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Attachment as Affirmation to Inhibit Health Risk Information Avoidance

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ATTACHMENT AS AFFIRMATION TO INHIBIT HEALTH RISK INFORMATION
AVOIDANCE

A Thesis
Presented to
The Faculty of the Department of Psychological Sciences
Western Kentucky University
Bowling Green, Kentucky

In Partial Fulfillment
Of the Requirements for the Degree
Master of Science

By
Elizabeth McCrary

May 2017

ATTACHMENT AS AFFIRMATION TO INHIBIT HEALTH RISK INFORMATION
AVOIDANCE

Date Recommended April 21, 2017



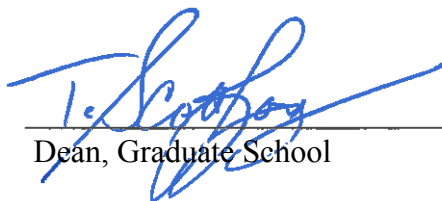
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Elizabeth McCrary

May 2017

42 Pages

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Previous research on information avoidance has revealed that people choose to avoid negative health information, but that this effect is interrupted by self-affirmation (Howell & Shepperd, 2013). The current study aimed to contribute to the field's understanding of the conditions under which self-affirmation reduces information avoidance by using a unique affirmation: secure attachment figures. I hypothesized that activating a secure attachment would serve as the affirmation necessary for participants to choose to view their risk information for a fictitious enzyme deficiency. However, when given a choice, participants in both the experimental and control conditions chose to view this information. At best, these results demonstrate that psychological resources of a social nature were effective in protecting people from undesirable health risk information. At worst, they present a failure to replicate previous research. Explanations for why the results were unexpected and future modifications to the paradigm are discussed.

Introduction

If human beings were the rational decision makers envisioned by economists (e.g., Friedman & Savage, 1948), one hundred percent of patients tested for the Human Immunodeficiency Virus (HIV) would adamantly seek their results, presumably in an effort to take the necessary, urgent steps for the sake of their health. However, as many as fifty-five percent of those tested for HIV fail to return to the test site to receive their results (Hightow et al., 2003). HIV is not the only condition for which people shy away from information. Indeed, the American Cancer Society (2009) estimates that millions of Americans choose not to be screened for various cancers. For example, even though colorectal cancer remains in the top five causes of cancer-related deaths, the usage of screening tools like the fecal occult blood test or the flexible sigmoidoscopy does not match the number of adults at risk (Weitzman, Zapka, Estabrook, & Goins, 2001).

Information Avoidance

Definition

One reason people avoid the proper screenings for these and other diseases is that they simply do not wish to know the results (Grusky, Johnston, & Swanson, 2007); in the words of one older male participant, “what I don’t know won’t hurt me” (Weitzman et al., 2001, p. 510). That is, they purposefully avoid information. Information avoidance as described in the above contexts, and as will be discussed throughout this proposal, describes the process by which people prevent themselves from acquiring available but unwanted information (Sweeny, Melnyk, Miller, & Shepperd, 2010). Information avoidance importantly diverges from established constructs such as selective exposure (see Smith, Fabrigar, & Norris, 2008 for a review) or knowledge dismissal (e.g.,

Shepperd, 1993), two constructs describing the process by which people simply do not select information that is already known. That is, in selective exposure, people are motivated to seek only the information that is consistent with their beliefs to avoid cognitive dissonance. In knowledge dismissal, people sometimes reject information that has already been encountered. Information avoidance uniquely describes the defensive process of refusing to receive new, usually threatening, information.

Causes of Information Avoidance

One of the primary reasons people tend to avoid information is the potential for obligation (Sweeny et al., 2010). Acquiring information sometimes leads to the need to take undesirable action – anything from ending a sexual relationship (Simpson, Ickes, & Blackstone, 1995) to undergoing a mastectomy (Ajekigbe, 1991). A second reason relevant to health concerns is the emotional impact of the information. In one study of gay and bisexual men, nearly 80 percent declined to receive their HIV status in an effort to avoid unpleasant emotions (Lyter, Valdiserri, Kingsley, Amoroso, & Rinaldo, 1987). The current study sought to test a way people could manage the threat of potentially negative information about their health that could create perceptions of future obligation or elicit negative emotions.

Moderators of Information Avoidance

According to the most recent review organizing the information avoidance literature, several factors exist as moderators, including perceptions of control, expectation that the information will be negative, and availability of coping resources (Sweeny et al., 2010). Indeed, participants in one study were less likely to express interest in being tested for a bogus enzyme deficiency if it was presented as untreatable,

demonstrating how lack of perceived control moderates information avoidance (Dawson, Savitsky, & Dunning, 2006). Afifi and Weiner (2006) found that participants who expected unknown information about their partner's sexual health to be negative were the least likely to actually seek this information from their partners.

