A Narrative Intervention for Depression

by

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A Dissertation

In

Experimental Psychology

Submitted to the Graduate Faculty  
of Texas Tech University in  
Partial Fulfillment of  
the Requirements for  
the Degree of

DOCTOR OF PHILOSOPHY

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## **Acknowledgments**

I would like to thank my current graduate advisor and committee chair, Dr. Zachary P. Hohman, for his influential instruction as my professor and teaching supervisor as well as for later adopting me into his lab and guiding me through this final milestone of the Ph.D. I would also like to thank my former graduate advisor, Dr. Molly E. Ireland, for taking me under her tutelage, nurturing my love of language and fiction, and continuing to offer counsel, even after leaving academia. Moreover, I am grateful to Dr. Jessica L. Alquist and Dr. Amelia E. Talley for all their advice and assistance, not only on my dissertation but on my various research projects presented during division-wide meetings. I would, furthermore, like to thank Dr. Roman M. Taraban for his mentorship in psycholinguistics, both inside and outside of the classroom, and for his generosity in funding the pilot study of my dissertation. I have learned so much from my chair and each of my committee members, and I give my heartfelt appreciation for their meaningful contributions to my dissertation and for their instruction and encouragement throughout all these years.

Additionally, I would like to dedicate my dissertation research to my parents, Jacques and Maro Nalabandian. I am profoundly grateful for the unwavering love and support they have shown me throughout my entire life and, especially, during the dissertation process. They are everything to me and without them I am nothing. I also want to show my love and appreciation to my brothers, Paul, Garo, and Christopher Nalabandian, my sister, Marie Shebeck, my sister-in-law, Michelle Nalabandian, and my extended (academic) family and friends for their love, laughter, and light during these difficult times. Finally, I would like to express my gratitude to Professor J. R. R. Tolkein,

whose epic fantasies pushed me to complete my dissertation (i.e., my very own journey to Mount Doom).

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## **Abstract**

Since the start of the COVID-19 pandemic and the resulting lockdowns, rates of depression have substantially increased, motivating research on more scalable treatments, such as narrative interventions. Although previous research has examined the impact of various narrative interventions on mental health and well-being, these studies neglected to identify the types of fictional narratives that depression-prone individuals gravitate toward and those that serve to alleviate or exacerbate symptoms. My dissertation experimentally manipulated different features of fictional narratives, testing the effect of protagonist type (depressed versus non-depressed) and resolution type (positive versus negative) on narrative preferences and depression symptoms. Consistent with research implicating negative and self-focused attentional biases as characteristic of depression, results demonstrated that individuals scoring higher on trait depression positively rated narratives depicting a depressed (rather than a non-depressed) protagonist by way of greater identification and development of a parasocial bond with the depressed protagonist. In line with self-discrepancy theories of depression, results also showed that those scoring higher on trait depression used higher rates of negative emotion language—specifically, words relating to sadness—in a reactionary response to a narrative about a non-depressed protagonist with positive resolution (rather than in response to narratives about a non-depressed protagonist with a negative resolution or a depressed protagonist with either a positive or negative resolution). The present findings inform research on bibliotherapy and depression, offering empirical insights on the specific narrative formulas and the contributing mechanisms that exacerbate depressive symptomology.

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## Chapter I

### Introduction

#### The Significance of Studying Depression

Major Depressive Disorder (MDD) is characterized by a depressed mood or anhedonia (i.e., decreased interest in things that previously sparked pleasure), accompanied by a number of other symptoms (e.g., weight loss or gain, fatigue, lack of concentration, worthlessness, suicidal ideation) that one experiences most every day for the span of at least two weeks (American Psychological Association, 2013). Depression is a debilitating mood disorder negatively impacting the lives of about 280 million people around the world (World Health Organization, 2022). Data from the National Survey on Drug Use and Health (NSDUH) demonstrated that about 21 million adults living in the United States alone recently experienced a major depressive episode and about 14.8 adults reported that their major depressive episode contributed to significant dysfunction in their daily lives (National Institute of Mental Health, 2022). Research also suggests that rates of depression have increased at least three-fold since the start of the COVID-19 pandemic and resulting lockdowns (Ettman et al., 2020; Fancourt et al., 2020).

In addition to the high rates of clinical depression, there are also individuals who do not meet the full criteria for depression, as relayed in the *Diagnostic and Statistical Manual of Mental Disorders*, but still experience depressive symptoms and its negative effects (e.g., suicidal ideation; Cukrowicz et al., 2011). Subclinically depressed individuals are at greater risk of being diagnosed with major depressive disorder; however, traditional treatments for depression (e.g., psychotherapy) can help reduce the risk of developing the disorder (Cuijpers et al., 2014). The prevalence of major

depressive disorder necessitates psychologists not only to determine more potent ways in which to diagnose and treat the disorder, but to develop preventative measures that may benefit those experiencing subclinical depression as well.

### **Attentional Biases in Depression**

Depression negatively impacts individuals' cognitive, emotional, and behavioral processes. However, traditional interventions for depression (e.g., cognitive-behavioral therapy; Clark & Beck, 2010; CBT; Jewell, 2011) typically emphasize treatment of maladaptive cognitions (e.g., thinking negatively about oneself) that often trigger and exacerbate maladaptive emotions (e.g., sadness) and behaviors (e.g., remaining in bed and isolating oneself from the world). That is, depressed individuals often attend to negative and self-relevant stimuli, and such negative self-focused attentional biases (or biased associative processing—i.e., the use of heuristics or mental short-cuts to navigate oneself and their environment) lead to experiencing a dysphoric or depressed mood (Beevers, 2005; Smith & DeCoster, 1999). A depressed mood leads to depleted cognitive resources, thwarting one's ability to engage in reflective processing or consciously and deliberately analyze their situation (Beevers, 2005; Smith & DeCoster, 2000). Without reflective processing, one remains in a state of biased associative processing, contributing to a negative feedback loop in depression. Therefore, in order to uncover differing modes of intervention (or prevention) that might serve as helpful to the (clinically and subclinically) depressed population, it is essential to first understand the cognitive mechanisms—in particular, the attentional biases—involved in depression.

### ***Negative Affect***

A substantial body of research demonstrates how those experiencing higher (rather than lower) levels of depression attend more to negative (than positive or neutral) content. Although research indicates that “bad is stronger than good” (Baumeister et al., 2001), wherein individuals tend to gravitate toward negative more so than positive stimuli (e.g., faster reaction times for identifying angry rather than happy faces; Hansen & Hansen, 1988), one’s current mood or affective context often moderates biases toward emotional content. For example, when participants were primed with positive stimuli, they were more likely to attend to positive than negative stimuli and vice versa (Smith et al., 2006). Based on such mood-congruent effects on attentional biases, depressed individuals—who experience a dysphoric and negative affective state—should be more likely to engage in negative attentional biases (i.e., attend to more negative rather than positive or neutral stimuli). In fact, Aaron T. Beck (1967), founder of cognitive (behavioral) therapy for depression, proposed that depression is characterized by depressive schemas, or negative perceptions of the self (e.g., feelings of worthlessness), the future, and the environment (also referred to as the negative cognitive triad; Beck, 1979), fueling research on negative attentional biases in depression.

Past research substantiates a negative attentional bias (in terms of both external and internal attention) in depressed and depression-prone individuals. External attention refers to the sensory perception of one’s environment (or spatial attention; Mennen et al., 2019) and can be assessed using attentional measures, such as dot-probe tasks. For example, participants completed a dot-probe task, where they were presented with word pairs (e.g., one neutral word paired with one negative word) and were asked to identify the location of a dot that replaced one of the words in each pair (Donaldson et al., 2007).

Results demonstrated that depressed individuals were more likely to exhibit an attentional bias (i.e., faster reaction times when identifying the location of the dot) for negative words presented at longer (1000 ms) rather than shorter (500 ms) durations. Results may intimate that a greater level of post-conscious awareness or late attentional stages are implicated in attentional biases of depression. Meta-analyses demonstrated further support of the notion that depressed individuals' negative attentional bias is exhibited more so during late rather than early attentional stages (Armstrong & Olatunji, 2012; Suslow et al., 2020). Early attention refers to one's initial gaze of a stimulus (Gamble & Rapee, 2009) and late attention refers to one's gaze maintenance (Calvo & Lang, 2004). Specifically, a recent meta-analysis (Suslow et al., 2020) examining attentional biases in depressed and non-depressed samples using eye-tracking methods found that depressed individuals were more likely to maintain their gaze on negative stimuli (e.g., sad faces) than non-depressed individuals. However, no significant differences between depressed and non-depressed individuals regarding initial eye-gaze were found. Such pattern of findings suggests that some degree of conscious awareness of negative content may serve as an important factor in sustaining biased attentional processes in depression.

In addition to longer exposure durations for stimuli (or initiation of late rather than early attention), depression-relevant content appears to drive negative attentional biases of depressed individuals. For instance, participants were exposed to pairs of faces (one emotional [happy, sad, or angry], one neutral) followed by a dot replacing either the image of the emotional or neutral face (Gotlib et al., 2004). Participants were then asked to indicate the location of the dot. Results demonstrated that depressed individuals (rather than non-depressed and anxious individuals) were more likely to exhibit a negative

attentional bias for sad faces (i.e., react to the dot-probe task faster for sad faces rather than the happy, angry, or neutral faces). Consistent with Beck's (1976) content-specificity hypothesis, depressed individuals more likely gravitate toward sad stimuli (or stimuli that is characteristic of depression and congruent with the individual's current dysphoric mood) as opposed to negative stimuli in general. On the other hand, as characteristic of anxiety, anxious individuals more likely gravitate toward stimuli reflecting threatening or fearful information (see meta-analysis on threat-related attentional biases of anxious individuals: Bar-Haim et al., 2007). Thus, studies examining external attention have demonstrated a negative attentional bias in depressed individuals, with stronger effects for depression-relevant stimuli presented for longer durations (Gotlib & Joorman, 2010).

Studies assessing internal attention also exhibited depressed individuals' tendency to focus on more negative rather than positive or neutral content. Internal attention refers to the cognitive processes relying on schemas or mental representations of the world—such as one's thoughts and memories—rather than the environmental cues implicated in external attention (Mennen et al., 2019). For example, past meta-analyses (Gaddy & Ingram, 2014; Matt et al., 1992) demonstrated that depressed individuals are more likely to recall negative rather than positive memories. Additionally, in one study asking undergraduates to deeply reflect on and write about how they felt about going away to college, depressed students were more likely to use negative emotion words (e.g., *sad*, *homesick*) in their responses than students who reported never being depressed (Rude et al., 2004). Other researchers (Ireland et al., in prep) examined users' level of social engagement in an online depression forum. Social engagement was measured by

computing language style matching scores (a linguistic metric of coordination or mimicry; Ireland & Nalabandian, 2022) or the degree to which the language style in each user's post matched with that of others' posts in the forum. Findings demonstrated that users engaged (or linguistically matched) more in discussions of depressive symptoms (i.e., negative content) than of recovery (i.e., positive content). A quasi-experimental follow-up by the same researchers had participants read two online forum-style appeals for dating advice, one negatively toned and one positively toned. After reading the prompts, participants responded with their own advice and answered questions about the prompt authors (e.g., how much they identified with the author). Participants scoring higher on depression were more likely to linguistically match with the negative (rather than the positive) prompt and this association was significantly mediated by higher levels of identification with the author of the negative prompt. That is, depression-prone individuals were more likely to engage with the negatively toned prompt if they believed that the prompt author dealt with similar negative experiences as themselves.

Such findings suggest that depression is characterized by maladaptive attentional biases pertaining to both negative and self-relevant information. For example, individuals scoring higher on trait depression—in addition to using more negative emotion words (Rude et al., 2004)—used more first-person singular pronouns (i.e., *I*, *me*, *my*, a linguistic and behavioral measure of self-focused attention) in their everyday spoken and written language (Tackman et al., 2019). In particular, individuals experiencing depressive episodes were more likely to use negative emotion language in conjunction with self-focused language (e.g., *I feel guilty*) than non-depressed controls (Baddeley et al., 2013). Thus, research shows that depressed and depression-prone individuals not only focus on



negative content but negative self-focused content, consistent with Beck's (1967) depressive schema model that emphasizes depressed individuals' negative self-view.

### ***Self-Focus***

Past research shows that negative and self-relevant attentional biases in depressed individuals are highly correlated. Drawing from Beck's (1967) depressive schema model—as well as Duval and Wicklund's (1972) and Carver and Scheier's (1981) theories incorporating self-regulation as a key factor in shaping attentional biases in depression—Pyszczynski and Greenberg (1987) argued that depressed individuals demonstrate a tendency to self-focus because of their decreased sense of self-worth, for which they are determined to reinstate or recover. If there are discrepancies between one's current and desired states, the individual undergoes a self-regulatory process in which they engage in behaviors and cognitions to diminish the discrepancy between their current and desired states. However, depressed individuals exist within a perpetual self-regulatory cycle, where they continually fail to diminish the discrepancy between their current and desired states, which leads to negative affect. The extant literature—largely based on Pyszczynski and Greenberg's (1987) self-regulatory perseveration theory of depression—illustrates not only that negative affective and self-focused biases are related to depression (refer to meta-analysis by Everaert et al., 2017) but that negative affect and self-focus are bidirectionally linked in depression more so than in other conditions.

For example, in an examination of daily diary entries of self-reported mood and self-focused language, previous research implicates the positive association between self-focus and negative affect as more apparent in individuals diagnosed with depression than those diagnosed with anxiety disorders (and co-morbid anxiety or depression) as well as

non-depressed individuals (Mor et al., 2010). More specifically, past studies found that different types of negative self-focus are associated with depression versus anxiety. Those who scored higher on depression were more likely to score higher on private self-consciousness (i.e., the degree to which participants generally reflect and scrutinize themselves as well as attend to their inner feelings; Smith & Greenberg, 1981). In particular, results from a meta-analysis (Mor & Winquist, 2002) demonstrated that private self-consciousness more strongly related to depression, whereas public self-consciousness (i.e., thinking about oneself in terms of social contexts, such as concerns about perceptions of others) more strongly related to anxiety. Findings relating to private self-focus and depression also extend to ruminative self-focus, a construct similar to (albeit distinct from) that of private self-consciousness.

Rumination—as defined by Susan Nolen-Hoeksema [and her colleagues] (2008), a pioneer in this sub-area of depression research—is a maladaptive response style or coping mechanism for distress, wherein one’s thoughts center on the symptoms and potential causes of their condition. In other words, rather than engaging in behaviors that might alleviate one’s symptoms, they analytically think about their issues and emotions revolving around their condition. For depressed individuals, this self-focused analytical thinking is usually negative. For instance, in a naturalistic study using an experience sampling method, participants reported on their levels of ruminative self-focus and negative affect eight times a day (at random intervals as prompted by a watch alarm) for one week (Moberly & Watkins, 2008). Results showed that ruminative self-focus and negative affect were positively correlated, and that this correlation was stronger for those scoring higher on depression symptoms. These researchers also found that state

ruminative self-focus at a preceding time point predicted state negative affect at a subsequent time point and vice versa. Such results suggest that ruminative self-focus precipitates negative affect and depression and that negative affect also precipitates ruminative self-focus.

In fact, experimental studies manipulating self-focus and negative affect have found each state to be causal factors of the other (see meta-analysis on self-focused and negative attentional biases in depression: Mor & Winquist, 2002). For example, researchers (Wood et al., 1990) induced either a sad or neutral mood in participants (by having them think about an experience—real or imagined—that would make them feel sad or neutral) and measured their levels of self-focus afterwards (using a task in which participants were asked to choose the best fitting pronoun—*I*, *they*, or *we*—to replace blanks in a list of sentences). Results demonstrated that participants in the negative mood condition were more self-focused (i.e., chose first-person singular pronouns in sentence completion tasks) than those in the neutral mood condition. Results suggest that depressed individuals' negative attentional bias may propel them into a state of self-focused rumination. Thus, research substantiates how negative affect leads to self-focus and vice versa, initiating a maladaptive cycle of negative affect and self-focus that maintain and exacerbate depression.

Research also suggests that negative self-focused attentional biases are particularly salient for those experiencing mild to moderate depression. For instance, one study examined self-focused attention and symptoms of both depression and anxiety in chronically depressed (e.g., current depressive episode lasted for two or more years), non-chronically depressed (e.g., depressive symptoms are episodic), and never-depressed

individuals. Results showed that first-person singular pronoun use (while recalling positive and negative memories) was greater in non-chronically depressed than never-depressed individuals (Brockmeyer et al., 2015). For never-depressed (but not for chronically or non-chronically depressed) participants, both depression and anxiety symptoms were positively correlated with rates of first-person singular pronoun use when recalling negative (not positive) autobiographical memories. Such findings intimate that self-focused attention may be more apparent in and problematic for mild to moderately depressed (or even subclinically depressed) individuals. Therefore, both depressed individuals' self-relevant and depression-relevant (or negative) attentional biases must be addressed in any effective treatment (or preventative intervention) of depression, in order to disrupt the maladaptive cycle and negative feedback loop brought on by negative affective and self-focused states that function to increase depressive symptoms.

### **Social Markers of Depression**

Previous research demonstrates both a correlational and causal link between self-focus and negative affect in depression; however, self-focused attention may also reflect social aspects of depression, such as social withdrawal, loneliness, and thwarted belongingness, that may serve to increase negative affect and depressive symptoms. For example, data across multiple studies from multiple labs were compiled and analyzed, demonstrating that first-person singular pronoun use positively correlated with depression, anxiety, and neuroticism (or negative emotionality) in general (Tackman et al., 2019). Such *I*-talk, or allocation of focus toward the self, characteristic of depressed or depression-prone individuals, may represent the absence of the other, or this distinction that a depressed individual experiences social isolation.

Individuals diagnosed with depression often appear to have poor social skills or withdraw from their social networks, leading them to feel rejected (Segrin, 2000; Segrin & Abramson, 1994). During depressive episodes—when social support is arguably needed most—individuals with depression may feel as though they do not belong and struggle to seek or obtain help from their social networks (Schaefer et al., 2011). Baumeister and Leary (1995) argue for the importance of satisfying one’s belongingness needs by engaging in long-term intimate relationships, as feelings of isolation may evolve into psychological disorders. In fact, decreased feelings of belongingness are strongly associated with depressive symptoms (Choenarom et al., 2005; Hagerty & Williams, 1999; Hagerty et al., 1996).

The link between depression and belongingness is emphasized further with first-person singular pronoun (or self-focused language) use. For instance, when participants wrote about their most recent interaction with a loved one, women (not men) with higher levels of depression used more *I*-words if they had weaker (rather than stronger) belongingness needs (Nalabandian & Ireland, in prep). These results—consistent with research demonstrating a higher prevalence of depression (Nolen-Hoeksema & Hilt, 2009) and self-focused language (Chung & Pennebaker, 2007) in women—further support the depression and first-person singular pronoun association as a reflection of social withdrawal. In other words, those with lower belongingness needs potentially use more self-focused pronouns as an indication of their isolation from others.

Because increased feelings of loneliness and isolation as well as decreased feelings of belongingness are characteristic of depression, interventions that involve bolstering belongingness and combatting isolation and loneliness may help to decrease

depressive symptoms. Indeed, past research implicates social support as a significant buffer of psychological distress, including distress caused by depressive episodes (Cohen & Wills, 1985). Even the use of first-person plural pronouns (*we, us, our*)—which theoretically reflects feelings of belongingness, affiliation, and social connectedness (Chung & Pennebaker, 2007)—predicts positive health outcomes for a variety of mental (e.g., substance use disorders, Rentscher et al., 2017; Rohrbaugh et al., 2012) and physical (e.g., heart failure, Rohrbaugh et al., 2008; breast cancer, Robbins et al., 2013) health issues. Therefore, if depressed individuals are prone to social isolation and withdrawal, exposure to fictional narratives (that inspire a depressed reader to adaptively cope with their condition) may serve as a potential intervention for instilling belongingness and subsequently decreasing depressive symptoms in an unobtrusive and less socially intimidating way. For example, depressed individuals—as consistent with negative and self-focused attentional biases—would more likely attend to depression-relevant narratives about a depressed protagonist with whom they may easily identify and develop a parasocial bond. A parasocial bond, or a one-sided bond that an audience member forms with a fictional character or media persona in a television series, movie, book, etc. (Tukachinsky et al., 2020), may then foster an increase in belongingness and a decrease in depression.

### **Current Treatments for Depression**

Past research established many different methods of treating depression and its various symptoms. In particular, cognitive-behavioral therapy (CBT) is a “first-line treatment” for depression (Anxiety & Depression Association of America, 2020), wherein both cognitive and behavioral orientations of psychology are taken into account.

CBT is a class of therapeutic treatments (Dobson & Dozois, 2010; Wakefield & Hupp, 2011) for depressed individuals that generally focuses on treating depressed patients' maladaptive cognitions (e.g., negative self-focused biases) and behaviors (e.g., social withdrawal and isolation).

There are many different variations of CBT, such as cognitive therapy (CT; Beck et al., 1979), which is directly based on Beck's (1967) cognitive (depressive schema) model of depression discussed in the "Attentional Biases in Depression" section of this dissertation. CT aims to treat all forms of depressive symptoms by targeting maladaptive cognitions, with the rationale that treating the root of depression (i.e., maladaptive cognitions) would then alleviate emotional and behavioral symptoms as well (Jewell, 2011). CT utilizes strategies, such as cognitive restructuring—which emphasizes assisting the depressed patient identify maladaptive cognitions (e.g., thoughts, beliefs, expectations) and instructing them in ways to alter said maladaptive cognitions to more adaptive cognitions (Clark & Beck, 2010). Specifically, CT combats the associative processing (i.e., bottom-up or automatic processing), which is a quick and automatic way of using previously stored information gathered from past experiences to make sense of one's current environment or situation (Smith & DeCoster, 1999), that maintains depressed individuals' negative self-focused bias and depressive symptoms. At the same time, CT encourages more elaborative processing (i.e., top-down or reflective processing), which involves consciously or deliberately thinking about how to navigate one's environment (Smith & DeCoster, 2000), that serve to help control depressed individuals' more maladaptive thoughts.