However, the third moderator, coping resources, remains the most elusive. Whereas medical research has observed improved quality of life for newly diagnosed breast cancer patients who felt they had family and friends available to help them through their battles (Arora, Finney Rutten, Gustafson, Moser, & Hawkins, 2007), no study has manipulated the availability of social resources to investigate its ability to decrease information avoidance. The present study was designed to explore how a socially relevant variable might decrease the likelihood of avoiding negative health information.

Self-Affirmation

In addition to the moderators mentioned above, another factor shown to influence information avoidance is self-affirmation, such that affirmed participants do not display the same patterns of avoiding negative health information (e.g., Howell & Shepperd, 2012). Self-affirmation theory (Steele, 1988) describes one way we strive to protect self-esteem (Tesser, Crepaz, Beach, Cornell, & Collins, 2000) by maintaining a sense of integrity about the self based on our cherished values – that one is kind, honorable, or a good person. Self-affirmations have been shown to decrease outgroup stereotyping (Fein & Spencer, 1997), reduce post-failure rumination (Koole, Smeets, van Knippenberg, & Dijksterhuis, 1999), and palliate stereotype threat for women taking a mathematics exam (Martens, Johns, Greenberg, & Schimel, 2006).

Several streams of research have offered explanations as to how self-affirmations

succeed. A traditional view likens self-affirmation to a bank account (e.g., Sherman & Cohen, 2006), in which we have a vault of finite resources available to affirm ourselves. When faced with a threat to one aspect of the self, we are resilient if and only if we can afford to be, based on what we have left in our accounts. Critcher and Dunning (2015) have recently attempted to explain further how this works and have argued that broadening one's perspective of the self is the mechanism underlying the process by which self-affirmation reduces defensiveness in the face of psychological threat. That is, when one aspect of the self is threatened, people respond less defensively if they consider it to not be all-encompassing. For example, recall a time a prestigious journal did not accept your article for publication. To cope with this negative information about the self as a writer, you might reassure yourself how empathetic you are as a parent. Instead of seeing the self only in terms of the salient self-threat, self-affirmation makes salient a larger portion of the self-concept, rendering the threat less menacing by comparison. A final explanation of self-affirmation comes from terror management theory (TMT). According to TMT, affirming the self reassures us of our rightful place in a meaningful universe (Solomon, Greenberg, & Pyszczynski, 1991) and that we are good in the context of our culture (Hart, 2014).

Positive Effects of Affirmation on Health

Meeting the need to sustain a global sense of self-worth decreases the tendency to avoid threatening information (Sherman & Cohen, 2006). For instance, affirmed women in one study reported stronger intentions to reduce their coffee consumption after reading an article about its link to breast cancer (Sherman, Nelson, & Steele, 2000). Howell and Shepperd (2012) recently demonstrated across three experiments that affirming

participants changed their health-screening behavior, such that they avoided threatening information about their risk for a disease at a significantly reduced rate from their non-affirmed counterparts. The current study proposes that these positive effects of self-affirmation may be achieved through attachment priming.

Attachment

Human survival depends on the relationships we have with others (e.g., Baumeister & Leary, 1995). Bowlby (1973, 1982) emphasized the importance of secure attachment for healthy childhood development that translates to psychological well-being in adulthood. Attachment researchers often refer to attachment styles as patterns of emotions and behaviors based on one's relational history (Ainsworth, Blehar, Waters, & Wall, 1978; Shaver & Mikulincer, 2002). When considering attachment style as an individual difference, researchers commonly score people on two relatively independent factors referred to as attachment-related avoidance and anxiety. Those who are worried about the availability of an attachment figure during times of need are said to have an anxious attachment style, and those who cling to their independence out of distrust for their attachment figure are said to have an avoidant attachment style (Brennan, Clark, & Shaver, 1998). Should someone have low scores on both these dimensions, he or she would be considered to be securely attached, with the confidence to trust an attachment figure who has a history of being available and sensitive. This sense of security contributes to the positive development of one's sense of self (Bowlby, 1973), as the person is able to see himself/herself connected to another and worthy of love and support.

Although we often conceptualize attachment as a trait that is global and stable, many studies have found malleability in attachment orientation based on context (see

Mikulincer & Shaver, 2007 for a review). For example, Gillath and Shaver (2007) found that *regardless* of pre-existing attachment style, participants primed with attachment security were less likely to respond in an anxious or avoidant way to negative relationship events, such as a partner exposing a secret of theirs, than participants who were not primed with security. In fact, even participants who are chronically insecurely attached have enough semblance of what secure attachment is like to be primed for it in the laboratory (Gillath & Karantzas, 2015). For example, priming eating disorder patients with attachment-security related names significantly reduced the differences between them and control participants on performance on a food and body related cognitive task (Admoni, 2006). It seemed these chronically insecurely attached adults received cognitive benefits from mere priming of secure attachment.

Moreover, the priming of secure attachment yields results that cannot be reduced to positive affect. Several studies have demonstrated that priming secure attachment better predicts effects, such as prosocial behavior and decreases in aggression, than positive emotion priming. That is, exposing participants to pictures of money or funny film characters does not elicit the positive effects that pictures of attachment figures do (e.g., Carnelley & Rowe, 2010).