Several meta-analyses since the late 1980s (e.g., Cuijpers et al., 2008; Dobson, 1989; Gloaguen et al., 1998) substantiated CBT (or CT) as a highly effective method of treatment for depressive disorders. However, a more recent meta-analysis (Johnsen & Friberg, 2015) examining the treatment effects of CBT over time demonstrated a decrease in the effectiveness of therapeutic treatment outcomes. The authors of this recent meta-analysis also found that female patients were more likely to experience positive treatment outcomes from CBT than male patients. Such a discrepancy in treatment outcomes between men and women may be due to stigmatization of mental health issues (Crocker & Major, 1989), especially because men are less likely to engage in self-disclosure (Dindia, 2002) which would potentially limit the positive effects of talk therapy. Thus, the findings concerning decreased efficacy of CBT over time and lower efficacy of CBT for men emphasize the importance of investigating supplementary interventions (implemented in conjunction with CBT) for depressed individuals as well as interventions that focus on preventative measures for depression-prone individuals.

Treatments, such as CBT, primarily target maladaptive cognitions (e.g., negative thoughts), whereas other treatments target maladaptive cognitive processes (e.g., rumination, negative self-focused attentional biases) that trigger, maintain, and even exacerbate depressive symptoms. For example, researchers assessed the efficacy of attention bias modification (ABM) as a treatment for depression, an intervention that involves reversing attentional biases in depression. ABM interventions require the depressed individual to complete dot-probe tasks, with a dot replacing the non-negative stimulus more often than the negative stimulus as a way for the depressed individual to reallocate their attention to neutral or positive stimuli (Mennen et al., 2019). Similar to



ABM, studies also assessed the efficacy of cognitive bias modification for interpretation (CBM-I) in depression. CBM-I helps depressed individuals form more positive (rather than negative) interpretations of ambiguous stimuli (e.g., repeatedly reading about different scenarios that are initially ambiguous but end with a positive outcome; Blackwell & Holmes, 2010).

However, meta-analyses on ABM and CBM-I yielded mixed effects, with CBM-I demonstrating larger effects than ABM (Cristea et al., 2015; Hallion & Ruscio, 2011) and for anxious rather than depressed samples (Hallion & Ruscio, 2011; Jones & Sharpe, 2017). Although the general effects of ABM and CBM-I show that patients are less likely to engage in negative attentional or interpretation biases after the respective intervention, findings regarding whether or not ABM and CBM-I interventions successfully reduce depressive symptomology, specifically, are mixed (Cristea et al., 2015; Hallion & Ruscio, 2011; Jones & Sharpe, 2017). Such mixed findings within the literature may be due to the lack of contextual meaning associated with the ABM and CBM-I training stimuli. The training stimuli used in ABM (e.g., negative and positive words) and CBM-I (i.e., sentences or paragraphs with a positive or negative tone) may not sufficiently relate to the depressed patient's experience, wherein the effects of training fail to transfer to patients' own negative self-focused thoughts that trigger and maintain rumination and other depressive symptoms. In other words, the depressed patient is not learning adaptive ways to manage their current depressive state (whether implicitly or explicitly); they, therefore, are unable to relate such stimuli to their own situation and find a meaningful way to apply it in their daily life.

In particular, interventions aimed at improving mental health tend to be more effective and scalable if they are self-relevant and parsimonious (Hall et al., 2021; Knapp & Wong, 2020). To both reduce maladaptive attentional biases as well as depressive symptoms, interventions should expose depressed individuals to content that is directly applicable to their own experiences. For example, exposure to a narrative revolving around a depressed protagonist that ends with a positive resolution may allow the depressed reader to simulate and apply that positive resolution in their own life. Such a narrative intervention for depression would not only serve as self-relevant and inexpensive but would help the depressed reader combat negative schemas (i.e., the positive resolution should stymie negative attentional biases) and rumination as well. In fact, research on narrative identity—an individual’s identity as conceptualized by their life stories (i.e., reconstructed episodic or autobiographical events; McAdams, 2018)—demonstrated that developing coherent positive resolutions to negative life events and engaging in positive meaning-making of such negative experiences is associated with positive mental health (e.g., greater well-being and happiness; McAdams & McLean, 2013). Past research also shows how thinking about oneself in a more adaptive way (e.g., experiential self-focus or thinking about one’s physical experience in the current moment [Watkins & Teasdale, 2004]; mindful self-awareness as promoted by mindfulness-based cognitive therapy [MBCT; Segal et al., 2002]) is related to decreased rumination and depressive symptoms. Thus, a depressed individual engaging in positive meaning-making by relating an adaptive fictional scenario to their own life might also decrease depressive symptomology.

## **Narrative Interventions**

Previous research has examined the efficacy of different types of narrative interventions, such as bibliotherapy, for a wide variety of mental health issues.

Bibliotherapy is a form of self-help therapy that involves the patient's mental health practitioner—often with the guidance of a librarian—assigning readings that outline the patient's mental health issues (e.g., depression) and how they can reduce their own symptoms through specific cognitive or behavioral therapeutic techniques (Forrest, 1998; Gualano et al., 2017; Popa & Porumbu, 2017). One of the earliest references to an established form of bibliotherapy was in 1813, at a mental institution in England where specific texts were selected for patients to read in hopes of reducing their symptomology (none of which included fiction or work that “in any degree connected with the peculiar notions of the patient;” Tuke, 1813).

The rationale for and advantage of bibliotherapy is the reduced cost of such self-help interventions in comparison with that of expensive psychotherapy sessions; however, one caveat remains that bibliotherapy interventions are more successful for those with mild to moderate rather than severe depression (Gualano et al., 2017). An explanation as to why bibliotherapy more so provides successful treatment for those experiencing less severe forms of depression may be due to the amount of cognitive work required to read non-fictional texts. Depressed individuals' cognitive faculties are often depleted and impaired (whether on account of an unrelenting dysphoric mood [Beever, 2005] or intrinsic processing, such as reoccurring negative thoughts and rumination [Jones et al., 2010; Levens et al., 2009; Papazacharias & Nardini, 2012]). Therefore, they may not gravitate toward assignments (e.g., applying therapeutic techniques and

strategies discussed in self-help texts to one's daily life) that would result in even further cognitive depletion, especially if they only have themselves for accountability in completing such tasks.

On the other hand, exposure to fiction (rather than non-fiction or self-help books) may be less cognitively depleting for depressed individuals and allow for greater engagement in (and positive outcomes attributed to) reading fictional narratives. For example, one study found that older adults who reported reading for pleasure were less lonely than those who reported not reading for pleasure (Rane-Szostak & Herth, 1995). Perhaps if a depressed patient read about a character going through similar experiences as themselves, they may feel as if they are not alone in the world. In other words, the depressed patient's sense of belongingness may increase if they identify and develop a parasocial bond with the fictional protagonist, potentially contributing to a decreased sense of loneliness as well as a reduction in other symptoms of depression. That is, a connection with fictional characters who experience the same "peculiar notions of the patient" (Tuke, 1813) may very well help rather than hurt the patient.

Indeed, there exists a growing body of research examining the effects of bibliotherapy utilizing fiction rather than non-fiction (self-help) texts. A group of researchers based in the University of Liverpool in England have developed bibliotherapy interventions, known as Get into Reading or Shared Reading, to treat various physical and mental health issues. Get into Reading (GiR) or Shared Reading (SR) are programs that offer individuals resources similar to that of group therapy, wherein individuals diagnosed with a certain disease or disorder come together with a group facilitator to read

and discuss assigned novels, short stories, and poetry (Billington, 2011; Billington et al., 2013; Billington et al., 2017; Dowrick et al., 2012).

One specific GiR intervention with patients diagnosed with depression demonstrated a decrease in depression symptoms from the start to the end of the 12-month program (Dowrick et al., 2012). Through qualitative close readings of the group sessions, the authors suggest that such positive mental health outcomes may be attributed to the skills and literary expertise of the group facilitator, the sense of social support and community between the group members (exhibited through mimicry of diction and syntax), and the meditative, calm state and concentration generated by the reading material, fiction and poetry, respectively. Other research on GiR or SR programs shows comparable positive treatment outcomes for individuals diagnosed with chronic pain (Billington et al., 2017) and dementia (Billington et al., 2013; Longden et al., 2015) as well as for incarnated individuals (Billington, 2011; Billington et al., 2016).

The overall pattern of findings for the GiR and SR studies yielded positive treatment outcomes; however, the majority of these studies were naturalistic and reported correlational or qualitative results (Billington et al., 2016; Dowrick et al., 2012). The studies that were quasi-experimental consisted of small samples (e.g., 10 participants for a study comparing CBT and SR treatment effects for those diagnosed with chronic pain, Billington et al., 2017; 31 participants comparing SR treatment and control groups for those diagnosed with dementia, Longden et al., 2015) which—although allows for an examination of trends within the data—contributed to null effects (Billington et al., 2013) as well as limited generalizability (or external validity) of the results. Accordingly,

researchers must implement a more tightly controlled experimental design in order to further assess effects of reading fiction on depression and mental health in general.

An additional limitation to the Get into Reading or Shared Reading studies remains that they solely incorporated classic literature (e.g., *Of Mice and Men* by John Steinbeck) and poetry (e.g., *Tell the Truth* by Emily Dickinson) into their curriculum (i.e., material that participants are asked to read; see Billington et al., 2017 for more examples). Specifically, this group of researchers emphasize that there exists a dichotomy within fiction and literature, where there are more serious and complex narratives (that portray “important” and “moral” themes) versus narratives that are more “ephemeral” that encompass popular culture (O’Sullivan et al., 2015). The researchers conducting the GiR and SR studies argue that, with these more serious texts, individuals are able to generate some kind of deeper meaning and insight, which is the key to experiencing positive outcomes from fiction reading (O’Sullivan et al., 2015).

However, reading “serious” texts or classic literature independently (outside of a facilitated group setting) as a form of self-help therapy may pose some issues for people experiencing depression. Because depressed individuals tend to have depleted or impaired cognitive resources (Beevers, 2005; Jones et al., 2010; Levens et al., 2009; Papazacharias & Nardini, 2012), reading or trying to comprehend serious literature may be difficult (or require more cognitive work) and, subsequently, exacerbate rumination and depressive symptoms. Additionally, popular culture, or fiction enjoyed by the masses, depicts the same moral concerns as serious literature. Embedded within those texts are ideologies circulated and perpetuated within a specific culture (Althusser, 1971) which offer the reader plenty of opportunity to engage in meaning-making of a text and

relating said text to one's own life experiences. Therefore, including less serious texts in self-help narrative interventions may serve as less cognitively taxing and produce stronger treatment effects for those experiencing depressive symptoms.

In fact, past research examined popular fiction (e.g., more contemporary rather than classic literature) in bibliotherapy treatments for psychological disorders. For example, a recent study (Troscianko, 2018) assessed the self-reported fiction reading habits and health outcomes of individuals diagnosed with an eating disorder. Results showed that participants with an eating disorder reported experiencing more negative outcomes concerning body image, diet, and exercise after reading eating disorder-related fiction. Although Troscianko's (2018) findings are inconsistent with the idea that reading fiction about characters experiencing the same mental health condition as the reader precipitates positive health outcomes, those results were correlational. For that reason, we cannot conclude whether reading such fiction directly causes negative outcomes or if there exist mediating or moderating variables driving this association. Factors such as character identification, parasocial relationships, and narrative resolutions may all play a role in determining mental health outcomes for individuals participating in narrative interventions. Experimental research examining the causal effects of different kinds of narratives and narrative resolutions instilling character identification and parasocial bonds is necessary to further unpack the findings illuminated by previous correlational and quasi-experimental work.

### ***Character Identification***

In particular, some researchers propose that the positive outcomes of bibliotherapy with fictional texts are conditional on character identification, or portrayals

of the protagonist going through similar experiences to that of the patient (e.g., both the protagonist and patient are diagnosed with the same disorder; Coleman & Ganong, 1990; Pardeck, 1994; Troscianko, 2018). Reading a novel with a protagonist living through the same or similar experiences as the reader can facilitate identification with said protagonist, which in turn may encourage readers to engage in introspection and help them deal with their own issues (Coleman & Ganong, 1990; Pardeck, 1994).

Prior research demonstrated links between readers' identification with fictional characters and changes in readers' attitudes and behaviors (De Graaf et al., 2012). Exposure to fictional narratives allows individuals to simulate experiences that may potentially take place in their own life, subsequently assisting individuals to develop scripts for certain situations they may not have yet experienced (Fong et al., 2013; Mar & Oatley, 2008; Oatley, 1999; Tan, 2008). If readers identify with (or feel similar to) the narrative protagonist, then they may be more likely to simulate the character's experiences and assume their attitudes and beliefs (Green, 2021). For example, one study found that those experiencing greater baseline suicidal ideation were more likely to report even greater suicidality after watching a movie about a protagonist who dies by suicide, with this effect conditional on whether they identified with the protagonist (Till et al., 2015). However, if a depressed and suicidal individual identifies with a depressed and suicidal protagonist that experiences a positive coherent resolution, they may mirror the same adaptive behaviors and attitudes that the depressed protagonist experiences by the end of the narrative.

Additionally, because the experience of identifying with a character involves reconciling the similarities of oneself with that of another (Cohen, 2001), character



identification might strongly relate to social constructs, such as interpersonal closeness (i.e., overlap between self and other) and belongingness. Past research established the negative correlation between depression and belongingness (Choenarom et al., 2005; Hagerty & Williams, 1999; Hagerty et al., 1996), suggesting that reinstating one's sense of belongingness may potentially serve to reduce depressive symptomology. Therefore, when individuals experience a depressive episode, they may not desire social interaction. A possible first step in resisting that urge for social withdrawal and isolation may be to read a narrative in which they can relate to the protagonist and develop a parasocial relationship, effectively satisfying their belongingness needs through alternative means.

### ***Parasocial Bonds***

Parasocial interactions and parasocial relationships with fictional characters may partially satisfy belongingness needs of a depressed individual and further propel them to simulate such bonds with individuals in the real world, ultimately helping to combat their state of social withdrawal and isolation. Historically, parasocial interaction was first operationally defined by Horton and Wohl (1956) as a “conversational give and take” (p. 215) between media personae and audience members, within the context of theatrical performances, radio talk shows, and television shows with studio audiences. However, the conceptualization of parasocial interactions and relationships evolved over the decades and now extends to media in which no explicit communicative exchange takes place between the persona (or character) and audience member.

Parasocial interactions constitute the reader's or viewer's cognitive and emotional experiences with a fictional character or media persona (e.g., feeling empathetic toward a fictional character) while reading or viewing content depicting the character or persona

(Bernhold & Metzger, 2020; Brown & Chaván de Matviuk, 2010). On the other hand, parasocial relationships represent a one-sided bond between an individual and their favorite fictional character or media persona that, although may be initiated at the time of media exposure, essentially transitions beyond that experience (Dibble et al., 2016). That is, the viewer or reader thinks about the character or persona during times when they are not exposed to the media content (e.g., talk show) or narrative (e.g., TV show, film, novel).

While parasocial relationships are not based in reality, they demonstrate the same psychological effects of real-life relationships (Gabriel et al., 2018). For instance, as the audience member consumes more and more content (e.g., episodes of a television show)—further getting to know the character—their intimacy with the character grows similar to that of a real-life relationship (Horton & Wohl, 1956). Stronger parasocial relationships or bonds between an individual and their favorite television show character are correlated with greater distress upon the series finale, not unlike one's experience of stress after a break-up with a close friend or romantic partner (Eyal & Cohen, 2006). Parasocial relationships have also been implicated in activation of the same brain regions as real-life relationships, solidifying the similar processes between the two types of relationships (Jacobs & Willems, 2018; Stever, 2017; Tukachinsky et al., 2020). The parallels between parasocial and real-life relationships suggest that the parasocial bond is a crucial construct to take into account when examining the effects of fiction-based interventions on individuals' cognitive and emotional states.

Recent research begins to examine what role parasocial bonds play in individuals' mental health and well-being. In particular, studies demonstrated the potential for

parasocial bonds in diminishing feelings of loneliness. One correlational study showed that participants were more likely to expect experiencing less loneliness after watching their favorite television show than after engaging in other activities (e.g., going to church, doing drugs; Derrick et al., 2009). In addition to reducing expectations of loneliness, results from two other studies by the same researchers further demonstrated that parasocial bonds are tied to one's need to belong. For instance, participants whose belongingness needs were thwarted (i.e., those who wrote about a conflict with a significant other) subsequently wrote about their favorite television show for longer than participants whose belongingness needs were not thwarted (i.e., those who wrote about different objects in their home; Derrick et al., 2009). Complementing those results, in another follow-up study, participants who wrote about their favorite television show identified fewer exclusion words during an exclusion word completion task than those who wrote about shows they watch "when nothing else is on" or who wrote about an academic achievement (Derrick et al., 2009). Such results suggest that immersing oneself in the fictional world of a television show might alleviate feelings of loneliness and increase feelings of belongingness.

Nevertheless, the aforementioned studies neither assessed the parasocial bond between the participant and fictional character nor participants' self-reported state or trait belongingness, leaving the degree to which (different types of) parasocial bonds influence one's sense of belongingness an open question. Specifically, previous research neglected to address whether parasocial bonds may increase belongingness and alleviate symptoms of mental health conditions characterized by social deficits (e.g., decreased belongingness, increased social withdrawal, isolation, and loneliness), such as depression.

With past research linking the experience of parasocial interaction and bonds with that of decreased loneliness and increased belongingness, a narrative intervention allowing depressed individuals to develop parasocial bonds with characters may yield positive treatment outcomes.

### ***Narrative Resolutions***

Other than depicting a protagonist in which a depressed reader can identify and form a parasocial bond with, narrative resolutions are also important to take into account when determining the efficacy of narrative or fiction-based interventions. Any effective form of narrative intervention for depression must include a positive coherent ending, wherein the depressed protagonist is able to engage in positive meaning-making and manage their situation in an adaptive way. A narrative about a depressed protagonist who fails to resolve their difficulties by the narrative's end will most likely prevent a depressed reader from disengaging with the negative information relayed in the narrative, as consistent with past research on depression and negative attentional biases outlined earlier in the "Introduction." A negative resolution would most likely serve to propel the depressed reader further into a ruminative episode exacerbating depressive symptomology.

In fact, narratives that portray characters experiencing mental health issues (e.g., depression and suicidal ideation) and end with that character's downfall and demise have, historically, precipitated negative effects on readers. For example, in 1774, the publication of Johann Wolfgang von Goethe's epistolary novel *The Sorrows of Young Werther* (illustrating a young man's internal struggles who—by the end of the novel—dies by suicide) proceeded a rash of copycat suicides, with such an effect of media on

suicidal behavior now known as the Werther effect (Phillips, 1974). Although past research demonstrates the negative effects of consuming suicide-related content in television shows and movies (Gould & Shaffer, 1986; Schmidtke & Häfner, 1988), other research also shows a potential for positive effects of suicide-related narratives. For instance, those who reported watching more television shows and movies about suicide (or with suicidal protagonists) reported experiencing lower levels of depression (Ferguson, 2021). While these findings do not explain how or why viewership of suicide-related narratives and audience's depression rates are negatively correlated, more recent research attempts to examine the mechanisms for which different types of narratives provide positive mental health outcomes for audiences.

In particular, positive resolutions illustrated within suicide-related narratives have produced promising results in terms of positive mental health outcomes. In one study (Till et al., 2015), participants watched either a film with a positive resolution (i.e., the suicidal protagonist overcomes their mental health issues) or a negative resolution (i.e., the suicidal protagonist dies from natural causes or by suicide) and answered questions about their mood and mental health. Findings showed that watching a film that results in a main character's death (whether by suicide or by natural causes) significantly increased negative mood and depression, whereas watching a film with a positive resolution significantly increased life satisfaction and belief in a benevolent world. Such results demonstrate a Papageno effect, named for the protagonist in Wolfgang Amadeus Mozart's opera *The Magic Flute* whose plans to die by suicide are thwarted after a meaningful incident with those persuading Papageno against the act (Niederkrotenthaler et al., 2010a). Thus, the Papageno effect refers to protective factors that buffer against

suicidal behavior and ideation depicted in narratives (Niederkröthenthaler et al., 2010b). In other words, exposure to adaptive information pertaining to one's mental health issues may reduce symptomology. In all, there are multiple components of fictional narratives, such as narrative resolutions, character identification, and parasocial bonds, that researchers must assess in order to generate a deeper understanding of what types of narratives produce positive outcomes for those experiencing depression.

### **Hypotheses**

The current dissertation tested a fiction-based narrative intervention for subclinically depressed individuals to help prevent further exacerbation of depressive symptoms by reorienting negative self-focused attentional biases. Although past research examined the impact of various narrative interventions (fiction- and non-fiction-based) on mental health and well-being, the majority of these studies did not experimentally manipulate the effect of different types of narratives on mental health outcomes (e.g., examining outcomes of reading groups in which group members read large selections of classic literature; Billington et al., 2016) or key aspects of narratives that would play a role in symptom reduction (e.g., solely manipulating different types of narrative resolutions rather than different types of characters as well; Niederkröthenthaler, 2010a). The present dissertation examined exactly what types of narratives depressed individuals would most likely attend to and engage with as well as what types of narratives would most likely reduce depressive symptomology.

In order to determine which types of narratives would most effectively reduce depressive symptomology, one must first determine what narratives depressed individuals will likely attend to or engage with most. A narrative that a depressed individual is better

able to attend and engage with allows for further processing and simulation of the ways in which the protagonist adaptively copes with their negative experiences. Thus, consistent with past research on negative self-focused attentional biases and depression, depressed individuals should more likely attend to narratives depicting depression- and self-relevant content. In other words, depressed individuals will more likely gravitate toward narratives depicting a depressed protagonist dealing with similar negative experiences as themselves (i.e., identify with the protagonist) with whom they may develop a stronger parasocial bond (i.e., character identification positively correlates with parasocial bonds; Tukachinsky et al., 2020). Therefore, I hypothesized that:

**(H1a)** The type of protagonist depicted in the narrative excerpt will moderate the positive associations between trait depression and narrative ratings as well as narrative engagement. That is, individuals scoring higher on trait depression will positively rate and engage (language style match) more with narrative excerpts portraying a depressed protagonist rather than a non-depressed protagonist.

**(H1b)** The moderation effect of protagonist type on the positive correlations between trait depression and narrative ratings as well as narrative engagement will also be serially mediated by character identification and parasocial bond. Specifically, those higher on trait depression will identify more with and, subsequently, develop a parasocial bond with a depressed (rather than a non-depressed) protagonist, leading to higher narrative ratings and engagement.

In addition to determining what types of narratives depressed individuals are more likely to positively rate and engage with, the narrative resolution must be taken into account when examining the effectiveness of narrative interventions. For example, past

research demonstrates that exposure to situations involving negative stimuli drives depression-prone individuals to engage in maladaptive self-focus (e.g., negative self-focused attentional biases, ruminative self-focus) which, subsequently, exacerbates depressive symptoms (Beevers 2005, Moberly & Watkins, 2008; Mor & Winquist, 2002; Wood et al., 1990). A narrative intervention for depression portraying a negative ending (i.e., the conflict is left unresolved)—regardless of whether or not the narrative depicts a depressed protagonist or a non-depressed protagonist—would most likely instigate negative self-focused attentional biases in a depression-prone individual which, in turn, would increase depressive symptoms. Likewise, a narrative about a non-depressed protagonist with a positive ending (i.e., the conflict is resolved) would also result in greater negative self-focused attention and depressive symptoms. The positive resolution of the non-depressed protagonist would highlight the discrepancy between the non-depressed protagonist's positive situation and the depressed reader's negative situation. Based on self-discrepancy theories (Higgins, 1987; Pyszczynski & Greenberg, 1987), such a discrepant state would further aggravate the depressed reader's condition by propelling them to analytically think about their condition (e.g., question why they are experiencing depressive symptoms while others, even fictional characters, are able to resolve their issues adaptively).

However, a narrative about a depressed protagonist with a positive ending may prevent (or reorient) negative self-focused attention and lessen the severity of depressive symptoms. For instance, the depressed individual reading about the similarly depressed protagonist may feel as if they are not alone in the world, serving to increase feelings of belongingness. Additionally, the depressed reader simulating the adaptive thoughts and



behaviors of the depressed protagonist may positively reframe and attribute meaning to their own negative experiences, subsequently decreasing negative self-focus and depression symptoms. Therefore, I also tested the hypothesis that:

**(H2a)** Narrative protagonist type and narrative resolution type will moderate the associations between trait depression and mental health outcomes (i.e., negative self-focused attention, state depression, and thwarted belongingness). In particular, when reading a narrative excerpt about a depressed protagonist with a positive resolution, those higher on trait depression will exhibit less negative self-focused attention (measured via language use) and lowers levels of state depression and thwarted belongingness. On the other hand, when reading a narrative excerpt about a depressed protagonist with a negative resolution (or a non-depressed protagonist with either a positive or negative resolution), those higher on trait depression will exhibit greater negative self-focused language and higher levels of state depression and thwarted belongingness.

Lastly, in order to substantiate the underlying mechanisms contributing to the narrative intervention treatment effects, the constructs of character identification and parasocial bond must be examined. I hypothesized that:

**(H2b)** Character identification and parasocial bond will serially mediate the moderation effect of protagonist type and resolution type on the association between trait depression and mental health outcomes (i.e., negative self-focused attention, state depression, and thwarted belongingness). In other words, those higher on trait depression will identify more with and, thereby, develop a parasocial bond with a depressed (rather than a non-depressed) protagonist,

leading to less negative self-focused attention and lower levels of state depression and thwarted belongingness for narratives with a positive (not negative) resolution.

## Chapter II

### Method

#### Sample

An a priori power analysis was conducted in R (R Core Team, 2022)—given the number of conditions ( $k = 4$ ; depressed protagonist/negative resolution, depressed protagonist/positive resolution, non-depressed protagonist/negative resolution, non-depressed protagonist/positive resolution) in the current 2 (protagonist type) x 2 (resolution type) between-subjects design and the small effect sizes typical of social and personality psychology and language studies ( $d = .3$ ; Berry-Blunt et al., 2021; Mischel, 2004)—it was determined that 492 participants were necessary to conduct a high-powered (.8) study. Furthermore, this sample size was also considered sufficient for the hypothesized higher-order moderated serial mediation models (which included *parasocial bond* and *character identification* as mediator variables), as past studies examining parasocial interaction and perspective-taking conducted moderated serial mediation models with similar sample sizes (Li et al., 2020; Xu et al., 2021).

For the current study, 611 participants were recruited from Amazon's Mechanical Turk (MTurk; [www.mturk.com](http://www.mturk.com)), a crowdsourcing website that permits researchers to post their online studies for MTurk workers to complete in exchange for monetary compensation. Participants were compensated \$2—an amount higher than typical participant payment in MTurk studies—as previous research concerning data quality in MTurk samples suggests that greater payment relates to greater participant attention (Robertson & Yoon, 2019). All participants were 18 years of age or older and fluent in

reading and writing English (in order to successfully complete the study's reading and writing tasks).

The majority of participants passed the manipulation check, accurately judging whether the protagonist they were randomly assigned to read about was depressed or non-depressed as well as whether the narrative ended negatively or positively. Specifically, results of two Goodness of Fit ( $X^2$ ) tests demonstrated that participants ( $N = 611$ ) were more likely to correctly identify (rather than incorrectly identify) the protagonist type ( $X^2 [1] = 507.77, p < .001$ ) and the resolution type ( $X^2 [1] = 440.85, p < .001$ ) of the assigned narrative excerpt. See Tables 1 and 2 below for percentages of participants who correctly identified protagonist versus resolution type for their respective narrative excerpt.

Table 1. Percentage of participants ( $N = 611$ ) correctly identifying protagonist type (depressed vs. non-depressed) of the assigned narrative excerpt.

|            | Depressed | Non-Depressed | Total |
|------------|-----------|---------------|-------|
| Correct    | 301       | 283           | 584   |
| Incorrect  | 9         | 18            | 27    |
| Total      | 310       | 301           | 611   |
| Percentage |           |               |       |
| Correct    | 97.10     | 94.02         | 95.58 |

Table 2. Percentage of participants ( $N = 611$ ) correctly identifying resolution type (negative vs. positive) of the assigned narrative excerpt.

|           | Negative | Positive | Total |
|-----------|----------|----------|-------|
| Correct   | 272      | 293      | 565   |
| Incorrect | 19       | 27       | 46    |
| Total     | 291      | 320      | 611   |

Table 2, Continued

| Percentage<br>Correct | 93.47 | 91.56 | 92.47 |
|-----------------------|-------|-------|-------|
|                       |       |       |       |

The 72 participants who did not pass the manipulation checks were excluded from the analyses. Additionally, participants reporting a diagnosis of major depressive disorder (MDD) by a health-care professional (e.g., psychiatrist, clinical psychologist) within the past year were excluded from the analyses ( $n = 44$ ), with the rationale that the hypotheses concerned individuals experiencing subclinical, rather than clinical depression.

Considering these exclusions, the final sample ( $N = 495$ ;  $M_{Age} = 42.76$ ,  $SD_{Age} = 12.18$ ) included 46.06% females, 52.73% males, and 1.21% who preferred not to disclose their gender. In terms of the participants' ethnicity, the majority of participants were White ( $n = 348$ ), followed by Black ( $n = 46$ ), Asian ( $n = 31$ ), Other ( $n = 31$ ), Hispanic ( $n = 29$ ), Mixed ( $n = 8$ ), and Native American ( $n = 2$ ).

### Procedure

Once MTurk workers selected the study from the website and consented to participate (Appendix A), they were randomly assigned to read one of four narrative excerpts (see Appendix B for reading task prompt). Narrative excerpts (Appendix C) depicted (1) a depressed protagonist and a positive resolution, (2) a depressed protagonist and a negative resolution, (3) a non-depressed protagonist and a positive resolution, or (4) a non-depressed protagonist and a negative resolution. After participants read their randomly assigned narrative excerpt, they were asked to answer manipulation check questions (Appendix D) as well as rate (Appendix E) and write a reactionary response (Appendix F) to the narrative excerpt. Participants then answered questions about their current mental health status (i.e., state depression [Appendix G], thwarted belongingness

[Appendix H]) and about their perception of the protagonist (i.e., character identification [Appendix I], parasocial bond [Appendix J]). Finally, participants ended the study by completing a trait depression scale (Appendix K) and by answering demographic questions (e.g., sex, ethnicity; Appendix L). Once participants answered the demographic questions, they were presented with a debriefing statement (Appendix M) and a survey code for which they were required to enter on the MTurk Hit in order to receive payment (Appendix N).

## **Materials**

### ***Reading and Writing Tasks***

The narrative excerpts that participants were randomly assigned to read and write about came from Ned Vizzini's (2006) novel *It's Kind of a Funny Story* which centers around a depressed and suicidal protagonist. Utilizing narrative excerpts from the same novel helped control for potential confounds that could alter the hypothesized effects—that is, not only are the excerpts portraying the same protagonist they are also written using the same language style. Specifically, the current study used narrative excerpts taken from two brief chapters of Vizzini's novel: (1) a chapter in which the depressed and suicidal protagonist Craig experiences an extreme bout of rumination and thereby decides to die by suicide, and (2) a chapter that portrays Craig untouched by the sorrows of depression and suicide who becomes frustrated with the difficulties of mapmaking. Although both chapters end with a positive resolution, each chapter was cut short at the peak of the narrative's conflict for the negative resolution conditions, which leaves a 282-284 discrepancy in word count between the positive and negative resolution conditions for the non-depressed protagonist and depressed protagonist excerpts, respectively.

To account for the word count discrepancies and ensure that the hypothesized effects were attributed to the differences in narratives, a pilot study was conducted and confirmed that participants were more likely to correctly identify the type of protagonist (depressed versus non-depressed) and resolution (negative versus positive) of their randomly assigned narrative excerpt. For a comprehensive summary of the background, method, and results of the pilot study, please refer to Appendix O. With concern to the main dissertation study (and as aforementioned in the “Sample” subsection of the “Method” in this dissertation), participants also completed a manipulation check (i.e., identifying whether the narrative excerpt ended on a positive or negative note and whether the protagonist was depressed or non-depressed; Appendix D) immediately after reading their randomly assigned narrative excerpt.

The **depressed protagonist/positive resolution condition** (1353 words) exposed participants to the chapter portraying the depressed Craig who is able to adaptively combat his rumination and suicidal thoughts by calling a suicide hotline for help. The depressed protagonist/positive condition excerpt ends with the words “It’s a local number, and I call.” However, I added to the end of that sentence, “and get the help that I need,” so that the positive resolution is explicit. In contrast, the **depressed protagonist/negative resolution condition** (1069 words) exposed participants to the same chapter with the depressed Craig, but the chapter was cut off after Craig makes his decision to die by suicide. In the **non-depressed protagonist/positive resolution condition** (1369 words), participants read about the non-depressed Craig who finds happiness in tracing maps of New York City but experiences extreme frustration in failing at his attempts to do so; however, his mother helps him positively reframe his

thinking by explaining that his “failure” should not be attributed to any of his own shortcomings but to the lack of the physical tools necessary for mapmaking. Finally, in the **non-depressed protagonist/negative resolution condition** (1087 words), participants read about the non-depressed Craig, but the chapter was cut off at Craig’s peak level of frustration and perceived failure. All narrative excerpts can be found in Appendix C.

Depression and suicide are distinct, albeit related, constructs (e.g., suicidal ideation is part of the diagnostic criteria for depression in the *DSM*; American Psychological Association, 2013). The rationale for using narratives revolving around suicidal ideation for the depressed protagonist/negative resolution and depressed protagonist/positive resolution conditions stems from research (Till et al., 2015) demonstrating how rates of depression are indeed influenced by narratives depicting suicidal content. Past work (Lang et al., 2009) also utilized film clips that include scenes of characters experiencing suicidal ideation and death by suicide in order to successfully test the impact of cognitive bias modification interventions for depression. The current study similarly employed narratives depicting suicidal ideation to manipulate treatment effects targeting depression-prone samples.

After reading the randomly assigned chapter and completing the manipulation check (Appendix D), participants were asked to rate how much they enjoyed the narrative excerpt, on a scale of 1 (*did not like it*) to 5 (*it was amazing*), similar to how one would rate a book on Goodreads (<https://www.goodreads.com>; a website that allows users to browse, rate, and review novels; Appendix E). The narrative ratings variable ( $M = 2.73$ ,  $SD = 1.11$ ) was normally distributed and did not possess any univariate outliers.



Participants were also asked if they knew what book or movie the narrative excerpt is from, so as to control for any noise associated with previous exposure to the story (Appendix E). However, only one participant indicated that they were aware the narrative excerpt was taken from Ned Vizzini's *It's Kind of a Funny Story*. Because the same pattern of results was obtained with and without including this participant in the analyses, they were included in all subsequent analyses. Lastly, participants were asked to write about their reaction to the narrative excerpt they were assigned to read (Appendix F).

## **Measures**

### ***Linguistic Inquiry and Word Count***

The Linguistic Inquiry and Word Count (LIWC; Pennebaker et al., 2015) software is a dictionary-based method of computerized text analysis that outputs frequencies (% of total words) of various language categories in a given text. LIWC includes grammatical (e.g., articles and prepositions), psychological (e.g., positive and negative emotion), and topical (e.g., work and leisure) language categories. LIWC was used to determine the frequencies of negative affective and self-focused language as well as the frequencies of the function word categories necessary to compute language style matching.

**Negative Affective and Self-Focused Language.** Researchers often assess negative affective and self-focused attention using individuals' everyday language use (e.g., Bernard et al., 2016; Brockmeyer et al., 2015; Nalabandian & Ireland, 2019; Zimmermann et al., 2017). Therefore, in order to measure the degree to which participants engaged in maladaptive attentional biases (e.g., negative self-focus) after

reading their assigned narrative excerpt, rates of first-person singular pronoun ( $M = 5.28$ ,  $SD = 2.98$ ; *I, me, my*) as well as negative emotion word ( $M = 2.46$ ,  $SD = 1.69$ ; *cry, depressed, sad*) use in participants' written responses were determined using LIWC. The first-person singular pronouns variable had two univariate outliers and the negative emotion word variable had one univariate outlier. Both variables were positively skewed, but after winsorizing the outliers, a square root transformation for first-person singular pronouns and a log transformation for negative emotion words effectively normalized the variables.

In addition to measuring negative affect and self-focus separately using LIWC language categories, a negative self-focus language category was created based on the guilt subscale of the Positive and Negative Affect Schedule – Expanded Form (PANAS-X; Watson & Clark, 1994) so as to measure the construct of negative self-focus as a whole. The guilt subscale of the PANAS-X includes six items, in which participants identify to what degree they currently feel “guilty,” “ashamed,” “blameworthy,” “angry at self,” “disgusted with self,” and “dissatisfied with self.” Although these six items are negative emotion words or phrases, they encompass negative emotion language that specifically tap into self-consciousness or negative feelings associated with the self. Thus, a PANAS-X-based negative self-focus dictionary was created by incorporating all six words of the guilt subscale and variations of those words.

Furthermore, because LIWC only recognizes words and word stems, “angry,” “disgusted,” and “dissatisfied” were included in the dictionary rather than “angry at self,” “disgusted with self,” and “dissatisfied with self.” However, to more sufficiently measure the “self” component of negative self-focus, self-focused language associated with

negative affect (e.g., “self-conscious,” “self-negativity,” “self-hatred,” “self-criticism”) were also included in the dictionary. Nevertheless, the mean rate in which participants used PANAS-X-based negative self-focused language in their responses was quite low ( $M = 0.07$ ,  $SD = 0.22$ ). The PANAS-X-based negative self-focused language variable was also severely skewed with nine outliers. Even after winsorizing the outliers, transformations were unable to normalize this variable, potentially due to the low number of participants ( $n = 57$ ) who used negative self-focused language captured in the PANAS-X-based dictionary.

**Language Style Matching (LSM).** LSM was calculated to assess participants’ level of engagement with the narrative excerpt that they were asked to read. LSM is a distance equation, comparable to that of the Canberra distance metric, that determines the function word similarity between two texts as a reflection of engagement or psychological distance (Ireland & Nalabandian, 2022; Ireland & Pennebaker, 2010). In order to calculate LSM between the participants’ written reactions to the narrative excerpts and the narrative excerpts themselves, the frequencies of nine function word categories (personal and impersonal pronouns, articles, prepositions, auxiliary verbs, adverbs, conjunctions, negations, and quantifiers) were first established for each participants’ written reaction and the narrative excerpt. Then, the following equation for each of the nine function word categories was calculated:

$$LSM_{\text{adverb}} = 1 - [(|\text{adverb}_{\text{narrative}} - \text{adverb}_{\text{reaction}}|) / (\text{adverb}_{\text{narrative}} + \text{adverb}_{\text{reaction}} + .0001)]$$

The above equation determines the degree to which the frequency of adverbs in the narrative excerpt ( $\text{adverb}_{\text{narrative}}$ ) is similar to that of the frequency of adverbs in a participant’s response ( $\text{adverb}_{\text{reaction}}$ ). To calculate the final LSM score (which ranges

from 0 to 1) for each participants' written reaction compared to the narrative excerpt, the LSM scores were averaged for each of the nine specified function word categories. The calculated LSM variable ( $M = 0.83$ ,  $SD = 0.06$ ) was a bit negatively skewed with seven univariate outliers. After winsorizing the outliers, the LSM variable was cube-transformed so as to reach a more normal distribution.

### ***Depression***

**State.** Participants' current level of depression after reading the narrative excerpt was assessed using the state subscale of the State-Trait Depression Scales (STDS; Krohne et al., 2002; Spielberger, 1995; Appendix G), which consists of ten items that focus on the cognitive and affective, rather than the somatic, symptoms of depression. In other words, this scale is targeted toward subclinical participants, as it is not feasible to measure somatic symptoms, such as weight changes or sleep disturbances, during the span of a short manipulation. Participants were asked to indicate the degree to which they felt depressed (e.g., "miserable," "gloomy") versus non-depressed (e.g., "alive," "hopeful") within the current moment on a scale of 1 (*not at all*) to 4 (*very much so*). The depression-absent items were reverse-scored and summed together with the depression-present items to compute each participant's state depression score (Cronbach's  $\alpha = .91$ ;  $M = 17.79$ ,  $SD = 6.42$ ). The state depression variable was positively skewed with four univariate outliers. After winsorizing the outliers, the state depression variable was log-transformed to reach normality.

**Trait.** The Center for Epidemiologic Studies Depression Scale Revised (CESD-R; Eaton et al., 2004; Van Dam & Earleywine, 2011; Appendix K) was used to measure participants' level of trait subclinical depression. The CESD-R includes 20 items

assessing facets of depression such as dysphoria, anhedonia, low appetite, disturbed sleep, difficulty with thinking and concentration, worthlessness, fatigue, agitation, and suicidal ideation. Participants reported how often (on a scale of *0-not at all* to *4-nearly every day*) they experienced symptoms of depression (e.g., “I could not shake off the blues,” “I lost interest in my usual activities”) within the past 2 weeks. The 20 items were summed to determine a total trait depression score (Cronbach’s  $\alpha = .96$ ;  $M = 9.14$ ,  $SD = 13.67$ ). The trait depression variable was positively skewed with six univariate outliers. The outliers were winsorized; however, potentially due to the low base rate of participants reaching the subclinical depression threshold, transformations did not effectively normalize the trait depression variable. Although past research demonstrates MTurk samples yielding representative clinical and subclinical samples that either match with or exceed that of the general population (Shapiro et al., 2013), only 19.19% of participants in the current sample reported experiencing subclinical depression (i.e., a CESD-style score of 16 or higher). The particularly low number of subclinically depressed participants might be due to the trigger warning presented at the beginning of the study which warned participants of potential exposure to narrative content depicting suicide.

### ***Thwarted Belongingness***

Participants’ state level of thwarted belongingness was assessed (after completion of the reading and writing tasks) using the Thwarted Belongingness Scale (TBS; Ma et al., 2019; Appendix H). The TBS consists of eight items all evaluating an individual’s sense of (thwarted) belonging in the world around them (e.g., “I feel isolated,” “I don’t matter to other people,” “I feel there is no one I can talk to”). Participants were asked to

state the degree to which they believed each item to be true in the current moment (on a scale of 1—*not at all true for me* to 7—*true for me*). In order to compute total thwarted belongingness for each participant, scores for each item were summed (Cronbach's  $\alpha = .97$ ;  $M = 15.12$ ,  $SD = 11.16$ ). The thwarted belongingness variable was positively skewed with eight univariate outliers; nevertheless, potentially due to the variable's low base rate, transformations did not help in achieving normality.

### ***Character Identification***

Participants' level of identification with the protagonist portrayed in the narrative excerpt was measured using a 5-item scale (Cohen, 2001; Tal-Or & Cohen, 2010; Appendix I). The identification scale assesses the degree to which the audience member (or, in the case of the current dissertation, the reader) is able to take the perspective of the fictional character. Both emotional (e.g., "While reading, I felt like Craig felt") and cognitive (e.g., "I understood the events in the narrative excerpt the way Craig understood them") aspects of identification are taken into account within the scale. Participants were asked to rate how much they agreed with each item, on a scale of 1 (*strongly disagree*) to 7 (*strongly agree*). Scores on all items were summed to calculate identification with the protagonist of the narrative excerpt for each participant (Cronbach's  $\alpha = .92$ ;  $M = 23.09$ ,  $SD = 7.76$ ). The character identification variable did not possess any univariate outliers and was normally distributed.

### ***Parasocial Bond***

Participants' level of parasocial bond with the protagonist in the narrative excerpt was measured using the 8-item Parasocial Interaction Scale (PSI-Scale; Dibble et al., 2016; Appendix J) based on past work (Rubin & Perse, 1987; Rubin et al., 1985).