Positive Effects of Secure Attachment

Secure attachment is associated with a host of positive outcomes, such as increased self-esteem (e.g., Bartholomew & Horowitz, 1991) and better emotional regulation (e.g., Cooper, Shaver, & Collins, 1998). Over time, we build rich schemas of our attachment figures that can be activated if we are reminded of these friends and family members (Fredrickson, 2001; Mikulincer & Shaver, 2015). What we have not yet

considered, though, is how effective priming secure attachment can be in empowering people to approach, rather than avoid, negative health information about themselves. One basis for this consideration stems from a recent conceptualization of attachment as part of the means by which people maintain their psychological equanimity or security in the face of psychologically disturbing situations. Whereas previous scholars have noted that attachment helps protect the self from any number of physical threats (Baumeister & Leary, 1995), Hart (2014) proposed that attachment reaches further than proximal defense of the self – that it can serve as a type of symbolic defense against psychological threat, alongside boosting self-esteem and upholding cultural worldviews. That is, maintaining secure attachments, boosting self-esteem, and upholding cultural worldviews contribute to the global maintenance of psychological security. Hart (2014) describes these three constructs as being relatively interchangeable, based on how they develop throughout life. At the start of infancy, human beings rely completely on their attachment figures to sustain life. Someone else is responsible for their physical and psychological well-being. As children grow older, they learn it feels good to be praised for correct behaviors, but that it feels bad to be punished for inappropriate behaviors. Through this series of reinforcement and punishment, self-esteem develops, as children strive to be good sons and daughters and feel good about themselves. Growing into adolescence and adulthood, people realize that what is correct or inappropriate in their family may not align with each of their friends, that their family has a unique perspective on what constitutes proper behavior. This process cultivates one’s view about the nature of the world (i.e., cultural worldview). In short, Hart argues that their developmental intertwining helps the concepts of attachment, self-esteem, and worldviews serve similar

protective functions.

This compelling theoretical model allows us to hypothesize that avoidance of threatening health risk information is one specific threat potentially attenuated by attachment, much in the way threatening death anxiety can be attenuated by upholding cultural worldviews (e.g., Schimel, Hayes, Williams, & Jahrig, 2007). Previous studies show the positive effects of attachment primes on altruism, outgroup tolerance, and mental health (Mikulincer & Shaver, 2007). Hart (2014) helps provide a theoretical basis to supplement these empirical findings. Following from this, I find it probable that priming secure attachment could serve as the affirmation necessary to reduce information avoidance in paradigms like those used by Howell and Shepperd (2012).

The Current Study

The current study sought to provide more data to support the attenuation of health risk information avoidance via self-affirmation, while simultaneously expanding on the discussion surrounding self-affirmation's explanatory mechanisms. Specifically, the current study diverged from previous ones with the utilization of a different type of affirmation (i.e., the use of a secure attachment prime). In contrast, the classic self-affirmation paradigm asks participants to recall and reflect on cherished values (e.g., kindness).

Although the use of an attachment prime as a form of self-affirmation itself is novel, the current study is unique in at least two additional ways. First, the effects of a secure attachment prime are new to the information avoidance literature. Second, while previous research has used a dichotomous outcome variable in the form of binary choice to view personal health risk information, I additionally used continuous, non-

dichotomized dependent variables to gain insight into this question. This was intended to lend increased power to detect the expected effects.

Method

Study Design and Procedure

Participants completed the study in the laboratory following an informed consent procedure. This procedure was conducted under the cover story that the researchers were collaborating with the health center on campus. The researcher wore medical scrubs, and various medical props were positioned throughout the room (e.g., a stethoscope, heart rate monitors, a treadmill). The Institutional Review Board approved all steps in the experimental procedure. All questionnaires were provided on desktop computers, and the entire study took about twenty minutes to complete.

Participants were randomly assigned to either an experimental (attachment prime) or control (no attachment prime) condition. After watching an informational video about a bogus enzyme deficiency (thioamine acetylase, or TAA), they provided demographic information, purportedly to allow calculation of their risk for TAA deficiency. The transcript of this film was identical to that used in the original study, as well as similar in graphic content and style (c.f., Howell & Shepperd, 2012). Participants then completed a demographics questionnaire that was presented as a “risk calculator” for TAA deficiency. See Appendix A for a complete list of demographic items collected. These items were used to enhance the cover story.

Participants subsequently were given the choice to view their personal calculated risk for TAA deficiency. Regardless of choice, all participants then responded to items assessing their information avoidance, message derogation attitudes, and source

derogation attitudes, along with four individual difference measures described below.

Finally, participants were completely debriefed, thanked, and compensated five dollars.

Manipulations

Attachment prime and Control condition. Participants were randomly assigned to one of two conditions: “attachment prime” or a control. All participants were asked to think about a person and provide a list of six attributes describing him or her. Those in the experimental condition were asked the following to activate thoughts of a loved one: *Think of someone you turn to when you feel distressed or worried. In the space provided, please describe this person by making a list of six of his/her central qualities, or personality characteristics.* Research shows that this manipulation successfully activates the representation of a secure relationship (e.g., Mikulincer, Shaver, & Rom, 2011), although it has not yet been used in the health information avoidance domain. Those in the control condition instead read, *Think of a fellow student you know but do not have a close relationship with. In the space provided, please describe this person by making a list of six of his/her central qualities, or personality characteristics.*

Measures

Continuous information avoidance. Regardless of whether participants chose to see their risk likelihood or not, participants responded to five original items assessing their information avoidance. Items were scored on a scale of (1) = *not likely at all* to (7) = *extremely likely*. Sample items included “consult with your physician” and “conduct a google search.” See Appendix B for a complete list of items.

Message derogation. Participants responded to five items taken and modified from van Koningsbruggen and Das (2009) assessing their attitudes toward the message

presented in the video. Items were scored on a scale of (1) = *strongly disagree* to (7) = *strongly agree*. Sample items included “stretched the truth” and “too extreme.” See Appendix C for a complete list of items.

Source derogation. Participants responded to four items taken and modified from Afifi and Weiner (2006) assessing their attitudes toward the presenter of the information in the video. Items were scored on a scale of (1) = *strongly disagree* to (7) = *strongly agree*. Sample items included “biased” and “likeable.” See Appendix D for a complete list of items.

Individual difference variables. Participants completed the following individual difference measures due to their relevance to the literature surrounding the constructs of interest (i.e., attachment, self-affirmation, and information avoidance). The State Adult Attachment Measure (SAAM; Gillath, Hart, Nofhle, & Stockdale, 2009) was used to capture temporary fluctuations in one’s attachment orientation, as it has been shown to be a reliable and sensitive alternative to the conventional Experiences in Close Relationships scale (ECR; Brennan et al., 1998) designed to reflect participant attachment at the trait level. Participant levels of Need for Closure (Kruglanski, Webster, & Klem, 1993) and Intolerance of Uncertainty scale (IUS; Freeston, Rhéaume, Letarte, Dugas, & Ladouceur, 1994) were also assessed, based on research showing those without the ability to tolerate ambiguity tend to seek more information before making decisions. Finally, scores on the Need for Cognition scale (Cacioppo, Petty, & Kao, 1984) were recorded, as those higher in the construct tend to be information seekers. See Appendixes E-H for complete lists of these items.

Results

After removing eight participants who indicated that they did not want their data to be used, five participants who were suspicious of the cover story, and one participant who did not complete the study, the usable sample included 90 participants. Of these 90, 65 (72.2%) were female. In order to examine the effectiveness of the attachment prime, ten blind coders used the six adjectives provided by each participant to classify each participant as being a part of either the attachment affirmation condition or the control condition. The coders were required to make a forced choice decision. The coders were instructed to classify participant responses into the affirmation condition if the list of six attributes resembled the description of an attachment figure the participant might turn to when distressed. Also, the coders were instructed to classify a participant into the control condition if the list of six attributes instead seemed to describe an acquaintance that he/she did not know well. Coders correctly classified 74.08 percent of those participants in the attachment affirmation condition, and correctly classified 44.30 percent of those participants in the acquaintance control condition, $X^2(1, N = 90) = 18.6, p < .001$. Consequently, means comparisons of the information avoidance dependent measures and the individual difference measures were performed for both the full sample ($n_{attachment} = 46, n_{control} = 44$) and a trimmed sample ($n_{attachment} = 45, n_{control} = 17$).

In the full sample, participants did not differ across conditions in levels of secure attachment, anxious attachment, avoidant attachment, Need for Closure, or Intolerance of Uncertainty, all $p > .05$. However, participants in the control condition scored significantly higher in Need for Cognition, $t(88) = -2.88, p = .005$. Means and standard deviations for the full sample for all individual differences are presented in Table 1.

Table 1. Means and standard deviations of individual differences separated by condition.

	Condition			
	Attachment Prime (n = 46)		Control (n = 44)	
	M	SD	M	SD
Individual Differences				
Anxious Attachment	4.48	1.25	4.09	1.21
Avoidant Attachment	3.18	1.27	2.97	1.45
Secure Attachment	5.97	.95	6.03	.76
Need for Closure	4.53	.88	4.41	.83
Intolerance of Uncertainty	2.10	.77	2.01	.74
Need for Cognition	3.83	.81	4.28	.68

First, the primary hypotheses were tested. A Chi-Square test was used to examine the difference between the two conditions (attachment prime or no attachment prime) on the dichotomous dependent variable (learning their risk or avoiding the information). Thirteen percent of participants in the experimental condition and 15.9 percent of participants in the control condition chose to avoid the health information, yielding nonsignificant group differences, $X^2(1, N = 89) = .15, p > .05$. Follow up tests using one-way ANOVAs on the continuous dependent variables yielded similar null results. Null results for these continuous dependent variables were also found with the trimmed sample. For continuous information avoidance ($\alpha = .77$), message derogation ($\alpha = .61$) and source derogation ($\alpha = .36$), p 's were $> .05$. Means and standard deviations for the full sample for all continuous dependent variables are presented in Table 2. A correlation matrix for all continuous measures and individual differences is provided in Table 3.