However, one item assessing protagonist attractiveness was modified from “I find Craig to be attractive” to “I find Craig to be likeable,” as romantic parasocial bonds are beyond the scope of the current study. Wording of the items were also further modified to align with the present study’s narrative excerpts (e.g., “I would miss reading about Craig if there were no other stories about him” or “If Craig appeared in another story, I would read that story”), rather than the video clips (Dibble et al., 2016) or soap opera (Rubin & Perse, 1987) and news (Rubin et al., 1985) mediums used in previous studies.

Participants were asked to identify the degree to which they agreed with each item, on a scale of 1 (*strongly disagree*) to 7 (*strongly agree*). All items were summed for each participant’s parasocial bond score (Cronbach’s  $\alpha = .96$ ;  $M = 33.77$ ,  $SD = 13.36$ ). The parasocial bond variable did not possess any univariate outliers and was normally distributed.

## Chapter III

### Results

The pattern of results for all models were the same whether the variables were transformed or untransformed; therefore, all results reported below are untransformed for interpretability.

#### **What Types of Narratives Do Depressed Individuals Prefer and Why?**

##### ***H1a***

In order to determine which narratives those scoring higher on trait depression more likely gravitate toward, two multiple regression models were conducted. The models included protagonist type as the categorical moderator, trait depression as the continuous explanatory variable, and narrative ratings as well as narrative engagement (i.e., language style matching) as the continuous outcome variables. Inconsistent with hypotheses, the moderation effect of protagonist type on the correlation between trait depression and *narrative ratings* was not statistically significant,  $b = 0.01$ ,  $SE = 0.01$ ,  $t(491) = 1.00$ ,  $p = .320$ , 95% CI [-0.01, 0.02]. Likewise, the moderation effect of narrative protagonist type on the correlation between trait depression and *narrative engagement* (i.e., language style matching between participants' written reactions to the narrative and the narrative itself) was not statistically significant,  $b = -0.0004$ ,  $SE = 0.0004$ ,  $t(491) = -0.93$ ,  $p = .352$ , 95% CI [-0.001, 0.0004].

##### ***H1b***

To uncover what mechanisms may help explain depressed individuals' preference for one narrative over another, character identification and parasocial bond were added as two continuous mediator variables within the previously described moderation models.



Specifically, the moderation effect of protagonist type on the association between trait depression and *narrative ratings* serially mediated by character identification and parasocial bond was conducted using Andrew Hayes's (2022) PROCESS macro for R (model 86 with 10,000 bootstrapped samples). Coinciding with predictions, results revealed a statistically significant index of moderated serial mediation for *narrative ratings*, that is, the differences between the indirect effect of trait depression on narrative ratings by protagonist type (Index = 0.01, Bootstrapped  $SE$  = 0.003, Bootstrapped 95% CI [0.002, 0.01]). Specifically, the indirect effect of trait depression on narrative ratings was significant for participants who read about a depressed protagonist (Indirect Effect = 0.01, Bootstrapped  $SE$  = 0.002, Bootstrapped 95% CI [0.01, 0.01]) but not for participants who read about a non-depressed protagonist (Indirect Effect = 0.003, Bootstrapped  $SE$  = 0.002, Bootstrapped 95% CI [-0.001, 0.01]). In other words, the sequential path of character identification and parasocial bond mediated the indirect effect of trait depression on narrative ratings for participants who read about a depressed (rather than a non-depressed) protagonist (Figure 1). See Table 3 for all conditional and unconditional direct and indirect effects.

Figure 1. Character identification and parasocial bond serially mediate the indirect effect of trait depression and narrative ratings (as moderated by narrative protagonist type).

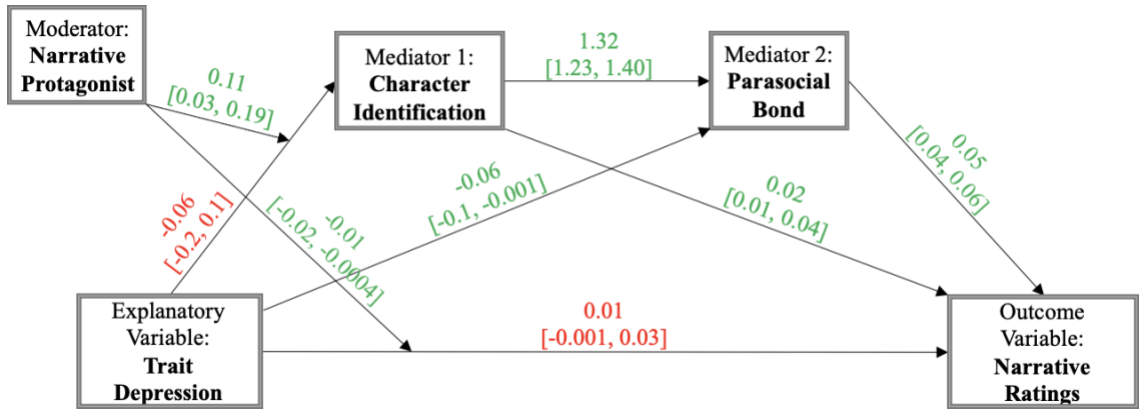


Table 3. The conditional and unconditional direct and indirect effects of trait depression on narrative ratings.

Conditional Direct Effects:

| Protagonist Type | Effect | SE    | t     | p    | 95% CI         |
|------------------|--------|-------|-------|------|----------------|
| Non-Depressed    | 0.004  | 0.004 | 1.11  | .266 | [-0.003, 0.01] |
| Depressed        | -0.01  | 0.004 | -1.64 | .102 | [-0.01, 0.001] |

Conditional Indirect Effects:

Trait Depression → Character Identification → Narrative Ratings

| Protagonist Type | Effect | Bootstrapped SE | Bootstrapped 95% CI |
|------------------|--------|-----------------|---------------------|
| Non-Depressed    | 0.001  | 0.001           | [-0.0004, 0.003]    |
| Depressed        | 0.003  | 0.001           | [0.001, 0.01]       |
|                  | Index  | Bootstrapped SE | Bootstrapped 95% CI |
|                  | 0.002  | 0.001           | [0.0004, 0.01]      |

Table 3, Continued

Trait Depression → Character Identification → Parasocial Bond → Narrative Ratings

| Protagonist Type | Effect | Bootstrapped <i>SE</i> | Bootstrapped 95% CI |
|------------------|--------|------------------------|---------------------|
| Non-Depressed    | 0.003  | 0.002                  | [-0.001, 0.01]      |
| Depressed        | 0.01   | 0.002                  | [0.01, 0.01]        |
|                  | Index  | Bootstrapped <i>SE</i> | Bootstrapped 95% CI |
|                  | 0.01   | 0.003                  | [0.002, 0.01]       |

Unconditional Indirect Effect:

Trait Depression → Parasocial Bond → Narrative Ratings

| Effect | Bootstrapped <i>SE</i> | Bootstrapped 95% CI |
|--------|------------------------|---------------------|
| -0.003 | 0.002                  | [-0.01, < -0.001]   |

In addition, the moderation effect of protagonist type on the association between trait depression and narrative engagement (i.e., language style matching; LSM) serially mediated by character identification and parasocial bond was also conducted using Hayes's (2022) PROCESS macro for R (model 86 with 10,000 bootstrapped samples). However, results demonstrated a nonsignificant index of moderated serial mediation for LSM, or the differences between the indirect effect of trait depression on LSM by protagonist type (Index < -0.001, Bootstrapped *SE* = 0.0001, Bootstrapped 95% CI [-0.0001, 0.0001]). In particular, the indirect effect of trait depression on LSM was not significant for participants who either read about a depressed protagonist (Indirect Effect < -0.001, Bootstrapped *SE* = 0.0001, Bootstrapped 95% CI [-0.0002, 0.0001]) or for

participants who read about a non-depressed protagonist (Indirect Effect < -0.001, Bootstrapped *SE* < 0.001, Bootstrapped 95% CI [-0.0001, < 0.001]). Thus, the sequential path of character identification and parasocial bond did not mediate the indirect effect of trait depression on narrative engagement by protagonist type. See Table 4 for all conditional and unconditional direct and indirect effects.

Table 4. The conditional and unconditional direct and indirect effects of trait depression on language style matching (LSM).

Conditional Direct Effects:

| Protagonist Type | Effect  | <i>SE</i> | <i>t</i> | <i>p</i> | 95% CI           |
|------------------|---------|-----------|----------|----------|------------------|
| Non-Depressed    | -0.0003 | 0.0003    | -1.03    | .302     | [-0.001, 0.0003] |
| Depressed        | 0.0001  | 0.0003    | 0.26     | .793     | [-0.001, 0.001]  |

Conditional Indirect Effects:

Trait Depression → Character Identification → LSM

| Protagonist Type | Effect       | Bootstrapped <i>SE</i>        | Bootstrapped 95% CI        |
|------------------|--------------|-------------------------------|----------------------------|
| Non-Depressed    | < -0.001     | < 0.001                       | [-0.0001, 0.0001]          |
| Depressed        | < -0.001     | 0.0001                        | [-0.0002, 0.0002]          |
|                  | <u>Index</u> | <u>Bootstrapped <i>SE</i></u> | <u>Bootstrapped 95% CI</u> |
|                  | < -0.001     | 0.0001                        | [-0.0001, 0.0001]          |

Trait Depression → Character Identification → Parasocial Bond → LSM

| Protagonist Type | Effect   | Bootstrapped <i>SE</i> | Bootstrapped 95% CI |
|------------------|----------|------------------------|---------------------|
| Non-Depressed    | < -0.001 | < 0.001                | [-0.0001, < 0.001]  |

Table 4, Continued

|           |          |                        |                     |
|-----------|----------|------------------------|---------------------|
| Depressed | < -0.001 | 0.0001                 | [-0.0002, 0.0001]   |
|           | Index    | Bootstrapped <i>SE</i> | Bootstrapped 95% CI |
|           | < -0.001 | 0.0001                 | [-0.0001, 0.0001]   |

Unconditional Indirect Effect:

Trait Depression → Parasocial Bond → LSM

|  |         |                        |                     |
|--|---------|------------------------|---------------------|
|  | Effect  | Bootstrapped <i>SE</i> | Bootstrapped 95% CI |
|  | < 0.001 | < 0.001                | [< -0.001, 0.0001]  |

### What Types of Narratives Will Serve as the Most Effective Fiction-Based Intervention for Depression?

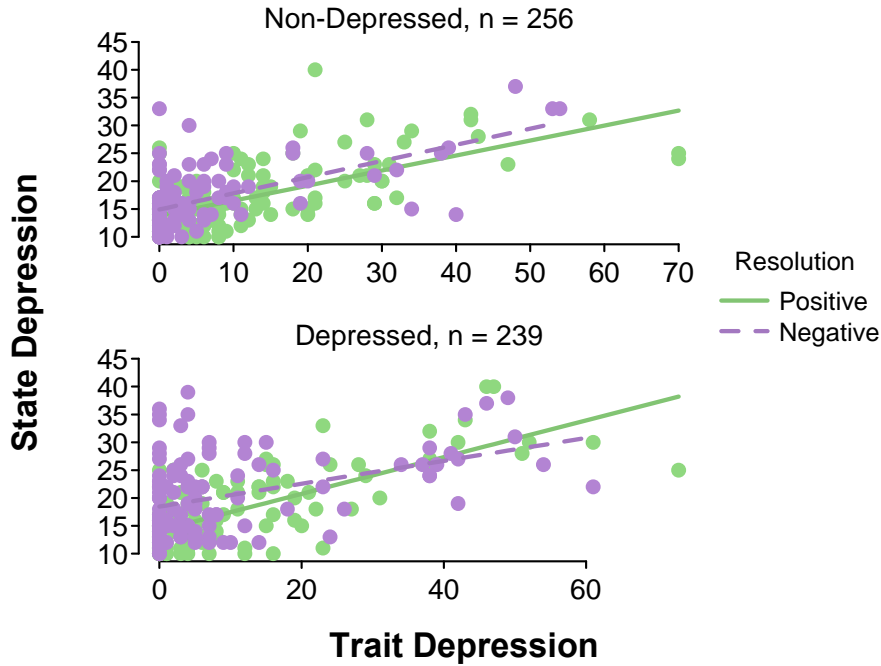
*H2a*

To test which narratives produce positive treatment effects, five multiple regression models were conducted. The models included protagonist type as categorical moderator 1 and narrative resolution type as categorical moderator 2, trait depression as the continuous explanatory variable, as well as negative emotion words, first-person singular pronouns, PANAS-X-based negative self-focused language, state depression, and thwarted belongingness as the continuous outcome variables. Results demonstrated a significant moderation effect of narrative resolution and protagonist type on the correlation between trait depression and state depression,  $b = -0.15$ ,  $SE = 0.07$ ,  $t(487) = -2.12$ ,  $p = .034$ , 95% CI [-0.28, -0.01]; Figure 2. Follow-up simple slope tests revealed significant positive correlations between trait depression and state depression for

participants who read a narrative about a non-depressed protagonist with a positive ending ( $b = 0.27$ ,  $SE = 0.03$ ,  $t(145) = 10.43$ ,  $p < .001$ , 95% CI [0.22, 0.32]), a non-depressed protagonist with a negative ending ( $b = 0.29$ ,  $SE = 0.04$ ,  $t(107) = 7.70$ ,  $p < .001$ , 95% CI [0.22, 0.37]), a depressed protagonist with a positive ending ( $b = 0.33$ ,  $SE = 0.03$ ,  $t(113) = 11.05$ ,  $p < .001$ , 95% CI [0.27, 0.39]), and a depressed protagonist with a negative ending ( $b = 0.21$ ,  $SE = 0.04$ ,  $t(122) = 5.06$ ,  $p < .001$ , 95% CI [0.12, 0.29]).

Although all simple slopes exhibited positive correlations between trait depression and state depression for the various subsets of protagonist type and resolution type, the effect was strongest for participants who read about a depressed protagonist with a positive resolution ( $\beta = .721$ ) rather than a non-depressed protagonist with a positive resolution ( $\beta = .654$ ), a non-depressed protagonist with a negative resolution ( $\beta = .597$ ), and a depressed protagonist with a negative resolution ( $\beta = .416$ ).

Figure 2. Narrative protagonist type and narrative resolution type moderate the association between trait depression and state depression.



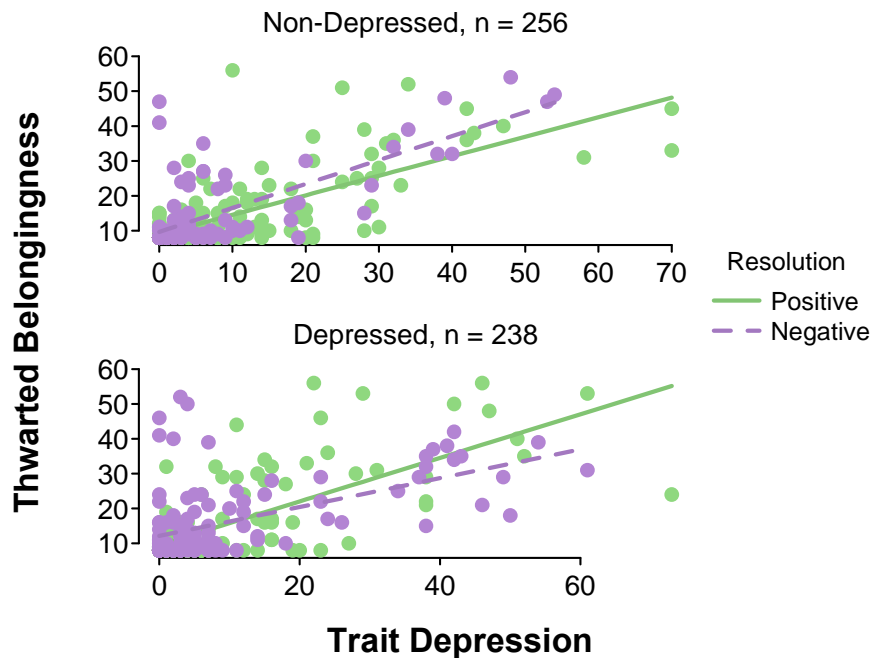
Similarly, results indicated a significant moderation effect of narrative resolution and protagonist type on the correlation between trait depression and thwarted

belongingness,  $b = -0.34$ ,  $SE = 0.11$ ,  $t(486) = -3.03$ ,  $p = .003$ , 95% CI [-0.56, -0.12];

Figure 3. Follow-up simple slope tests revealed significant positive correlations between trait depression and thwarted belongingness for participants who read a narrative about a non-depressed protagonist with a positive ending ( $b = 0.56$ ,  $SE = 0.04$ ,  $t(145) = 12.69$ ,  $p < .001$ , 95% CI [0.47, 0.65]), a non-depressed protagonist with a negative ending ( $b = 0.69$ ,  $SE = 0.06$ ,  $t(107) = 11.40$ ,  $p < .001$ , 95% CI [0.57, 0.81]), a depressed protagonist with a positive ending ( $b = 0.62$ ,  $SE = 0.06$ ,  $t(112) = 10.62$ ,  $p < .001$ , 95% CI [0.51, 0.74]), and a depressed protagonist with a negative ending ( $b = 0.41$ ,  $SE = 0.06$ ,  $t(122) = 7.33$ ,  $p < .001$ , 95% CI [0.30, 0.53]). While all simple slopes demonstrated positive

correlations between trait depression and thwarted belongingness for the differing subsets of protagonist type and resolution type, the effect was strongest for participants who read about a non-depressed protagonist with a negative resolution ( $\beta = 0.741$ ) rather than a non-depressed protagonist with a positive resolution ( $\beta = .725$ ), a depressed protagonist with a positive resolution ( $\beta = .708$ ), and a depressed protagonist with a negative resolution ( $\beta = .553$ ).

Figure 3. Narrative protagonist type and narrative resolution type moderate the association between trait depression and thwarted belongingness.

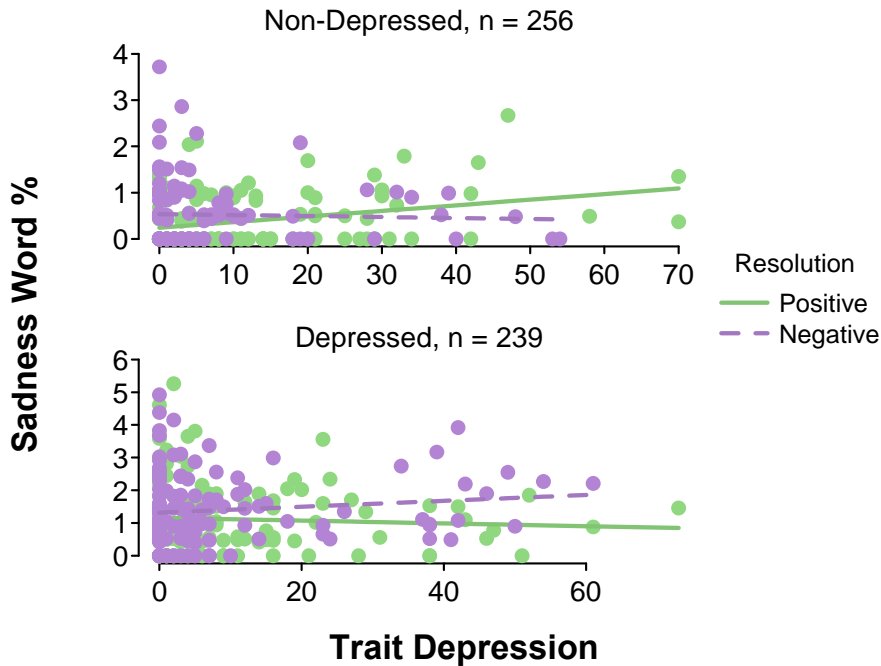


Contrary to hypotheses, the moderation effect of narrative resolution and protagonist type on the correlation between trait depression and negative emotion words was not significant,  $b = 0.02$ ,  $SE = 0.02$ ,  $t(487) = 0.90$ ,  $p = .367$ , 95% CI [-0.02, 0.06]. However, there was a significant moderation effect of narrative resolution and



protagonist type on the correlation between trait depression and sadness words (a sub-category of the negative emotion word category in LIWC),  $b = 0.03$ ,  $SE = 0.01$ ,  $t(487) = 2.30$ ,  $p = .022$ , 95% CI [0.004, 0.05]; Figure 4. Partly consistent with hypotheses, follow-up simple slope tests revealed a significant positive correlation between trait depression and sadness word use for participants who read a narrative about a non-depressed protagonist with a positive ending ( $b = 0.01$ ,  $SE = 0.003$ ,  $t(145) = 3.85$ ,  $p < .001$ , 95% CI [0.01, 0.02]), but not for those who read about a non-depressed protagonist with a negative ending ( $b = -0.002$ ,  $SE = 0.01$ ,  $t(107) = -0.37$ ,  $p = .714$ , 95% CI [-0.01, 0.01]), a depressed protagonist with a positive ending ( $b = -0.004$ ,  $SE = 0.01$ ,  $t(113) = -0.59$ ,  $p = .556$ , 95% CI [-0.02, 0.01]), and a depressed protagonist with a negative ending ( $b = 0.01$ ,  $SE = 0.01$ ,  $t(122) = 1.32$ ,  $p = .189$ , 95% CI [-0.004, 0.02]).

Figure 4. Narrative protagonist type and narrative resolution type moderate the association between trait depression and sadness word use.



Lastly, there were no significant moderation effects of narrative resolution and protagonist type on the correlations between trait depression and the remaining outcome variables: first-person singular pronouns ( $b = 0.05$ ,  $SE = 0.04$ ,  $t(487) = 1.21$ ,  $p = .227$ , 95% CI [-0.03, 0.13]) and PANAS-X-based negative self-focused language ( $b = -0.003$ ,  $SE = 0.003$ ,  $t(487) = -1.08$ ,  $p = .281$ , 95% CI [-0.01, 0.003]).