Table 2. Means and standard deviations of continuous dependent variables separated by condition.

	Condition			
	Attachment Prime (n = 46)		Control (n = 44)	
	M	SD	M	SD
Continuous Dependent Variables				
Information Avoidance	3.18	1.36	3.49	1.27
Message Derogation	1.66	.81	1.65	.65
Source Derogation	3.00	.78	2.90	.79

Table 3. Correlation matrix for continuous variables and individual differences.

Measure	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Info. Avoid.	-												
2. Message Der.	.058	-											
3. Source Der.	.091	.324**	-										
4. Anxious Att.	.161	.046	-.084	-									
5. Avoidant Att.	-.039	.256*	.147	.017	-								
6. Secure Att.	.016	-.033	-.032	.050	-.647**	-							
7. Source Der.1	-.062	-.169	-.683**	.052	-.124	.131	-						
8. Source Der.2	.137	.330*	.244*	.019	.059	.129	.138	-					
9. Source Der.3	-.087	-.170	-.706**	-.093	-.106	-.010	.389**	-.016	-				
10. Source Der.4	.046	-.127	-.646**	.222*	-.053	.049	.252*	.108	.215*	-			
11. Need Clos.	-.015	.104	-.026	.121	.252*	-.206*	-.088	-.119	-.026	.073	-		
12. Intol. Uncert.	.002	.252*	.092	.242*	.525**	-.398*	-.199	-.016	-.032	.009	.622**	-	
13. Need Cog.	-.009	.214*	.024	-.008	-.033	.102	.102	.211*	.095	-.075	.119	.097	-

Note. ** Correlation is significant at the 0.01 level (2-tailed). * at the 0.05 level (2-tailed).

Second, attachment style was investigated as a potential moderator of the attachment manipulation. Logistic regression analyses were used to explore relationships between attachment style and condition in predicting the dichotomous dependent variable. Attachment style was scored using the conventional decomposition of the three SAAM subscales, including secure attachment ($\alpha = .86$), anxious attachment ($\alpha = .86$), and avoidant attachment ($\alpha = .87$). These were standardized to center before the dichotomous dependent variable was regressed on the condition factor in conjunction with each of the subscales and their interactions with condition, in three separate logistic regressions. None emerged significant in predicting the dichotomous information avoidance variable (all $p > .05$). Multiple regression analyses then were used to explore relationships between attachment style and condition in predicting the continuous dependent variables of information avoidance, message derogation, and source derogation. Neither secure nor avoidant attachment style moderated the effects of affirmation condition, but participants scoring higher in attachment anxiety were less likely to avoid learning their risk for TAA deficiency in the attachment prime condition ($R^2 = .09$, $F(3, 86) = 2.80$, $p = .051$). This effect of attachment prime was significant at one standard deviation below the mean of attachment anxiety ($t(86) = 2.4$, $p = .02$).

Figure 1 illustrates this relationship.

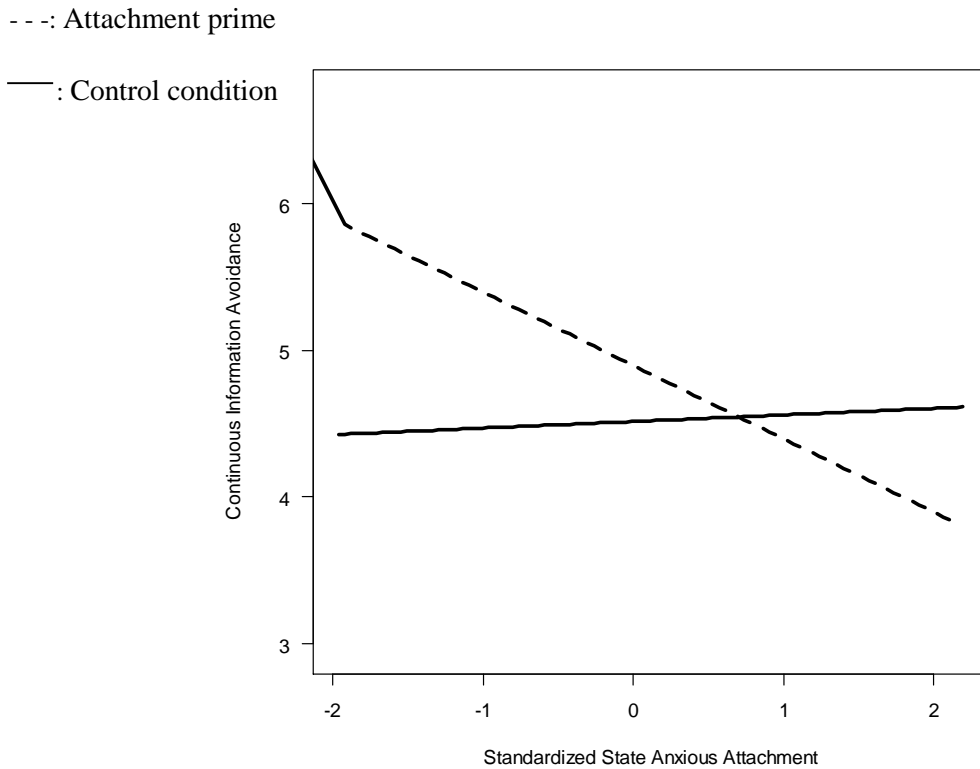


Figure 1. Graph illustrating relationship between anxious attachment and information avoidance.

Scores on the remaining standardized individual difference variables – Need for Closure ($M = 4.47$, $SD = .85$), Intolerance of Uncertainty ($M = 2.06$, $SD = .76$), and Need for Cognition ($M = 4.05$, $SD = .78$) – did not interact with condition to predict dichotomous or continuous outcome variables (all $p > .05$). However, secure attachment did moderate the relationship between intolerance of uncertainty and message derogation, such that participants who were intolerant of uncertainty and insecurely attached were more likely to derogate the message presented in the informational TAA deficiency video, $R^2 = .14$, $F(3, 85) = 4.49$, $p = .01$. Figure 2 illustrates this relationship.

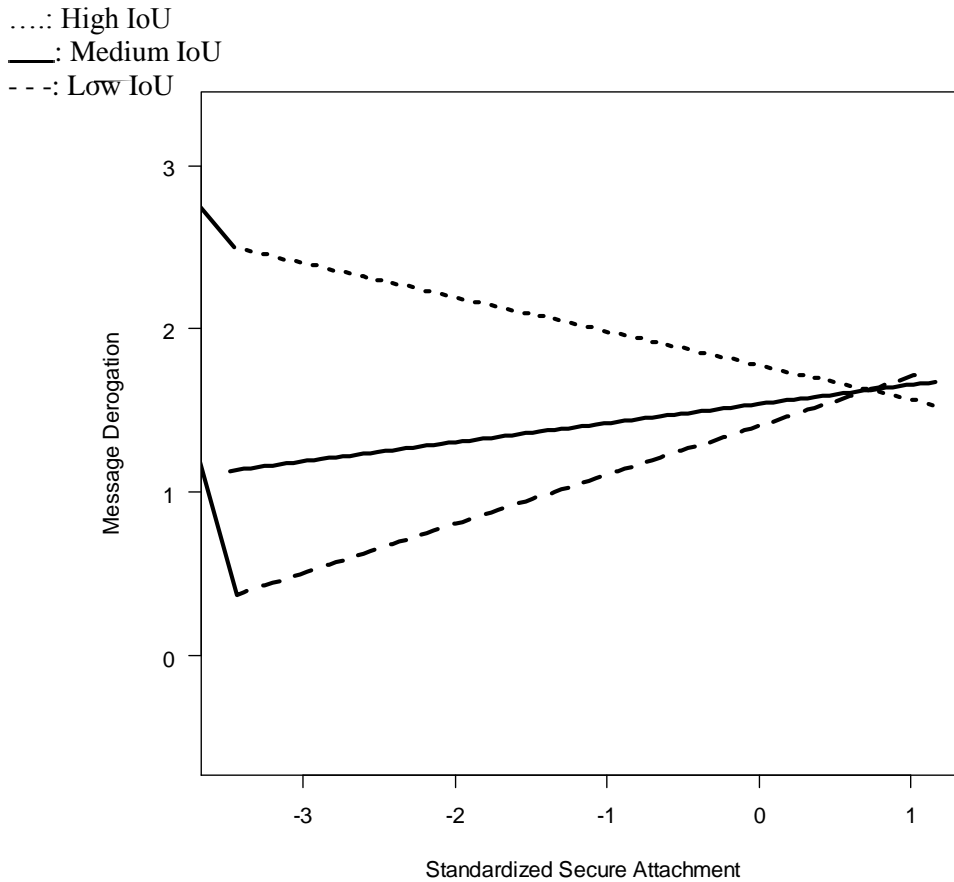


Figure 2. Graph illustrating interaction of intolerance of uncertainty and secure attachment on message derogation.

Discussion

Whereas some previous research exists to demonstrate the positive impact of affirmation on health decision-making (e.g., Howell & Shepperd, 2012), what we do not yet know is how effectively the mere activation of secure attachment could embolden people to learn potentially negative health information about themselves. The present study was equivocal in this regard. Almost no one in either the experimental condition or control condition chose to avoid his/her disease risk – 13 percent and 15.9 percent, respectively. This proportion does not match results of the Howell and Shepperd (2012) paradigm I sought to replicate. Across three studies, these authors found that, on average

54 percent of participants who were not affirmed avoided the health information. The burden to explain why a disproportionate number of participants did not avoid information now falls on the current study.