### ***H2b***

To establish the mechanisms underlying the narrative intervention treatment effects, character identification and parasocial bond were added to the aforementioned moderation models. In particular, five moderated-moderated (i.e., three-way interaction) serial mediations were conducted using Hayes's (2022) PROCESS macro for R (user-defined model with 10,000 bootstrapped samples). However, inconsistent with hypotheses, the index of moderated-moderated serial mediation was not statistically significant for models predicting state depression (Index = -0.003, Bootstrapped  $SE = 0.01$ , Bootstrapped 95% CI [-0.02, 0.01]; Table 5), thwarted belongingness (Index = -0.01, Bootstrapped  $SE = 0.02$ , Bootstrapped 95% CI [-0.06, 0.04]; Table 6), negative emotion word use (Index = -0.0003, Bootstrapped  $SE = 0.001$ , Bootstrapped 95% CI [-0.003, 0.002]; Table 7), first-person singular pronoun use (Index = -0.001, Bootstrapped  $SE = 0.003$ , Bootstrapped 95% CI [-0.01, 0.01]; Table 8), and PANAS-X-based negative self-focused language use (Index = -0.0001, Bootstrapped  $SE = 0.0004$ , Bootstrapped 95% CI [-0.001, 0.001]; Table 9). Specifically, the moderation effect of protagonist type and narrative resolution type on the association between trait depression and mental health outcomes (state depression, thwarted belongingness, and negative self-focused attention) was not serially mediated by character identification and parasocial bond.

Table 5. The conditional and unconditional direct and indirect effects of trait depression on state depression.

Conditional Direct Effects:

| Protagonist Type | Resolution Type | Effect | SE   | t    | p      | 95% CI       |
|------------------|-----------------|--------|------|------|--------|--------------|
| Non-Depressed    | Positive        | 0.27   | 0.03 | 8.87 | < .001 | [0.21, 0.33] |
| Non-Depressed    | Negative        | 0.29   | 0.04 | 7.21 | < .001 | [0.21, 0.37] |
| Depressed        | Positive        | 0.32   | 0.03 | 9.98 | < .001 | [0.26, 0.39] |
| Depressed        | Negative        | 0.21   | 0.03 | 6.57 | < .001 | [0.15, 0.27] |

Conditional Indirect Effects:

Trait Depression → Character Identification → State Depression

| Protagonist Type | Resolution Type | Effect | Bootstrapped SE | Bootstrapped 95% CI |
|------------------|-----------------|--------|-----------------|---------------------|
| Non-Depressed    | Positive        | 0.001  | 0.003           | [-0.01, 0.01]       |
| Non-Depressed    | Negative        | 0.002  | 0.004           | [-0.01, 0.01]       |
| Depressed        | Positive        | 0.004  | 0.01            | [-0.01, 0.02]       |
| Depressed        | Negative        | 0.01   | 0.01            | [-0.01, 0.03]       |

| Index | Bootstrapped SE | Bootstrapped 95% CI |
|-------|-----------------|---------------------|
| 0.001 | 0.01            | [-0.01, 0.02]       |

Trait Depression → Character Identification → Parasocial Bond → State Depression

| Protagonist Type | Resolution Type | Effect | Bootstrapped SE | Bootstrapped 95% CI |
|------------------|-----------------|--------|-----------------|---------------------|
| Non-Depressed    | Positive        | -0.001 | 0.004           | [-0.01, 0.01]       |
| Non-Depressed    | Negative        | -0.004 | 0.005           | [-0.02, 0.004]      |
| Depressed        | Positive        | -0.01  | 0.01            | [-0.02, 0.0003]     |
| Depressed        | Negative        | -0.02  | 0.01            | [-0.04, -0.0003]    |

Table 5, Continued

| Index  | Bootstrapped SE | Bootstrapped 95% CI |
|--------|-----------------|---------------------|
| -0.003 | 0.01            | [-0.02, 0.01]       |

Unconditional Indirect Effect:

Trait Depression → Parasocial Bond → State Depression

| Effect | Bootstrapped SE | Bootstrapped 95% CI |
|--------|-----------------|---------------------|
| 0.004  | 0.004           | [-0.0003, 0.01]     |

Table 6. The conditional and unconditional direct and indirect effects of trait depression on thwarted belongingness.

Conditional Direct Effects:

| Protagonist Type | Resolution Type | Effect | SE   | t     | p      | 95% CI       |
|------------------|-----------------|--------|------|-------|--------|--------------|
| Non-Depressed    | Positive        | 0.56   | 0.05 | 11.55 | < .001 | [0.47, 0.66] |
| Non-Depressed    | Negative        | 0.69   | 0.07 | 10.61 | < .001 | [0.56, 0.82] |
| Depressed        | Positive        | 0.59   | 0.05 | 11.24 | < .001 | [0.49, 0.69] |
| Depressed        | Negative        | 0.40   | 0.05 | 7.82  | < .001 | [0.30, 0.50] |

Conditional Indirect Effects:

Trait Depression → Character Identification → Thwarted Belongingness

| Protagonist Type | Resolution Type | Effect | Bootstrapped SE | Bootstrapped 95% CI |
|------------------|-----------------|--------|-----------------|---------------------|
| Non-Depressed    | Positive        | 0.004  | 0.01            | [-0.02, 0.03]       |

Table 6, Continued

|               |          |       |                 |                     |
|---------------|----------|-------|-----------------|---------------------|
| Non-Depressed | Negative | 0.01  | 0.01            | [-0.01, 0.04]       |
| Depressed     | Positive | 0.03  | 0.02            | [0.003, 0.07]       |
| Depressed     | Negative | 0.05  | 0.02            | [0.02, 0.09]        |
|               |          | Index | Bootstrapped SE | Bootstrapped 95% CI |
|               |          | 0.01  | 0.03            | [-0.04, 0.06]       |

Trait Depression → Character Identification → Parasocial Bond → Thwarted Belongingness

| Protagonist Type | Resolution Type | Effect | Bootstrapped SE | Bootstrapped 95% CI |
|------------------|-----------------|--------|-----------------|---------------------|
| Non-Depressed    | Positive        | -0.004 | 0.01            | [-0.02, 0.02]       |
| Non-Depressed    | Negative        | -0.01  | 0.01            | [-0.04, 0.01]       |
| Depressed        | Positive        | -0.03  | 0.01            | [-0.06, -0.004]     |
| Depressed        | Negative        | -0.05  | 0.02            | [-0.08, -0.02]      |
|                  |                 | Index  | Bootstrapped SE | Bootstrapped 95% CI |
|                  |                 | -0.01  | 0.02            | [-0.06, 0.04]       |

Unconditional Indirect Effect:

Trait Depression → Parasocial Bond → Thwarted Belongingness

| Effect | Bootstrapped SE | Bootstrapped 95% CI |
|--------|-----------------|---------------------|
| 0.01   | 0.01            | [-0.001, 0.03]      |

Table 7. The conditional and unconditional direct and indirect effects of trait depression on negative emotion word use.

Conditional Direct Effects:

| Protagonist Type | Resolution Type | Effect | SE   | t     | p    | 95% CI         |
|------------------|-----------------|--------|------|-------|------|----------------|
| Non-Depressed    | Positive        | 0.01   | 0.01 | 0.75  | .453 | [-0.01, 0.03]  |
| Non-Depressed    | Negative        | -0.01  | 0.01 | -0.61 | .539 | [-0.03, 0.02]  |
| Depressed        | Positive        | 0.01   | 0.01 | 1.07  | .284 | [-0.01, 0.03]  |
| Depressed        | Negative        | 0.02   | 0.01 | 1.69  | .091 | [-0.002, 0.04] |

Conditional Indirect Effects:

Trait Depression → Character Identification → Negative Emotion Word Use

| Protagonist Type | Resolution Type | Effect  | Bootstrapped SE | Bootstrapped 95% CI |
|------------------|-----------------|---------|-----------------|---------------------|
| Non-Depressed    | Positive        | -0.0002 | 0.001           | [-0.002, 0.002]     |
| Non-Depressed    | Negative        | -0.001  | 0.001           | [-0.004, 0.001]     |
| Depressed        | Positive        | -0.002  | 0.002           | [-0.01, 0.002]      |
| Depressed        | Negative        | -0.003  | 0.003           | [-0.01, 0.002]      |

| Index  | Bootstrapped SE | Bootstrapped 95% CI |
|--------|-----------------|---------------------|
| -0.001 | 0.002           | [-0.005, 0.003]     |

Trait Depression → Character Identification → Parasocial Bond → Negative Emotion Word Use

| Protagonist Type | Resolution Type | Effect  | Bootstrapped SE | Bootstrapped 95% CI |
|------------------|-----------------|---------|-----------------|---------------------|
| Non-Depressed    | Positive        | -0.0001 | 0.001           | [-0.001, 0.001]     |
| Non-Depressed    | Negative        | -0.0004 | 0.001           | [-0.002, 0.001]     |

Table 7, Continued

|           |          |         |                 |                        |
|-----------|----------|---------|-----------------|------------------------|
| Depressed | Positive | -0.001  | 0.001           | [-0.004, 0.001]        |
| Depressed | Negative | -0.002  | 0.002           | [-0.01, 0.002]         |
|           |          | Index   | Bootstrapped SE | Bootstrapped<br>95% CI |
|           |          | -0.0003 | 0.001           | [-0.003, 0.002]        |

Unconditional Indirect Effect:

Trait Depression → Parasocial Bond → Negative Emotion Word  
Use

|  |        |                 |                        |
|--|--------|-----------------|------------------------|
|  | Effect | Bootstrapped SE | Bootstrapped<br>95% CI |
|  | 0.001  | 0.001           | [-0.001, 0.002]        |

Table 8. The conditional and unconditional direct and indirect effects of trait depression on first-person singular pronoun (self-focused language) use.

Conditional Direct Effects:

| Protagonist<br>Type | Resolution<br>Type | Effect | SE   | t     | p    | 95% CI         |
|---------------------|--------------------|--------|------|-------|------|----------------|
| Non-Depressed       | Positive           | 0.032  | 0.02 | 1.78  | .075 | [-0.003, 0.07] |
| Non-Depressed       | Negative           | -0.01  | 0.02 | -0.22 | .826 | [-0.05, 0.04]  |
| Depressed           | Positive           | 0.02   | 0.02 | 1.10  | .271 | [-0.02, 0.06]  |
| Depressed           | Negative           | 0.03   | 0.02 | 1.82  | .069 | [-0.003, 0.07] |

Conditional Indirect Effects:

Trait Depression → Character Identification → Self-Focused  
Language Use

Table 8, Continued

| Protagonist Type | Resolution Type | Effect | Bootstrapped SE | Bootstrapped 95% CI |
|------------------|-----------------|--------|-----------------|---------------------|
| Non-Depressed    | Positive        | 0.001  | 0.003           | [-0.01, 0.01]       |
| Non-Depressed    | Negative        | 0.003  | 0.003           | [-0.003, 0.01]      |
| Depressed        | Positive        | 0.01   | 0.004           | [0.0003, 0.02]      |
| Depressed        | Negative        | 0.01   | 0.01            | [0.002, 0.02]       |

| Index | Bootstrapped SE | Bootstrapped 95% CI |
|-------|-----------------|---------------------|
| 0.002 | 0.01            | [-0.01, 0.01]       |

Trait Depression → Character Identification → Parasocial Bond → Self-Focused Language Use

| Protagonist Type | Resolution Type | Effect  | Bootstrapped SE | Bootstrapped 95% CI |
|------------------|-----------------|---------|-----------------|---------------------|
| Non-Depressed    | Positive        | -0.0004 | 0.002           | [-0.003, 0.003]     |
| Non-Depressed    | Negative        | -0.001  | 0.002           | [-0.01, 0.002]      |
| Depressed        | Positive        | -0.004  | 0.003           | [-0.01, 0.001]      |
| Depressed        | Negative        | -0.01   | 0.004           | [-0.01, 0.001]      |

| Index  | Bootstrapped SE | Bootstrapped 95% CI |
|--------|-----------------|---------------------|
| -0.001 | 0.003           | [-0.01, 0.01]       |

Unconditional Indirect Effect:

Trait Depression → Parasocial Bond → Self-Focused Language Use

| Effect | Bootstrapped SE | Bootstrapped 95% CI |
|--------|-----------------|---------------------|
| 0.002  | 0.001           | [-0.001, 0.005]     |



Table 9. The conditional and unconditional direct and indirect effects of trait depression on negative self-focused (PANAS-X-based) language use.

Conditional Direct Effects:

| Protagonist Type | Resolution Type | Effect   | SE    | t     | p    | 95% CI          |
|------------------|-----------------|----------|-------|-------|------|-----------------|
| Non-Depressed    | Positive        | < -0.001 | 0.001 | -0.01 | .991 | [-0.003, 0.003] |
| Non-Depressed    | Negative        | -0.0001  | 0.002 | -0.08 | .937 | [-0.004, 0.003] |
| Depressed        | Positive        | -0.001   | 0.001 | -0.37 | .711 | [-0.003, 0.002] |
| Depressed        | Negative        | -0.003   | 0.001 | -2.43 | .016 | [-0.01, -0.001] |

Conditional Indirect Effects:

Trait Depression → Character Identification → PANAS-X-Based Language Use

| Protagonist Type | Resolution Type | Effect  | Bootstrapped SE | Bootstrapped 95% CI |
|------------------|-----------------|---------|-----------------|---------------------|
| Non-Depressed    | Positive        | < 0.001 | 0.0001          | [-0.0003, 0.0003]   |
| Non-Depressed    | Negative        | 0.0001  | 0.0002          | [-0.0001, 0.001]    |
| Depressed        | Positive        | 0.0003  | 0.0003          | [-0.0002, 0.001]    |
| Depressed        | Negative        | 0.0004  | 0.0004          | [-0.0003, 0.001]    |

| Index  | Bootstrapped SE | Bootstrapped 95% CI |
|--------|-----------------|---------------------|
| 0.0001 | 0.0003          | [-0.001, 0.001]     |

Table 9, Continued

Trait Depression → Character Identification → Parasocial Bond → PANAS-X-Based Language Use

| Protagonist Type | Resolution Type | Effect  | Bootstrapped SE | Bootstrapped 95% CI |
|------------------|-----------------|---------|-----------------|---------------------|
| Non-Depressed    | Positive        | -0.0001 | 0.0002          | [-0.0004, 0.0003]   |
| Non-Depressed    | Negative        | -0.0002 | 0.0002          | [-0.001, 0.0001]    |
| Depressed        | Positive        | -0.0004 | 0.0003          | [-0.001, < -0.001]  |
| Depressed        | Negative        | -0.001  | 0.0003          | [-0.002, -0.0001]   |

| Index   | Bootstrapped SE | Bootstrapped 95% CI |
|---------|-----------------|---------------------|
| -0.0001 | 0.0004          | [-0.001, 0.001]     |

Unconditional Indirect Effect:

Trait Depression → Parasocial Bond → PANAS-X-Based Language Use

| Effect | Bootstrapped SE | Bootstrapped 95% CI |
|--------|-----------------|---------------------|
| 0.0002 | 0.0001          | [< -0.001, 0.001]   |

## **Chapter IV**

### **Discussion**

The current dissertation research examined the reception of various narrative formulas so as to determine which formula elicits positive versus negative mental health outcomes in a fiction-based narrative intervention for individuals experiencing subthreshold depression symptoms. Based on negative self-focused attentional biases characteristic of depression, the present study first tested predictions concerning whether subclinically depressed individuals preferred and engaged more with a fictional narrative about a depressed (rather than a non-depressed) protagonist by way of identification and parasocial bond. Consistent with hypotheses, results demonstrated that those scoring higher on trait depression were more likely to positively rate narratives about a depressed (rather than a non-depressed) protagonist through greater identification and development of a parasocial bond with the depressed protagonist. These findings, highlighting the depression-relevant narrative preferences of people experiencing subclinical levels of depression, are in line with past research implicating the tendency for depressed individuals to focus on information that relates to their own depressive state more so than other (positive or neutral) information (Beavers 2005, Moberly & Watkins, 2008; Mor & Winquist, 2002; Wood et al., 1990).

Although depressed individuals may gravitate more toward narratives about depressed protagonists, a narrative that ends with a depressed protagonist feeling hopeless to resolve their issues may propel a depressed reader into further rumination and exacerbate symptomology. Therefore, the present study also examined how the type of narrative resolution (in addition to the type of narrative protagonist) effected the mental

health of readers. Partly consistent with predictions, results showed that those scoring higher on trait depression used higher rates of sadness words (i.e., *cry*, *depressed*) in their written narrative reactions, but only after reading about a non-depressed protagonist with a positive resolution. Such findings coincide with self-discrepancy theories of depression (Higgins, 1987; Pyszczynski & Greenberg, 1987), wherein depressive symptoms (e.g., negative affect) are often magnified after exposure to positive stimuli that increases a depressed individual's awareness of their own depression and the discrepancy between their current and desired states.

In contrast with hypotheses, results also demonstrated that participants scoring higher on trait depression reported higher levels of state depression and thwarted belongingness for all types of narratives (regardless of protagonist and resolution type). These findings might suggest that exposure to narratives portraying sensitive or triggering information to people experiencing subclinical levels of depression may lead to deleterious effects. However, findings identified narratives depicting a depressed protagonist with a positive resolution as the strongest predictor of state depression for those scoring higher on trait depression. Although the original hypothesis predicted that a narrative about a depressed protagonist with a positive resolution would be associated with lower levels of state depression, this particular narrative formula magnified one's state depression, possibly by highlighting the reader's depressive state and their inability to adaptively resolve their issues in the same way as the depressed protagonist.

Additionally, narratives about a non-depressed protagonist with a negative resolution elicited the strongest correlation between trait depression and thwarted belongingness. As a psychological construct, thwarted belongingness represents the

degree to which an individual feels isolated and alone in the world (Ma et al., 2019).

Thwarted belongingness may be significantly higher in those experiencing subclinical levels of depression particularly after reading about a non-depressed protagonist because they are less able to relate to or see themselves in a non-depressed (rather than a depressed) protagonist; thus, they may begin to ruminate about how they are indeed all alone in the world. This ruminative thinking revolving around thwarted belongingness may be further heightened by the negative narrative resolution (i.e., negative content which serves to perpetuate rumination and depressive symptomology).

Perhaps future studies on narrative interventions should incorporate some form of guided reflection or expressive writing after reading about sensitive content, in order to better ascertain the mechanisms of symptom reduction. Allowing a person with depression to read potentially triggering narratives (and write about their reaction to the narrative afterwards) may lead to maladaptive rumination in regard to their depressive state, thwarted belongingness, and negative attentional bias. On the other hand, the basic expressive writing paradigm, which requires one to write about their “deepest thoughts and feelings” regarding a negative or positive personal experience, elicits positive physical health (e.g., fewer visits to the doctor) and mental health (e.g., managing stress and emotions more effectively) outcomes (Baddeley & Pennebaker, 2011; Smyth & Pennebaker, 2008; Pennebaker, 2018). Although the expressive writing paradigm yields small effects, these effects are longitudinal and often demonstrated weeks after the manipulation takes place.

Therefore, a follow-up study to the current dissertation should examine whether engaging in an expressive writing task after exposure to a triggering narrative (e.g., a

narrative about a depressed protagonist that ends with a positive resolution) might help mitigate negative mental health outcomes in those who are depression-prone and whether such effects are apparent cross-sectionally or longitudinally. Specifically, encouraging depressed individuals to deeply reflect and write about personal experiences similar to the depressed protagonist's as well as the ways in which they might apply the protagonist's positive meaning-making strategies in their own lives may help navigate their thoughts to more adaptive rather than maladaptive avenues (reminiscent of narrative identity research which supports the conceptualization of coherent positive resolutions of negative experiences to promote greater well-being; McAdams, 2018; McAdams & McLean, 2013).

All in all, by experimentally manipulating different narrative formulas (i.e., investigating the effects of various protagonists and narrative resolutions) and the psychological mechanisms (i.e., character identification, parasocial bond) that account for effects of narrative exposure, this dissertation provides empirical insights for research on bibliotherapy, an area that has largely focused on conducting naturalistic study designs using correlational or qualitative analyses of narrative treatment effects with small samples.

### **Limitations and Future Directions**

The current dissertation also yielded a number of null results as well as results that were inconsistent with predictions. Therefore, limitations of the study design, measures, and sample must be taken into account when attempting any interpretation of the results. For example, the mental health outcome variables (i.e., negative affect, self-focus, state depression, and thwarted belongingness) were only measured after

participants read their assigned narrative excerpt. However, measuring participants' baseline mental health prior to reading the narrative excerpt, in addition to measuring their mental health after reading the narrative excerpt, would provide more nuanced insight on the effect of narrative exposure on mental health. Thus, future research on fiction-based narrative interventions will implement pre- and post-tests for all mental health outcome variables.

Additionally, nearly all models predicting participant language use as a measure of negative and self-focused attention (e.g., first-person singular pronouns, negative emotion words) and narrative engagement (i.e., language style matching) did not reach statistical significance. A potential issue contributing to these null effects may be the extremely small effect sizes of language research, particularly language research that intersects with depression research. Previous meta-analyses have found a weak positive association between self-reported levels of depression and rates of first-person singular pronoun use ( $r = .13$ , Edwards & Holtzman, 2017;  $r = .10$ , Tackman et al., 2019) with sample sizes reaching the thousands. Another factor to consider with regard to the null language models is the nature of language use as a measure of behavior. Research shows that behavioral measures do not perfectly align with self-reported measures (Boyd & Pennebaker, 2017; Eastwick et al., 2011), which may explain the imbalance of nonsignificant and significant effects between behavioral outcome models (i.e., language use) versus self-report outcome models (e.g., thwarted belongingness, state depression) in the current study.

Another limitation of this dissertation remains—as previously stated in the “Method” section—that less than 20% of the present sample reached the threshold for

subclinical (trait) depression. Statistical models including trait depression may be skewed by the low variability and base rate of participants reporting trait depression. The current findings revealed that participants with higher levels of trait depression were more likely to experience negative mental health outcomes after being exposed to all types of narratives (i.e., depressed versus non-depressed protagonist, positive versus negative resolution). With the majority of the sample identifying as non-depressed, perhaps models examining participants' mental health outcomes, as influenced by the interaction between their levels of trait depression and differential exposure to narrative protagonists and resolutions, may provide greater insight if participant trait depression was excluded as a variable.

Specifically, when analyzing only participants ( $n = 400$ ) scoring under the threshold of subclinical depression (i.e., CESD-style score of 15 or lower), results yielded a significant interaction effect between protagonist type and resolution type on participants' level of state depression after reading their assigned narrative excerpt,  $F(1, 183) = 7.32, p = .007$ . Tukey HSD tests confirmed that participants who read a narrative about a depressed protagonist with a negative resolution subsequently reported higher levels of state depression ( $M = 19.16, SD = 6.63$ ) than participants who read about a non-depressed protagonist with a negative resolution ( $M = 15.67, SD = 4.68, p < .001, 95\% CI [-5.33, -1.64]$ ), a depressed protagonist with a positive resolution ( $M = 15.46, SD = 4.58, p < .001, 95\% CI [-5.58, -1.82]$ ), and a non-depressed protagonist with a positive resolution ( $M = 14.70, SD = 3.72, p < .001, 95\% CI [-6.20, -2.71]$ ). These post-hoc findings are consistent with this dissertation's hypotheses but may intimate that narrative interventions have more positive mental health benefits for non-depressed rather than



subclinical or clinical samples. Future research recruiting an equal sample of non-depressed and subclinically depressed participants is necessary to unpack differences concerning the therapeutic effects of fiction between these two samples.

Furthermore, models examining mental health outcomes of narrative exposure (i.e., narrative protagonist type, narrative resolution type) by way of character identification and parasocial bond were not statistically significant. Perhaps the degree to which narrative exposure elicits mental health outcomes (as well as the degree to which participants engaged with and rated the narratives) is influenced by whether or not participants actually *like* the protagonist that they read about. However, when conducting all original predicted models with the addition of *character liking* as a covariate, results that were previously significant remained significant and results that were previously nonsignificant remained nonsignificant. That is, all findings remained the same even after controlling for character liking.

Although the current and post-hoc results suggest that reading stories about different types of protagonists with different types of resolutions effects mental health, underlying factors examined in this dissertation (i.e., character identification and parasocial bond) may have more relevance with concern to the effect of protagonist type (rather than resolution type) on mental health. In other words, identifying with and developing a parasocial bond with a fictional character necessitates introspection about the narrative protagonist (perhaps more so than the narrative resolution, or how a story ends). Thus, null models testing mental health effects of narratives with character identification and parasocial bond as serial mediators may be driven by the inclusion of narrative resolution type in said models.

As a way in which to further investigate character identification and parasocial bond as potential mechanisms of the therapeutic effects of fiction, post-hoc moderation models were conducted using the non-depressed participant pool of the current sample to take into account the low base rate of subclinical depression in the full sample. In particular, analyses revealed significant interaction effects between narrative protagonist type (controlling for narrative resolution) and identification predicting state depression ( $b = -0.19$ ,  $SE = 0.07$ ,  $t(396) = -2.88$ ,  $p = .004$ , 95% CI [-.32, -.06]) and thwarted belongingness ( $b = -0.23$ ,  $SE = 0.10$ ,  $t(395) = -2.31$ ,  $p = .021$ , 95% CI [-.42, -.03]). Additional post-hoc analyses yielded a significant interaction effect between narrative protagonist type (controlling for narrative resolution) and parasocial bond predicting state depression ( $b = -0.09$ ,  $SE = 0.04$ ,  $t(395) = -2.23$ ,  $p = .026$ , 95% CI [-.16, .01]). Follow-up simple slope tests demonstrated that—after reading their assigned narrative, regardless of the type of narrative resolution—non-depressed participants who identified more with ( $b = -0.14$ ,  $SE = 0.04$ ,  $t(207) = -0.72$ ,  $p = .001$ , 95% CI [-1.58, -.73]) and developed a greater parasocial bond with ( $b = -0.07$ ,  $SE = 0.02$ ,  $t(207) = -3.26$ ,  $p = .001$ , 95% CI [-.12, -.03]) a non-depressed protagonist reported lower levels of state depression. On the other hand, non-depressed participants who identified more with a depressed protagonist reported higher levels of thwarted belongingness ( $b = 0.16$ ,  $SE = 0.08$ ,  $t(187) = 2.09$ ,  $p = .038$ , 95% CI [.01, .31]). These findings show that while identifying with and developing parasocial bonds with non-depressed fictional characters may engender a protective buffer against negative mental health outcomes for non-depressed individuals, identifying with a depressed fictional character may engender more harmful effects.

Although character identification and parasocial bond appear to serve as mechanisms that offer insight into the mental health effects of fictional narratives portraying different types of protagonists, other mechanisms—such as expectancy violations—might prove more informative when examining the mental health effects of fictional narratives depicting different types of narrative resolutions. Specifically, research suggests that individuals engage in associative processing by default, when one's expectancies of the world are currently aligned with their experiences (i.e., when schema- as well as mood-congruent information is retrieved) or often when one's cognitive load has exceeded capacity (Lieberman, 2003; Lieberman et al., 2002). Therefore, depressed individuals' biased associative processing is maintained by a schema- and mood-congruent state that centers around negative self-focused thoughts. These maladaptive cognitive processes impede a depressed person's ability to engage in adaptive cognitive processes, such as reflective processing (i.e., conscious deliberation about their situation), that serve to interrupt biased associative processing and, thereby, interrupt their depressive state.

In contrast, reflective processing occurs when one has enough cognitive resources to sequentially analyze the situation or when expectancies are violated (i.e., schema- as well as mood-incongruent information is retrieved), compelling one to engage in deep thought and realign their current situation with their expectancies (Lieberman, 2003; Lieberman et al., 2002). Whereas a narrative about a depressed protagonist would serve to capture a depressed reader's attention (deeming it more likely for them to engage with the narrative and simulate the experiences of the character), a narrative ending with a positive (rather than a negative) resolution would violate the depressed reader's

expectancies and interrupt their maladaptive associative processing so that they may better internalize and simulate the way in which the protagonist adaptively copes with their negative situation. Thus, future research will determine the degree to which positive versus negative narrative resolutions differentially violate the expectancies of depressed readers and how such expectancy violations may further inform the mental health outcomes of fiction.

In addition to expectancy violations, another underlying factor that may provide further understanding of fictional exposure effects on mental health is an individual's preference for fictional versus non-fictional narratives. Specifically, people who do not enjoy (or make a habit of) reading fiction may have a more difficult time engaging with the characters and the story itself than those who derive great pleasure from reading fiction regularly. In other words, the positive (or negative) mental health outcomes of reading fiction may not apply to people who do not like fiction. That is, those uninterested in fiction would not become sufficiently immersed in the narrative and, thus, would not be affected by it. To determine whether fiction or non-fiction preferences moderated participants' reception of the narratives (i.e., engagement and ratings) as well as any mental health outcomes (e.g., state depression, thwarted belongingness) after narrative exposure, I conducted the original hypothesized moderation models with the additional moderators of fiction and non-fiction preferences, separately. Post-hoc analyses revealed that the degree to which participants preferred fiction or non-fiction did not significantly moderate (all  $ps > .05$ ) their engagement with (and ratings of) the narrative or their mental health after reading the narrative. However, the majority of participants within the current dissertation study reported that—on a scale of 1 (*strongly*

*disliked*) to 7 (*strongly liked*)—they liked (rather than disliked) reading and watching both fictional (91%;  $M = 5.86$ ,  $SD = 1.08$ ) and non-fictional (85%;  $M = 5.58$ ,  $SD = 1.17$ ) narratives, which may account for the present null effects. Therefore, future research should continue to investigate the influence of fiction and non-fiction preferences on media effects.

To further explore more effective ways in which to implement fiction-based treatments for mental health conditions, future directions of this dissertation research will involve determining boundary conditions for successful narrative interventions. For example, because depression typically involves some form of cognitive impairment (e.g., deficits in thinking, concentration, decision-making; American Psychological Association, 2013) or depleted cognitive resources (Beevers, 2005; Jones et al., 2010), a narrative intervention exposing patients to video clips, rather than written narrative excerpts, might produce stronger treatment effects. That is, watching (rather than reading) a narrative may allow a depressed individual to exert less cognitive effort, buffering against a rumination spell triggered by overriding one's cognitive load. On the other hand, perhaps if the narrative effectively promotes character identification and parasocial bonds, treatment effects would persist regardless of the type of narrative medium.

In addition to examining the effect of different narrative mediums, assessing one's time spent immersed in the fictional world may also enlighten treatment outcomes of narrative interventions. Namely, there may be a parabolic effect of narrative exposure on mental health: If one gets lost in a narrative to the degree that the fictional universe replaces one's reality, then narrative exposure may become problematic. In fact, past research demonstrated how lower cognitive ability predicts greater tendencies for

maladaptive parasocial interactions, such as celebrity worship (McCutcheon et al., 2003). As previously mentioned, depressed individuals who tend to experience cognitive depletion may be particularly at risk of forming unhealthy parasocial bonds that steal them further from reality rather than help them simulate—in real-life—the adaptive processes modeled in the narrative.

Furthermore, future research will strive to uncover whether the narrative formulas and mechanisms implicated in the present dissertation may generalize to other mental health conditions. For instance, older adults experiencing age-related cognitive impairment might benefit from narrative interventions. Current interventions surrounding age-related cognitive impairment emphasize the importance of maintaining both social and cognitive activities in older adults (Demiray et al., 2020), wherein fiction-based narrative interventions would serve as an ideal form of treatment for such samples. One's social needs may be satisfied through the development of parasocial bonds with characters that the reader can identify with. Cognitive needs may also be satisfied through reading about the characters' lives, propelling the reader to recall past experiences as well as simulate potential future experiences. Therefore, implications of the narrative intervention for depression within the present dissertation research include the extension of such interventions to other conditions and sample populations (e.g., healthy aging in older adults).

## **Conclusions**

A substantial amount of research corroborates the influence of fictional narratives on varying psychological processes. As a depiction of the world through the perspective of fictional characters, narratives facilitate the development of individuals' scripts and

schemas, or mental representations of themselves and the world around them (Mar & Oatley, 2008; Oatley, 1999). In other words, narratives teach us how to perceive and react (emotionally and behaviorally) in various situations (Tan, 2008). Past studies yield differing effects of exposure to certain types of narratives. Depending on the narrative's content and how such content is depicted, narratives may elicit negative effects. For instance, research has demonstrated exposure to violent media as positively associated with aggression, an association that is only getting stronger with time (Bushman & Anderson, 2001). Individuals prone to certain mental health conditions, such as depression, anxiety, suicidal ideation, may be susceptible to the negative copycat effects of narratives portraying a suicidal protagonist dying by suicide, as demonstrated by the Werther effect (Niederkrötenhaler, 2010a, 2010b).

However, other research illustrates positive effects of narrative exposure with the Papagano effect (in direct contrast to the Werther effect), in which narratives depicting a suicidal protagonist who adaptively overcomes their negative situation engenders a positive frame of mind in suicidal readers or viewers (Niederkrötenhaler, 2010a, 2010b). Fictional narratives give readers and viewers the opportunity to absorb different perspectives, allowing them to experience a newfound understanding of others' thoughts and feelings (Fong et al., 2013), informing their own understanding of themselves and their environment. Thus, the underlying scientific contributions of my research include the innovative use of fiction as a source for psychological data. Individuals are exposed to different narrative mediums every single day (e.g., through reading books, streaming movies and shows on Netflix), demonstrating the importance of studying how such narratives influence psychological processes. Reading novels allows audiences to

simulate experiences that could feasibly take place in real life and, thereby, serve as a non-invasive way to manipulate the emotions, thoughts, or behaviors that scientists wish to study (Mar & Oatley, 2008; Oatley, 1999).

Moreover, as a main source of impairment in millions of adults worldwide (World Health Organization, 2022), determining more effective methods of prevention, diagnosis, and treatment of depression is imperative for increasing the quality of life amongst individuals in our society. Current interventions for depression (whether therapeutic or pharmaceutical) are extremely expensive, intimating that only a portion of the general population can even afford treatment. The degree to which standard treatments of depression, such as antidepressants, produce positive outcomes in patients is questionable. Meta-analyses have demonstrated that placebos are just as efficient as antidepressants in reducing depressive symptomology (Kirsch, 2008). Although the current study targets those experiencing subclinical levels of depression, who do not exhibit full diagnostic criteria for the disorder, past research shows that such mild to moderate forms of depression are also debilitating (e.g., associated with suicidal ideation; Cukrowicz et al., 2011). Determining modes of prevention would serve as an efficient intervention for depression, particularly as subclinical depression is a significant predictor for future diagnoses (Cuijpers et al., 2014). Thus, my dissertation research, a narrative intervention for depression, offers insight into an inexpensive form of self-help treatment by way of determining what types of narrative formulas exacerbate or diminish the struggles associated with the disorder.



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## **Appendices**

### **Appendix A Consent Form**

#### **What is the project studying?**

The present study attempts to examine mental health and social relationships. Results obtained from the study have the potential to help psychologists diagnose and treat mental health disorders and advance research in clinical and social psychology.

#### **What would I do if I participate?**

If you choose to participate in the study, then you will be asked to (1) read a short story and write about your reaction to the story, and (2) answer questions about the story, questions about your emotional state and how you see yourself, and demographic questions.

***Important Note:*** The story you will be asked to read may include descriptions of a character contemplating suicide. If you are currently experiencing suicidal thoughts, this may not be the best study for you to complete, since parts of the story might be triggering.

#### **How will I benefit from participating?**

You may gain self-knowledge because completing such questionnaires will help you to think about yourself and others in a different light, leading to realizations you may not have otherwise experienced. You may also benefit from knowing that you are helping research on mental health and social relationships.

#### **Can I quit if I become uncomfortable?**

You are free to stop at any time before or during the experiment. There is no penalty for withdrawing from participation beyond not receiving payment.

#### **How long will participation take?**

The study will take approximately 30 minutes to complete. However, some participants finish sooner and some take a little longer.

#### **How are you protecting privacy?**

Your responses will be created and stored without identifying information. Your MTURK worker ID will only be stored in order to make sure that the same person does not participate in the study twice. The ID itself is anonymous, meaning that we will never know your name or any other identifying information. Beyond checking that you completed the study, your MTURK ID will not be linked with your responses. After your data is recorded, neither the experimenter nor anyone involved in this experiment will be able to associate your responses with your identity.



**I have some questions about this study. Who can I ask?**

Dr. Zachary Hohman ([zachary.hohman@ttu.edu](mailto:zachary.hohman@ttu.edu)) or Taleen Nalabandian ([taleen.nalabandian@ttu.edu](mailto:taleen.nalabandian@ttu.edu)) in the Department of Psychological Sciences will answer any questions you have about the study. Questions can also be directed to the Human Research Protections Program (HRPP), Office of the Vice President for Research, Texas Tech University, Lubbock, Texas 79409, 806-742-2064, [HRPP@ttu.edu](mailto:HRPP@ttu.edu).

Please note that we are looking for volunteers for this study, not employees. We are asking for a generous contribution of your time to help us with our research.

While we like to compensate our participants as much as we can, our funds are limited. If completing online tasks is the way you make your living, this study may not be worth your time, though you are certainly welcome to participate.

If you agree to participate, please enter your MTURK Worker ID below. Information regarding how your privacy will be protected is outlined above.

**PLEASE NOTE**

1. **If you have already taken this survey, do not proceed. You will not be paid a second time.**
2. **The study requires you to write a few paragraphs in English. The writing tasks also serve as attention checks. If you cannot complete the writing tasks or skip them (by typing nonsense, copy-pasting text, leaving them blank, etc.), you will not be paid.**

**MTurk Worker ID:** \_\_\_\_\_

## **Appendix B**

### **Reading Task Instructions**

Please carefully **read the short story below**. After you've finished reading, click the "-->" icon at the bottom of the page.

On the next few pages, **you will be asked questions about the story**. Note that attempting to go backwards in the study may invalidate your results. **Please do not use your browser's back button.**

**Remember to read the story carefully** because you will be asked questions about the story on the next page.

## Appendix C Narrative Excerpts

### Depressed Protagonist/Positive Resolution

I'm pretty stupid for thinking I could get any sleep tonight. Once I turn off the lights and put the cup aside, I get the Not-Sleeping Feeling—it's kind of like the feeling of the Four Horsemen and the Apocalypse rear up in your brain and put some ropes around it and pull it toward the front of your skull. They say, *No way, dude! Who do you think you were fooling! You think you were going to wake up at three in the morning and throw yourself off the Brooklyn Bridge without staying up all night? Give us a little credit!*

My mind starts the Cycling. I know it's going to be the worst that it's ever been. Over and over again, a cycling of tasks, failures, of problems. I'm young, but I'm already screwing up my life. I'm smart but not enough—just smart enough to have problems. Not smart enough to get good grades. Not smart enough to have a girlfriend. Girls think I'm weird. I don't like to spend money. Every time I spend it, I feel as if I'm being raped. I don't like to smoke pot, but then I do smoke it and I get depressed. I haven't done enough with my life. I don't play sports. I quit Tae Bo. I'm not involved in any social causes. My one friend is a screwup—a genius blessed with the most beautiful girl in the world, and he doesn't even know it. There's so much more for me to be doing. I should be a success and I'm not and other people—younger people—are. Younger people than me are on TV and getting paid and winning scholarships and getting their life in order. I'm still a nobody. When am I going to not be a nobody?

The thoughts trail one another in my brain, running from the back to the front and dripping down again under my chin: I'm no one; I'll never make it in my life; I'm about to get revealed as a fake, I've already been revealed as a fake but I don't know it yet; I know I'm a fake and pretend not to. All the good thoughts—the normal ones, the ones that have occasionally surfaced since last fall—ramble out the front of my brain in terror of what lives in my neck and spine. This is the worst it'll ever be.

My homework swims in front of my closed eyes—the Intro to Wall Street stock-picking game, the Inca history paper, the ding-dong math test—they appear as if on a gravestone. They'll all be over soon.

Mom climbs into bed next to me. That means it's still early. Not even eleven. It's going to be such a long night. Jordan, the dog, climbs into bed with her and I put my hand on him, try to feel his warmth and take comfort from it. He barks at me.

I turn on my stomach. My sweat drenches my pillow. I turn over on my back. It drenches it in the other direction. I turn on my side like a baby. Do babies sweat? How about in the womb, do you sweat in there? This night will never end. Mom stirs.

“Craig, are you still up?”

“Yes.”

“It's twelve-thirty. Do you want cereal? Sometimes a bowl of cereal will just knock you out.”

“Sure.”

“Cheerios?”

I think I can handle Cheerios. Mom gets up and gets them for me. The bowl is heaping and I tackle it with the ferocity that I think a last meal deserves—shoving it all in me as if it owes me loot. I’m not going to throw this up.

Mom starts breathing regularly next to me. I start to think practically about how I’m going to handle this. I’m taking my bike, I know that. That’s one thing I’ll miss: riding around Brooklyn on the weekends like a maniac, dodging cars and trucks and vans with pipes sticking out of them, meeting Ronny and then locking the bikes up by the subway station to go to Aaron’s house. Riding a bike is pure and simple—Ronny says he thinks it’s mankind’s greatest invention, and although I thought that was stupid at first, these days I’m not so sure. Mom won’t let me take the bike to school so I’ve never ridden over a bridge—this’ll be the first time. I don’t think I’ll wear my helmet.

I’ll take the bike, and it’ll be a warm spring night. I’ll speed up Flatbush Avenue—the artery of fat Brooklyn—right to Brooklyn entrance of the bridge, with the potholes and cops stationed all night. They won’t look at me twice—what, it’s illegal, a kid biking over a bridge? I’ll go up the ramp and get right to the middle, where I was before, and then I’ll walk out over the roadway and take one last look at the Verrazano Bridge.

What am I going to do about my bike, though? If I lock it up, it’ll just stay there at the side of the bridge, as evidence, and they’ll clip the lock and saw through the chain after a while. It’s an expensive chain! But if I *don’t* lock it up, someone’ll take it quickly—it’s a good bike, a Raleigh—and there won’t be any evidence that I was ever even there.

I can’t lose the bike, I decide. I’ll take the key with me when I go down, and Mom and Dad will know, then, where I’ve gone. The cops will find the bike and tell them. It’ll be harsh, but at least they’ll know. It’ll be better than not leaving anything.

What time is it? Time has stopped for me. Since I can’t sleep and I’m still sweating, I decide I can try something to knock myself out: push-ups. I don’t want to go to sleep, I just want to exhaust myself and rest a little bit so I can make the trip at the appropriate time, in an hour or so. I prop myself up in bed in proper push-up position, which is also proper sex position, I realize, and I haven’t even had sex—I’m going to die a virgin. Does that mean I go to heaven? No, according to the Bible, suicide is a sin and I go straight to hell, what a gyp.

*Badoom. Badoom. Badoom.*

My heart is ramming now. It’s beating everywhere. It wants to do this, to *badoom* away all the time.

*Badoom.*

It feels good.

*Badoom.*

Screw it. I want my heart.

I want my heart but my brain is acting up. I want to live but I want to die. What do I do?

I get out of bed, glance at the clock. It's 5:07. I don't know how I got through the night. My heart radiates *badoom*, so I shuffle into the living room and pick a book off my parents' shelf.

It's called *How to Survive the Loss of a Love*.

I looked at it just to see what it was about, and the first chapter said, "If you feel like harming yourself right now, turn to page 20." And I thought that was pretty silly, like a Choose Your Own Adventure book, so I turned to page 20, and right there it said to call your local suicide hotline, because suicidal thoughts were a medical situation and you needed medical help right away.

Now, I open to page 20.

"Every municipality has a suicide hotline, and they're listed right in the government services section of the yellow pages," it says.

Okay. I go into the kitchen and open up the yellow pages.