There is no reason to conclude the results are due to a difference in sample. Howell and Shepperd (2012) had similar sample sizes (e.g., 113, 104) of psychology undergraduate students from similarly large universities in the southeastern United States. One explanation is that condition-based differences were not found because the manipulation worked the same way in both conditions (e.g., 55.7 percent of participants in the control condition were misclassified as attachment). That is, it seems likely this uniformity could be the result of unintended attachment priming in the control condition. Participants describing peers did not avoid information at a statistically different rate than participants describing attachment figures. The most optimistic interpretation of these results is that the acquaintance prime actually seemed to have served a protective function and affirmed them in such a way the health information was not too threatening to receive. This conclusion is purely speculative, but it corresponds with other characteristics of the sample. For instance, the mean score on secure attachment in my sample was 6.0 on a 7-point scale. It could be the case that I attempted to prime secure attachment to prevent the tendency to avoid information, but that a mental representation of supportive attachment figures was already activated in most of my participants' minds! Finally, Howell and Shepperd (2012) used a slightly different dichotomous outcome measure of information avoidance. Whereas participants in their study were presented with a screen where "yes" had already been selected, participants in the current study did see that option selected on their screens. The high rate of non-affirmed participants

avoiding information might be the result of participants scrambling to regain autonomy following threat. According to self-determination theory, Ryan and Deci (2004) argue that this is a basic psychological function to maintain self-esteem.

A more compelling explanation for my results involves self-schemas, or the mental representations we hold of ourselves based on repeated categorization of our behaviors (Markus, 1977). In a classroom we might sit quietly until spoken to, whereas with close friends we speak loudly and freely. It seems possible that the scripts (Abelson, 1981) participants use to interact with acquaintances might mimic those they use to interact with attachment figures, specifically parents. For example, they might be cautious and polite interacting with both acquaintances and parents. Therefore, because of this overlap in acquaintance and parent scripts, activating thoughts of acquaintances might have actually activated thoughts of attachment figures as well. This self-schema explanation is not in conflict with the single condition-related significant effect – that anxiously attached participants in the affirmation condition sought health information. Because this standalone effect of attachment and information avoidance exists in the absence of other consistent with hypotheses, it may be a Type I error.

However, the data did include some evidence that attachment style predicts how people react to new, potentially threatening information. Participants who were intolerant of uncertainty and insecurely attached were more likely to derogate the message presented in the informational TAA deficiency video. This finding is consistent with previous research citing “deactivating strategies” whereby anxiously attached people actively ignore threats to keep their attachment schema from being activated, which would only remind them of the unavailability of an attachment figure and increase

frustration (Shaver & Mikulincer, 2002). It could be the case that the current study's manipulation did not effectively produce two unlike groups for comparison, but it does provide incentive for future research to investigate how attachment relates to information avoidance. Future research could benefit from a change in manipulation, dependent variable, or both.

Perhaps the most useful change to the current study would be a redesign of the manipulation. To more specifically prime secure attachment in only the experimental condition, future studies could include new control groups: a true neutral group, and a parallel task group. To minimize affirmation effects in the control groups, participants might list attributes about the experimenter they just met to provide a more neutral control. An open-response question asking participants to describe how they feel watching television might serve as an additional type of control. This should, of course, take the same amount of time and cognitive effort as the affirmation induction. Finally, it would be helpful to conduct a follow-up study in which insecure attachment is first primed, followed by a secure attachment prime. This would allow us to investigate whether secure attachment truly serves this soothing, compensatory mechanism that would replenish self-affirmation levels. Such a study could still utilize an information avoidance paradigm, resulting in participants avoiding information at a decreased rate if security had been activated.

Additionally, if future studies operate from a similar pool of college-student participants, the dependent variable might be made more relevant for this demographic. The information they might be prompted to avoid or receive could be an unaffordable increase in tuition, for example. It is possible that younger adults, like those in the current

sample, are still too young to have experienced the consequences of ignoring health information. The original study used a sample of psychology students (Howell & Shepperd, 2012), but these effects remain to be replicated. From a psychometric perspective, results including the message derogation and source derogation measures need to be viewed with some skepticism. The message derogation variable only achieved questionable reliability ($\alpha = .61$), and the source derogation variable was completely unacceptable ($\alpha = .36$; George & Mallery, 2003). However, when separated by condition, the reliability of the source derogation measure increased for the affirmation condition ($\alpha = .57$) as well as the control condition ($\alpha = .41$). The reliability of the continuous measure of information avoidance was acceptable ($\alpha = .77$), but this was an entirely original measure that could be improved prior to future use.