The government listings are in blue at the front, but it's all phone numbers for where to get your car when it's towed, what to do if your block has a rat problem...Ah, here, *health*. Poison control, emergency, *mental health*. There is a bunch of numbers. The first one says "suicide" near it. It's a local number, and I call and get the help that I need.

### **Depressed Protagonist/Negative Resolution**

I'm pretty stupid for thinking I could get any sleep tonight. Once I turn off the lights and put the cup aside, I get the Not-Sleeping Feeling—it's kind of like the feeling of the Four Horsemen and the Apocalypse rear up in your brain and put some ropes around it and pull it toward the front of your skull. They say, *No way, dude! Who do you think you were fooling! You think you were going to wake up at three in the morning and throw yourself off the Brooklyn Bridge without staying up all night? Give us a little credit!*

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The thoughts trail one another in my brain, running from the back to the front and dripping down again under my chin: I'm no one; I'll never make it in my life; I'm about to get revealed as a fake, I've already been revealed as a fake but I don't know it yet; I know I'm a fake and pretend not to. All the good thoughts—the normal ones, the ones that have occasionally surfaced since last fall—ramble out the front of my brain in terror of what lives in my neck and spine. This is the worst it'll ever be.

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“Craig, are you still up?”

“Yes.”

“It's twelve-thirty. Do you want cereal? Sometimes a bowl of cereal will just knock you out.”

“Sure.”

“Cheerios?”

I think I can handle Cheerios. Mom gets up and gets them for me. The bowl is heaping and I tackle it with the ferocity that I think a last meal deserves—shoving it all in me as if it owes me loot. I'm not going to throw this up.

Mom starts breathing regularly next to me. I start to think practically about how I'm going to handle this. I'm taking my bike, I know that. That's one thing I'll miss: riding around Brooklyn on the weekends like a maniac, dodging cars and trucks and vans with pipes sticking out of them, meeting Ronny and then locking the bikes up by the subway station to go to Aaron's house. Riding a bike is pure and simple—Ronny says he thinks it's mankind's greatest invention, and although I thought that was stupid at first, these days I'm not so sure. Mom won't let me take the bike to school so I've never ridden over a bridge—this'll be the first time. I don't think I'll wear my helmet.

I'll take the bike, and it'll be a warm spring night. I'll speed up Flatbush Avenue—the artery of fat Brooklyn—right to Brooklyn entrance of the bridge, with the potholes and cops stationed all night. They won't look at me twice—what, it's illegal, a kid biking over a bridge? I'll go up the ramp and get right to the middle, where I was before, and then I'll walk out over the roadway and take one last look at the Verrazano Bridge.

What am I going to do about my bike, though? If I lock it up, it'll just stay there at the side of the bridge, as evidence, and they'll clip the lock and saw through the chain after a while. It's an expensive chain! But if I *don't* lock it up, someone'll take it

quickly—it's a good bike, a Raleigh—and there won't be any evidence that I was ever even there.

I can't lose the bike, I decide. I'll take the key with me when I go down, and Mom and Dad will know, then, where I've gone. The cops will find the bike and tell them. It'll be harsh, but at least they'll know. It'll be better than not leaving anything.

What time is it? Time has stopped for me. Since I can't sleep and I'm still sweating, I decide I can try something to knock myself out: push-ups. I don't want to go to sleep, I just want to exhaust myself and rest a little bit so I can make the trip at the appropriate time, in an hour or so. I prop myself up in bed in proper push-up position, which is also proper sex position, I realize, and I haven't even had sex—I'm going to die a virgin. Does that mean I go to heaven? No, according to the Bible, suicide is a sin and I go straight to hell, what a gyp.

### **Non-Depressed Protagonist/Positive Resolution**

When I was four, this is how things were:

Our family lived in a crappy apartment in Manhattan. I didn't know it was crappy at the time, because I didn't have our better apartment to compare it to yet. But there was exposed piping. That's no good. You don't want to raise your child in a house with exposed piping. I remember there was a green pipe and a red pipe and a white pipe, gathered near the corner of the hallway just before the bathroom, as soon as I could walk I investigated them all, walked up to them and put my palm about two millimeters away from each one to test if it was hot or cold. One was cold, one was hot, and the red one was *really* hot. I burned myself on it and Dad, who hadn't realized, encased it in duct tape, but duct tape never stopped me so I picked it off and chewed it and then when other kids came over to my house I dared them to touch the re-exposed pipe.

I had my own room but I didn't like to be alone in it; the only room I like to be in was the living room, under the table that held all the encyclopedias. I made it my little fort; I put a blanket over me and worked in there, with a light that Dad rigged up. I worked on maps. I loved maps. I knew that we lived in Manhattan and I had a map of it, a Hagstrom Five Borough Atlas with all the streets laid out. I knew exactly where we lived, on the corner of 53<sup>rd</sup> Street and 3<sup>rd</sup> Avenue. Third Avenue was a yellow street because it was an avenue, big and long and important. Fifty-third Street was a little white street that went across Manhattan. The streets went sideways and the avenues went up-and-down; that was all you had to remember. (Dad helped me remember, too, when we went out for pancakes. He would ask, "Do you want them cut in streets and avenues, Craig?" And I'd go "Yes!" and he'd cut the stack of pancakes in a grid, and we'd name each street and avenue as we went along, making sure to get to 3<sup>rd</sup> Ave. and 53<sup>rd</sup> Street.) It was so simple. If you were really advanced (like I was, *duh*), you knew that traffic on the even streets went east (East for Even) and the odd streets went west (West is Odd). Then every bunch of streets, there were fat yellow streets, like the avenues, that went both ways. These were the famous streets: 42<sup>nd</sup> St., 34<sup>th</sup> St. The complete list from the bottom up was

Chambers St., Canal St., Houston St., 14<sup>th</sup> St., 23<sup>rd</sup> St., 34<sup>th</sup> St., 42<sup>nd</sup> St., 57<sup>th</sup> St., 72<sup>nd</sup> St. (there wasn't any big street in the 60s; they got shafted), 79<sup>th</sup> St., 86<sup>th</sup> St., 96<sup>th</sup> St., and then you were in Harlem, where Manhattan effectively ended for little white boys who made forts under encyclopedias and studied maps.

As soon as I saw the Manhattan map, I wanted to draw it. So I asked Mom for tracing paper and she got it for me and I brought it into my fort and I pointed the light right down on the first map in the Hagstrom Atlas—downtown, where Wall Street was and the stock market worked. The streets were crazy down there; they didn't have any kind of streets and avenues; they just had names and they looked like a game of Pick-Up Sticks. But before I could even worry about the streets, I had to get the land right. Manhattan was actually built on land. Sometimes when they were digging up the streets you saw it down there—real dirt! And the land had a certain curve to it at the bottom of the island, like a dinosaur head, bumpy on the right and straight on the left, a swooping majestic bottom.

I held my tracing paper down and tried to trace the line of lower Manhattan.

I couldn't do it.

I mean, it was ridiculous. My line didn't have anything to do with the real one. I didn't understand—I was holding the tracing paper steady. I looked at my small hand. “Stay still,” I told it. I crumpled up the paper and tried again.

This line was even worse than before. I didn't have the swoop.

I crumpled up the paper and tried again.

This line was even worse than before. Manhattan looked square.

I tried again.

Oh boy, now it looked like a duck.

*Crumple.*

Now it looked like a *turd*.

*Crumple.*

Now it looked like a piece of fruit.

It looked like everything but what it was supposed to look like: Manhattan. I couldn't do it. I didn't realize then that when you trace stuff you're supposed to have a tracing *table*, lighted from below, and clamps to hold the paper straight, not a trembling four-year-old hand, so I just thought I was a failure. They always said on TV you could do anything you wanted, but here I was trying to do something and it wasn't working. I would never be able to do it. I crumpled up the last piece of tracing paper and started sobbing, my head in my hands in my fort.

Mom heard me.

“Craig?”

“What? Go away.”

“What's wrong, honey?”

“Don't open the curtain! *Don't open it!* I have things in here.”

“Why are you crying? What's the matter?”

“I can't do it.”

“What's the matter?”



“Nothing!”

“Tell Mommy, c’mon. I’m going to open the blanket—”

“No!”

I jumped at her face as she pulled the blanket aside, bringing it taut under the encyclopedias. Mom threw her hands up and held the books in place, saving both of us from getting clobbered. With her occupied, I ran across the room, streaking tears, wanting to get to the bathroom, to sit down on the toilet with the light off and splash hot water on my face. But Mom was too quick. She shoved the encyclopedias back and loped across the room, swooping me up in her thin arms with the elbow skin that you could pull down. I beat my palms against her.

“Craig! We do not hit Mommy!”

“I can’t do it I can’t do it *I can’t do it!*” I hit her.

“*What?*” She hugged me tight so I had no room to hit. “*What* can’t you do?”

“*I can’t draw Manhattan!*”

“Huh?” Mom drew her face up and away from me, looked me in the eyes. “Is *that* what you were trying to do down there?”

I nodded, sniffled.

“You were trying to trace Manhattan with the tracing paper I bought you?”

“I can’t do it.”

“Craig, *no one* can.” She laughed. “You can’t just trace freehand. It’s impossible!”

“Then how do they make the maps?”

Mom paused.

“See? See? Someone can do it!”

“They have *equipment* for it, Craig. They’re grown-ups and they have special tools that they use.”

“Well I need those tools.”

“Craig.”

“Let’s buy them.”

“Honey.”

“Do they cost a lot of money?”

“Honey.”

Mom put me down on the sofa, which turned into a bed for her and Dad at night, and sat next to me. I wasn’t crying anymore. I wasn’t hitting anymore. My brain was all right back then; it didn’t get stuck in ruts.

“Craig,” she sighed, looked at me. “I have an idea. Instead of spending your time trying to trace maps of Manhattan, why don’t you make your own maps of *imaginary places?*”

And that was the closest I’ve ever come to an epiphany.

I could make up my own city. I could use my own streets. I could put a river where I wanted. I could put the ocean where I wanted. I could put the bridges where I wanted and I could put a big highway right across the middle of town, like Manhattan should have but didn’t. I could make up my own subway system. I could make my own

street names. I could have my own grid stretching off to the edges of the map. I smiled and hugged Mom.

She got me some thick paper—white construction paper. I went back under my fort and turned the light on and started on my first map. That made me happy. That was my Anchor. And until I turned nine and turned to video games, that was what I wanted to be when I grew up: A mapmaker.

### **Non-Depressed Protagonist/Negative Resolution**

When I was four, this is how things were:

Our family lived in a crappy apartment in Manhattan. I didn't know it was crappy at the time, because I didn't have our better apartment to compare it to yet. But there was exposed piping. That's no good. You don't want to raise your child in a house with exposed piping. I remember there was a green pipe and a red pipe and a white pipe, gathered near the corner of the hallway just before the bathroom, as soon as I could walk I investigated them all, walked up to them and put my palm about two millimeters away from each one to test if it was hot or cold. One was cold, one was hot, and the red one was *really* hot. I burned myself on it and Dad, who hadn't realized, encased it in duct tape, but duct tape never stopped me so I picked it off and chewed it and then when other kids came over to my house I dared them to touch the re-exposed pipe.

I had my own room but I didn't like to be alone in it; the only room I like to be in was the living room, under the table that held all the encyclopedias. I made it my little fort; I put a blanket over me and worked in there, with a light that Dad rigged up. I worked on maps. I loved maps. I knew that we lived in Manhattan and I had a map of it, a Hagstrom Five Borough Atlas with all the streets laid out. I knew exactly where we lived, on the corner of 53<sup>rd</sup> Street and 3<sup>rd</sup> Avenue. Third Avenue was a yellow street because it was an avenue, big and long and important. Fifty-third Street was a little white street that went across Manhattan. The streets went sideways and the avenues went up-and-down; that was all you had to remember. (Dad helped me remember, too, when we went out for pancakes. He would ask, "Do you want them cut in streets and avenues, Craig?" And I'd go "Yes!" and he'd cut the stack of pancakes in a grid, and we'd name each street and avenue as we went along, making sure to get to 3<sup>rd</sup> Ave. and 53<sup>rd</sup> Street.) It was so simple. If you were really advanced (like I was, *duh*), you knew that traffic on the even streets went east (East for Even) and the odd streets went west (West is Odd). Then every bunch of streets, there were fat yellow streets, like the avenues, that went both ways. These were the famous streets: 42<sup>nd</sup> St., 34<sup>th</sup> St. The complete list from the bottom up was Chambers St., Canal St., Houston St., 14<sup>th</sup> St., 23<sup>rd</sup> St., 34<sup>th</sup> St., 42<sup>nd</sup> St., 57<sup>th</sup> St., 72<sup>nd</sup> St. (there wasn't any big street in the 60s; they got shafted), 79<sup>th</sup> St., 86<sup>th</sup> St., 96<sup>th</sup> St., and then you were in Harlem, where Manhattan effectively ended for little white boys who made forts under encyclopedias and studied maps.

As soon as I saw the Manhattan map, I wanted to draw it. So I asked Mom for tracing paper and she got it for me and I brought it into my fort and I pointed the light right down on the first map in the Hagstrom Atlas—downtown, where Wall Street was

and the stock market worked. The streets were crazy down there; they didn't have any kind of streets and avenues; they just had names and they looked like a game of Pick-Up Sticks. But before I could even worry about the streets, I had to get the land right. Manhattan was actually built on land. Sometimes when they were digging up the streets you saw it down there—real dirt! And the land had a certain curve to it at the bottom of the island, like a dinosaur head, bumpy on the right and straight on the left, a swooping majestic bottom.

I held my tracing paper down and tried to trace the line of lower Manhattan.

I couldn't do it.

I mean, it was ridiculous. My line didn't have anything to do with the real one. I didn't understand—I was holding the tracing paper steady. I looked at my small hand. "Stay still," I told it. I crumpled up the paper and tried again.

This line was even worse than before. I didn't have the swoop.

I crumpled up the paper and tried again.

This line was even worse than before. Manhattan looked square.

I tried again.

Oh boy, now it looked like a duck.

*Crumple.*

Now it looked like a *turd*.

*Crumple.*

Now it looked like a piece of fruit.

It looked like everything but what it was supposed to look like: Manhattan. I couldn't do it. I didn't realize then that when you trace stuff you're supposed to have a tracing *table*, lighted from below, and clamps to hold the paper straight, not a trembling four-year-old hand, so I just thought I was a failure. They always said on TV you could do anything you wanted, but here I was trying to do something and it wasn't working. I would never be able to do it. I crumpled up the last piece of tracing paper and started sobbing, my head in my hands in my fort.

Mom heard me.

"Craig?"

"What? Go away."

"What's wrong, honey?"

"Don't open the curtain! *Don't open it!* I have things in here."

"Why are you crying? What's the matter?"

"I can't do it."

"What's the matter?"

"Nothing!"

"Tell Mommy, c'mon. I'm going to open the blanket—"

"No!"

I jumped at her face as she pulled the blanket aside, bringing it taut under the encyclopedias. Mom threw her hands up and held the books in place, saving both of us from getting clobbered. With her occupied, I ran across the room, streaking tears, wanting to get to the bathroom, to sit down on the toilet with the light off and splash hot

water on my face. But Mom was too quick. She shoved the encyclopedias back and loped across the room, swooping me up in her thin arms with the elbow skin that you could pull down. I beat my palms against her.

“Craig! We do not hit Mommy!”

“I can’t do it I can’t do it *I can’t do it!*” I hit her.

“*What?*” She hugged me tight so I had no room to hit. “*What* can’t you do?”

“*I can’t draw Manhattan!*”

**Appendix D**  
**Manipulation Check**

Please select the statement that most accurately describes the **main character** of the short story that you just read:

The main character, Craig, was depressed and suicidal.

The main character, Craig, was **not** depressed and **not** suicidal.

Please select the statement below that most accurately describes the **ending** of the short story that you just read:

The story that I just read ended on a **positive** note (e.g., a happy ending, where Craig was able to overcome or resolve his main issues).

The story that I just read ended on a **negative** note (e.g., a sad ending, where Craig's issues were left unresolved).

**Appendix E**  
**Narrative Excerpt Ratings**

Please rate how much you liked the **short story** that you just read, on a scale of 1 (*did not like it*) to 5 (*it was amazing*).

- 1-Did not like it
- 2-It was ok
- 3-Liked it
- 4-Really liked it
- 5-It was amazing

Have you read the book or watched the movie that the short story you just read was taken from?

- Yes
- No

(If “Yes”: Please write the title of the book/movie that the story was taken from.)

Please rate how much you liked **Craig**, the main character of the short story that you just read, on a scale of 1 (*strongly disliked Craig*) to 5 (*strongly liked Craig*).

- 1-Strongly disliked
- 2-Somewhat disliked
- 3-Neither liked nor disliked
- 4-Somewhat liked
- 5-Strongly liked

## **Appendix F**

### **Writing Task Instructions**

In this portion of the study, you will be asked to take the time to **describe your reaction to the short story that you just read**. You might write about the following:

- Did you like the short story? Why or why not?
- What were you feeling or thinking about *while* reading about the characters' experiences?
- How did you feel or what did you think about *after* reading the short story?

Please try to write as naturally as possible. **Your response should be at least 1,000 characters (about 150-200 words)**. However, you are free to write as much as you want.

Note that copy-pasting is disabled; please type directly in the text box. Also, attempting to go backwards in the study will invalidate your results. Please do not use your browser's back button, and make sure the cursor is placed in the text box any time you hit the backspace button on your keyboard.

After you are finished writing your response, click the "-->" button below to continue.

(Minimum 1,000 characters, count: 0)

## **Appendix G**

### **State Depression Scale**

(Krohne et al., 2002; Spielberger, 1995)

Below are a number of statements that people have used to describe themselves. After reading each statement, please indicate how you feel *right now*, that is, *at this moment*.

**1**-Not at all

**2**-Somewhat

**3**-Moderately so

**4**-Very much

I feel strong.

I feel blue.

I feel miserable.

I feel downhearted.

I feel alive.

I feel sad.

I feel safe.

I feel gloomy.

I feel healthy.

I feel hopeful about the future.



**Appendix H**  
**Thwarted Belongingness Scale**  
(Ma et al., 2019)

Please rate how you *currently* feel in this moment about each of the statements below, on a scale of 1 (*not at all true for you*) to 7 (*true for you*).

1 - *not at all true for me*

2

3

4 - *somewhat true for me*

5

6

7 - *true for me*

I feel isolated.

I don't matter to other people.

Nobody cares about me.

I feel there is no one I can talk to.

I don't fit in.

I don't play an important role in other people's lives.

I am not close to anyone.

I am alone in this world.

## **Appendix I**

### **Identification Scale**

(Cohen, 2001; Tal-Or & Cohen, 2010)

The following statements are in reference to your thoughts and feelings about Craig, the main character in the story you just read. Please rate the degree to which you agree or disagree with each of the following statements, on a scale of 1 (strongly disagree) to 7 (strongly agree).

- 1-Strongly disagree
- 2-Disagree
- 3-Somewhat disagree
- 4-Neither agree nor disagree
- 5-Somewhat agree
- 6-Agree
- 7-Strongly agree

I think I understand Craig well.

I understood the events in the story the way Craig understood them.

While reading the story, I felt like Craig.

While reading story, I could really “get inside” Craig’s head.

I understand why Craig did what he did.

## **Appendix J**

### **Parasocial Interaction Scale**

(Dibble et al., 2016; Rubin & Perse, 1985, 1987)

The following statements are in reference to your thoughts and feelings about Craig, the main character in the story you just read. Please rate the degree to which you agree or disagree with each of the following statements, on a scale of 1 (strongly disagree) to 7 (strongly agree).

- 1-Strongly disagree
- 2-Disagree
- 3-Somewhat disagree
- 4-Neither agree nor disagree
- 5-Somewhat agree
- 6-Agree
- 7-Strongly agree

Craig made me feel comfortable, as if I was with a friend.

I see Craig as a natural, down-to-earth person.

I look forward to reading about Craig in another story.

If Craig appeared in another story, I would read that story.

If there were a story about Craig in a newspaper or magazine, I would read it.

I would miss reading about Craig if there were no other stories about him.

I would like to meet Craig in person.

I find Craig to be likeable.

**Appendix K**  
**Trait Depression Scale**  
(Eaton et al., 2004)

Below is a list of statements describing the ways you might have felt or behaved. For each statement, please indicate how often you have felt this way in the past week or so.

- 0**-Not at all or less than one day last week
- 1**-One or two days last week
- 2**-Three to four days last week
- 3**-Five to seven days last week
- 4**-Nearly every day for two weeks

My appetite was poor.

I could not shake off the blues.

I had trouble keeping my mind on what I was doing.

I felt depressed.

My sleep was restless.

I felt sad.

I could not get going.

Nothing made me happy.

I felt like a bad person.

I lost interest in my usual activities.

I slept much more than usual.

I felt like I was moving too slowly.

I felt fidgety.

I wished I were dead.

I wanted to hurt myself.

I was tired all the time.

I did not like myself.

I lost weight without trying to.

I had a lot of trouble getting to sleep.

I could not focus on the important things.

**Appendix L**  
**Demographic Survey**

The following survey will ask about your demographics and background. Please complete the questions below to the best of your abilities.

How old are you as of today's date?

\_\_\_\_\_

What is your sex? (check all that apply)

Female

Male

Other\_\_\_\_\_

Prefer not to say

What is your primary ethnicity?

\_\_\_\_\_

What was the first language that you spoke fluently?

English

Other\_\_\_\_\_

What is your general political orientation?

Very liberal

Somewhat liberal

Neither liberal nor conservative

Somewhat conservative

Very conservative

What is the highest level of education either of your parents have completed?

None, to some junior high school

Some high school

High school diploma or equivalent

Some college

College degree

Some post-graduate work

Post-graduate degree

Prefer not to say

Have you been diagnosed with major depressive disorder (MDD) by a health-care professional (e.g., psychiatrist, clinical psychologist) within the past year?

Yes

No

Please rate the degree to which you like reading or watching **fictional** narratives (e.g., stories about characters that are imagined by the author, such as thriller/suspense, romance, science-fiction/fantasy), on a scale of 1 (*strongly dislike*) to 7 (*strongly like*).

Strongly dislike

Dislike

Somewhat dislike

Neither like nor dislike

Somewhat like

Like

Strongly Like

Please rate the degree to which you like reading or watching **non-fictional** narratives (e.g., factual stories about real people and real events, such as biographies/autobiographies, historical accounts), on a scale of 1 (*strongly dislike*) to 7 (*strongly like*).

Strongly dislike

Dislike

Somewhat dislike

Neither like nor dislike

Somewhat like

Like

Strongly Like

## **Appendix M Debriefing**

Thank you for taking the time to participate in our study!

Your mental health and well-being are very important to us. If you have ever or are currently experiencing suicidal thoughts and would like to talk with someone, please use the hotline below, which offers free, confidential, and 24/7 help.

### **National Suicide Prevention Lifeline**

Chat now: [suicidepreventionlifeline.org/chat](https://suicidepreventionlifeline.org/chat)

1-800-273-TALK (8255)

.....

The main goal of our study is to test a fiction-based narrative intervention for depression. Specifically, we are interested in seeing how different aspects of narratives (e.g., narrative resolutions, characters) might provide insight on what types of narratives people with depression prefer and what types of narratives reduce depression symptoms.

For more information, here is a paper that the study you just participated in was based on:

Till, B., Strauss, M., Sonneck, G., & Niederkrotenthaler, T. (2015). Determining the effects of films with suicidal content: A laboratory experiment. *The British Journal of Psychiatry*, 207(1), 72-78. <https://doi.org/10.1192/bjp.bp.114.152827>

If you wish to learn more about the study, feel free to contact Dr. Zachary Hohman at [zachary.hohman@ttu.edu](mailto:zachary.hohman@ttu.edu) or Taleen Nalabandian at [taleen.nalabandian@ttu.edu](mailto:taleen.nalabandian@ttu.edu).

**Appendix N**  
**End of Study**

**Enter the survey code into MTurk to receive payment.**

Survey Code: \${e://Field/Random%20ID}

To verify that you received a code, copy your **Survey Code** below (remember, you will need to enter it again on the MTurk HIT to receive payment).



## **Appendix O**

### **Pilot Study**

**Introduction.** The current dissertation tests the hypotheses that a narrative about a depressed protagonist with a positive resolution will be preferred by and produce positive mental health outcomes for those higher on subclinical depression. To ensure that the hypothesized effects are due to the differences in narrative protagonist type (depressed versus non-depressed) and narrative resolution type (positive versus negative), a pilot study testing the effects of four narrative excerpts was conducted. Specifically, the pilot study should demonstrate that the type of protagonist and resolution of each narrative excerpt are salient to participants:

**H1a:** Participants reading a story about a depressed and suicidal protagonist or a non-depressed and non-suicidal protagonist will correctly identify the protagonist as depressed and suicidal or non-depressed and non-suicidal, respectively.

**H1b:** Participants reading a story with a positive resolution or a negative resolution will correctly identify the resolution as positive or negative, respectively.

To further confirm the effectiveness of the dissertation's narrative manipulation—namely, that participants will rate and engage with the narrative excerpts differently based on their levels of subclinical depression—it is important to determine that the narrative excerpts elicit a diverse range of responses. Therefore, the pilot study measured participants' levels of character identification, parasocial bond, and ratings of the protagonist and narrative excerpt itself, after reading the randomly assigned narrative excerpt, to ensure that all variables provide normally distributed data.

Narrative transportation—a measure of narrative engagement that refers to the experience of being immersed or “lost” in the fictional world of the narrative (Green, 2021; Green & Brock, 2000)—was also assessed. Narrative transportation allows the audience to vividly simulate character experiences, wherein audiences transported into a narrative are more likely to assume or take on the attitudes and behaviors portrayed in the narrative. In fact, narrative transportation is strongly positively correlated with character identification and parasocial bond (Tukachinsky et al., 2020). Narrative transportation should help substantiate whether the narrative excerpts are ideal for facilitating character identification and parasocial bonds with characters, the mechanisms that will serially mediate the hypothesized effects of narrative preferences and mental health outcomes of those with higher levels of subclinical depression. Therefore, for the purposes of the pilot study, narrative transportation was also examined in addition to the main measures (e.g., character identification, parasocial bond).

**Method.** Participants ( $N = 168$ ) for the pilot study were recruited on Amazon’s Mechanical Turk (MTurk) and were compensated \$0.50 for their time. Once given their informed consent (Appendix A) to participate in the pilot study, participants were randomly assigned to read one of four narrative excerpts about a depressed or non-depressed protagonist with a positive or negative resolution (Appendices B and C). After reading the excerpt, participants were asked manipulation check questions (e.g., whether the main character was depressed or not and whether the story had a positive or negative resolution; Appendix D) and questions about how much they liked the story and the main character (Appendix E). Once the manipulation check questions were completed, the participants answered a series of surveys on character identification (Appendix I),

parasocial bond (Appendix J), narrative transportation (Appendix P), and demographics (Appendix L). Participants were shown a debriefing statement at the end of the study (Appendices M and N).

**Results and Discussion.** Results of two Goodness of Fit ( $X^2$ ) tests demonstrated that participants ( $N = 168$  MTurk Workers) were more likely to correctly identify (rather than incorrectly identify) the protagonist type ( $X^2 [1] = 61.9, p < .001$ ) and the resolution type ( $X^2 [1] = 30.9, p < .001$ ) of the assigned narrative excerpt. See Tables 10 and 11 for percentages of participants who correctly identified protagonist type and resolution type for their respective narrative excerpt.

Table 10. Percentage of pilot participants ( $N = 168$ ) correctly identifying protagonist type (depressed vs. non-depressed) of the assigned narrative excerpt.

|                           | <b>Depressed</b> | <b>Non-Depressed</b> | <i>Total</i> |
|---------------------------|------------------|----------------------|--------------|
| <b>Correct</b>            | 84               | 51                   | 135          |
| <b>Incorrect</b>          | 3                | 30                   | 33           |
| <i>Total</i>              | 87               | 81                   | 168          |
| <b>Percentage Correct</b> | 96.6             | 63.0                 | 80.4         |

Table 11. Percentage of pilot participants ( $N = 168$ ) correctly identifying resolution type (negative vs. positive) of the assigned narrative excerpt.

|                           | <b>Negative</b> | <b>Positive</b> | <i>Total</i> |
|---------------------------|-----------------|-----------------|--------------|
| <b>Correct</b>            | 54              | 66              | 120          |
| <b>Incorrect</b>          | 25              | 23              | 48           |
| <i>Total</i>              | 79              | 89              | 168          |
| <b>Percentage Correct</b> | 68.4            | 74.2            | 71.4         |

Additional analyses determined that the narrative excerpts elicited a diverse range of responses. Based on the sample of MTurk Workers ( $N = 101$ ; see Table 12 for demographics) who correctly identified the type of protagonist (depressed versus non-depressed) *and* the type of resolution (positive versus negative), measures of character identification, parasocial bond, transportation (i.e., self-reported narrative engagement), and ratings of the protagonist and narrative excerpt were all normally distributed without conducting transformations. Z-statistics for skewness and kurtosis for each of the aforementioned variables were less than 3.29 (see Table 13 for skewness and kurtosis statistics and Figure 5 for histograms).

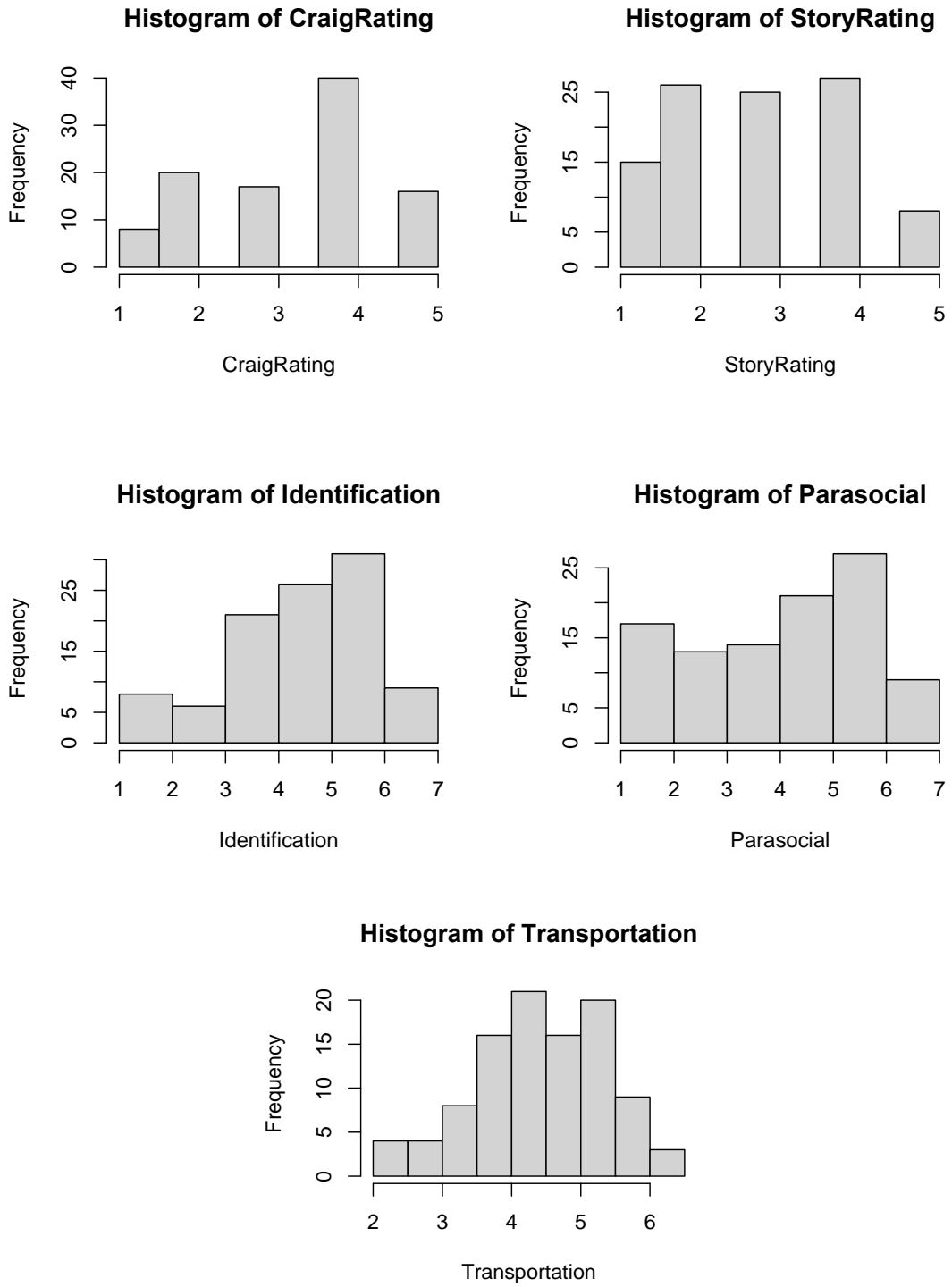
Table 12. Pilot sample descriptive statistics ( $N = 101$ ).

| <b>Demographics</b> | <b>Percentage</b> | <b><i>M</i></b> | <b><i>SD</i></b> |
|---------------------|-------------------|-----------------|------------------|
| <i>Gender</i>       |                   |                 |                  |
| Male                | 63.4              |                 |                  |
| Female              | 36.6              |                 |                  |
| <i>Ethnicity</i>    |                   |                 |                  |
| White               | 68.3              |                 |                  |
| Black               | 9.9               |                 |                  |
| Other               | 8.9               |                 |                  |
| Asian               | 7.9               |                 |                  |
| Hispanic            | 5.0               |                 |                  |
| <i>Age</i>          |                   | 39.0            | 12.1             |

Table 13. Skewness and kurtosis for total pilot sample ( $N = 101$ ).

|                            |           | Statistic | SE    | Z-Statistic |
|----------------------------|-----------|-----------|-------|-------------|
| <b>Craig Rating</b>        | <i>M</i>  | 3.360     | 0.119 |             |
|                            | <i>SD</i> | 1.197     |       |             |
|                            | Skewness  | -0.439    | 0.240 | 1.829       |
|                            | Kurtosis  | -0.822    | 0.476 | 1.727       |
| <b>Story Rating</b>        | <i>M</i>  | 2.870     | 0.119 |             |
|                            | <i>SD</i> | 1.197     |       |             |
|                            | Skewness  | 0.003     | 0.240 | 0.013       |
|                            | Kurtosis  | -0.988    | 0.476 | 2.076       |
| <b>Identification</b>      | <i>M</i>  | 4.523     | 0.138 |             |
|                            | <i>SD</i> | 1.391     |       |             |
|                            | Skewness  | -0.712    | 0.240 | 2.967       |
|                            | Kurtosis  | 0.028     | 0.476 | 0.059       |
| <b>Parasocial<br/>Bond</b> | <i>M</i>  | 4.100     | 0.161 |             |
|                            | <i>SD</i> | 1.618     |       |             |
|                            | Skewness  | -0.434    | 0.240 | 1.808       |
|                            | Kurtosis  | -0.908    | 0.476 | 1.908       |
| <b>Transportation</b>      | <i>M</i>  | 4.506     | 0.095 |             |
|                            | <i>SD</i> | 0.952     |       |             |
|                            | Skewness  | -0.332    | 0.240 | 1.383       |
|                            | Kurtosis  | -0.245    | 0.476 | 0.515       |

Figure 5. Histograms for total pilot sample ( $N = 101$ ).



Furthermore, skewness and kurtosis were also within normal range ( $< 3.29$ ) for data subset by the 4 conditions of the study: depressed protagonist/negative resolution (Table 14), depressed protagonist/positive resolution (Table 15), non-depressed protagonist/negative resolution (Table 16), and non-depressed protagonist/positive resolution (Table 17). Thus, the results of the pilot study substantiate that the type of protagonist and resolution of each narrative excerpt are salient to participants and that the variables of interest provide normally distributed data.

Table 14. Skewness and kurtosis for pilot data subset by the depressed protagonist/negative resolution condition ( $n = 25$ ).

|                        |           | <b>Statistic</b> | <b>SE</b> | <b> Z-Statistic </b> |
|------------------------|-----------|------------------|-----------|----------------------|
| <b>Craig Rating</b>    | <i>M</i>  | 2.960            | 0.241     |                      |
|                        | <i>SD</i> | 1.207            |           |                      |
|                        | Skewness  | -0.381           | 0.464     | 0.821                |
|                        | Kurtosis  | -1.087           | 0.902     | 1.205                |
| <b>Story Rating</b>    | <i>M</i>  | 2.520            | 0.259     |                      |
|                        | <i>SD</i> | 1.295            |           |                      |
|                        | Skewness  | 0.390            | 0.464     | 0.841                |
|                        | Kurtosis  | -0.883           | 0.902     | 0.979                |
| <b>Identification</b>  | <i>M</i>  | 3.992            | 0.323     |                      |
|                        | <i>SD</i> | 1.613            |           |                      |
|                        | Skewness  | -0.488           | 0.464     | 1.052                |
|                        | Kurtosis  | -0.920           | 0.902     | 1.020                |
| <b>Parasocial Bond</b> | <i>M</i>  | 3.605            | 0.363     |                      |
|                        | <i>SD</i> | 1.817            |           |                      |
|                        | Skewness  | -0.059           | 0.464     | 0.127                |
|                        | Kurtosis  | -1.442           | 0.902     | 1.599                |

Table 14, Continued

|                       |           |        |       |       |
|-----------------------|-----------|--------|-------|-------|
| <b>Transportation</b> | <i>M</i>  | 4.280  | 0.203 |       |
|                       | <i>SD</i> | 1.017  |       |       |
|                       | Skewness  | -0.146 | 0.464 | 0.315 |
|                       | Kurtosis  | -0.654 | 0.902 | 0.725 |

Table 15. Skewness and kurtosis for pilot data subset by the depressed protagonist/positive resolution condition ( $n = 27$ ).

|                        |           | <b>Statistic</b> | <b>SE</b> | <b> Z-Statistic </b> |
|------------------------|-----------|------------------|-----------|----------------------|
| <b>Craig Rating</b>    | <i>M</i>  | 3.810            | 0.185     |                      |
|                        | <i>SD</i> | 0.962            |           |                      |
|                        | Skewness  | -1.000           | 0.448     | 2.232                |
|                        | Kurtosis  | 1.601            | 0.872     | 1.836                |
| <b>Story Rating</b>    | <i>M</i>  | 3.220            | 0.216     |                      |
|                        | <i>SD</i> | 1.121            |           |                      |
|                        | Skewness  | -0.297           | 0.448     | 0.663                |
|                        | Kurtosis  | -0.518           | 0.872     | 0.594                |
| <b>Identification</b>  | <i>M</i>  | 5.037            | 0.202     |                      |
|                        | <i>SD</i> | 1.048            |           |                      |
|                        | Skewness  | -0.051           | 0.448     | 0.114                |
|                        | Kurtosis  | -1.093           | 0.872     | 1.253                |
| <b>Parasocial Bond</b> | <i>M</i>  | 4.690            | 0.229     |                      |
|                        | <i>SD</i> | 1.190            |           |                      |
|                        | Skewness  | -0.463           | 0.448     | 1.033                |
|                        | Kurtosis  | -0.216           | 0.872     | 0.248                |
| <b>Transportation</b>  | <i>M</i>  | 4.957            | 0.169     |                      |
|                        | <i>SD</i> | 0.876            |           |                      |
|                        | Skewness  | -0.758           | 0.448     | 1.692                |
|                        | Kurtosis  | 1.116            | 0.872     | 1.280                |



Table 16. Skewness and kurtosis for pilot data subset by the non-depressed protagonist/negative resolution condition ( $n = 24$ ).

|                        |           | <b>Statistic</b> | <b>SE</b> | <b> Z-Statistic </b> |
|------------------------|-----------|------------------|-----------|----------------------|
| <b>Craig Rating</b>    | <i>M</i>  | 3.170            | 0.238     |                      |
|                        | <i>SD</i> | 1.167            |           |                      |
|                        | Skewness  | 0.007            | 0.472     | 0.015                |
|                        | Kurtosis  | -1.165           | 0.918     | 1.269                |
| <b>Story Rating</b>    | <i>M</i>  | 2.580            | 0.199     |                      |
|                        | <i>SD</i> | 0.974            |           |                      |
|                        | Skewness  | 0.668            | 0.472     | 1.415                |
|                        | Kurtosis  | 0.340            | 0.918     | 0.370                |
| <b>Identification</b>  | <i>M</i>  | 4.425            | 0.230     |                      |
|                        | <i>SD</i> | 1.127            |           |                      |
|                        | Skewness  | -0.728           | 0.472     | 1.542                |
|                        | Kurtosis  | 0.250            | 0.918     | 0.272                |
| <b>Parasocial Bond</b> | <i>M</i>  | 3.865            | 0.301     |                      |
|                        | <i>SD</i> | 1.473            |           |                      |
|                        | Skewness  | -0.363           | 0.472     | 0.769                |
|                        | Kurtosis  | -0.619           | 0.918     | 0.674                |
| <b>Transportation</b>  | <i>M</i>  | 4.410            | 0.148     |                      |
|                        | <i>SD</i> | 0.726            |           |                      |
|                        | Skewness  | -0.049           | 0.472     | 0.104                |
|                        | Kurtosis  | -1.024           | 0.918     | 1.115                |

Table 17. Skewness and kurtosis for pilot data subset by the non-depressed protagonist/positive resolution condition ( $n = 25$ ).

|                        |           | <b>Statistic</b> | <b>SE</b> | <b> Z-Statistic </b> |
|------------------------|-----------|------------------|-----------|----------------------|
| <b>Craig Rating</b>    | <i>M</i>  | 3.440            | 0.265     |                      |
|                        | <i>SD</i> | 1.325            |           |                      |
|                        | Skewness  | -0.443           | 0.464     | 0.955                |
|                        | Kurtosis  | -1.105           | 0.902     | 1.225                |
| <b>Story Rating</b>    | <i>M</i>  | 3.120            | 0.254     |                      |
|                        | <i>SD</i> | 1.269            |           |                      |
|                        | Skewness  | -0.509           | 0.464     | 1.097                |
|                        | Kurtosis  | -0.965           | 0.902     | 1.070                |
| <b>Identification</b>  | <i>M</i>  | 4.592            | 0.313     |                      |
|                        | <i>SD</i> | 1.564            |           |                      |
|                        | Skewness  | -0.799           | 0.464     | 1.722                |
|                        | Kurtosis  | -0.007           | 0.902     | 0.008                |
| <b>Parasocial Bond</b> | <i>M</i>  | 4.185            | 0.362     |                      |
|                        | <i>SD</i> | 1.811            |           |                      |
|                        | Skewness  | -0.483           | 0.464     | 1.041                |
|                        | Kurtosis  | -1.175           | 0.902     | 1.303                |
| <b>Transportation</b>  | <i>M</i>  | 4.337            | 0.209     |                      |
|                        | <i>SD</i> | 1.043            |           |                      |
|                        | Skewness  | -0.304           | 0.464     | 0.655                |
|                        | Kurtosis  | -0.05            | 0.902     | 0.055                |

**Appendix P**  
**Transportation Scale**  
(Green & Brock, 2000)

Indicate the degree to which each of the following statements best represents your opinion about the narrative you just read, on a scale of 1 (not at all) to 7 (very much).

- 1 (Not at all)
- 2
- 3
- 4
- 5
- 6
- 7 (Very much)

While I was reading the narrative, I could easily picture the events in it taking place.  
While I was reading the narrative, activity going on in the room around me was on my mind.

I could picture myself in the scene of the events described in the narrative.

I was mentally involved in the narrative while reading it.

After the narrative ended, I found it easy to put it out of my mind.

I wanted to learn how the narrative ended.

The narrative affected me emotionally.

I found myself thinking of ways the narrative could have turned out differently.

I found my mind wandering while reading the narrative.

The events in the narrative are relevant to my everyday life.

The events in the narrative have changed my life.

I had a vivid mental image of Craig.