The present results were unexpected, but not meaningless. It is possible that participants reaped the benefits of self-affirmation via secure attachment, even if they were simply describing a pleasant acquaintance. Although most of us have experienced both positive and negative relationships, we are all likely to have some components of secure attachment in our memories that can be activated (Baldwin, Keelan, Fehr, Enns, & Koh-Rangarajoo, 1996). If simply thinking about an attachment figure can decrease the tendency to avoid information about our health, it is exciting to consider how interventions as subtle as the wording on a medical form might be able to affirm patients by priming secure attachment. This intervention could be installed by simply providing patients a blank to fill in describing who would be available to go with them to the healthcare facility. Such an intervention could improve the rates of HIV test result receipt, getting appropriate cancer screenings, or other healthful behaviors that are

disrupted by information avoidance. The successful results of a future study would have the potential to improve public health outcomes by outlining a way patients might more reliably take necessary precautions to protect their health. Early detection is crucial in breast and colorectal cancer, two of the top three deadliest forms of cancer (WHO, 2016). Imagine the possibility that strategically-recruited thoughts of loved ones could prevent the avoidance of proper screenings.

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APPENDIX A: DEMOGRAPHICS

1. Age
2. Gender
3. Race/Ethnicity
4. Height
5. Weight
6. Previous diagnosis of high blood pressure (Yes/No)
7. Smoker/Non-smoker
8. Previous diagnosis of type II diabetes (Yes/No)
9. Headaches (Mild/Debilitating)
10. Occasional dizziness (Times per month)
11. Feeling distracted (Times per week)
12. Thirsty at night (Yes/No)
13. Sleep Quality (Hours)

APPENDIX B: AVOIDANCE MEASURED AS A CONTINUOUS VARIABLE

1. Consult with your physician about TAA deficiency
2. Conduct a Google search about TAA deficiency
3. Consult with your friends about TAA deficiency
4. Request family history from a family member about TAA deficiency
5. Seek reading materials about TAA deficiency (e.g., at the health center)

Answered on a scale of 1 (Not Likely at All) to 7 (Extremely Likely)

APPENDIX C: ORIGINAL MESSAGE DEROGATION ITEMS

1. It was difficult to understand the video.
2. The video exaggerated the importance of this issue.
3. The video was too extreme.
4. The video tried to manipulate my feelings.
5. The video stretched the truth.

Answered on a scale of 1 (Strongly Disagree) to 7 (Strongly Agree)

APPENDIX D: ORIGINAL SOURCE DEROGATION ITEMS

1. The person in the video was likable.
2. The person in the video was biased.*
3. The person in the video made a good case.
4. I want to meet the person in the video.

Answered on a scale of 1 (Strongly Disagree) to 7 (Strongly Agree)

*Item is reverse-scored.

APPENDIX E: STATE ADULT ATTACHMENT MEASURE (SAAM)

1. I feel loved.
2. I feel like I have someone to rely on.
3. I feel secure and close to other people.
4. If something went wrong right now I feel like I could depend on someone.
5. I feel like others care about me.
6. I feel relaxed knowing that close others are there for me right now.
7. I feel I can trust the people who are close to me.
8. I feel a strong need to be unconditionally loved right now.
9. I really need to feel loved right now.
10. I want to share my feelings with someone.
11. I want to talk with someone who cares for me about things that are worrying me.
12. I wish someone close could see me now.
13. I wish someone would tell me they really love me.
14. I really need someone's emotional support.
15. If someone tried to get close to me, I would try to keep my distance.
16. The idea of being emotionally close to someone makes me nervous.
17. I'm afraid someone will want to get too close to me.
18. I feel alone and yet don't feel like getting close to others.
19. I have mixed feelings about being close to other people.
20. I would be uncomfortable having a good friend or a relationship partner close to me.
21. I feel like I am loved by others but I really don't care.

Answered on a scale of 1 (Strongly Disagree) to 7 (Strongly Agree)

APPENDIX F: NEED FOR CLOSURE SCALE

1. I think that having clear rules and order at work is essential for success.
2. Even after I've made up my mind about something, I am always eager to consider a different opinion.
3. I don't like situations that are uncertain.
4. I dislike questions which could be answered in many different ways.
5. I like to have friends who are unpredictable.*
6. I find that a well ordered life with regular hours suits my temperament.
7. I enjoy the uncertainty of going into a new situation without knowing what might happen.*
8. When dining out, I like to go to places where I have been before so that I know what to expect.
9. I feel uncomfortable when I don't understand the reason why an event occurred in my life.
10. I feel irritated when one person disagrees with what everyone else in a group believes.
11. I hate to change my plans at the last minute.
12. I would describe myself as indecisive.*
13. When I go shopping, I have difficulty deciding exactly what it is I want.*
14. When faced with a problem I usually see the one best solution very quickly.
15. When I am confused about an important issue, I feel very upset.
16. I tend to put off making important decisions until the last possible moment.*
17. I usually make important decisions quickly and confidently.

18. I have never been late for an appointment or work.
19. I think it is fun to change my plans at the last moment.*
20. My personal space is usually messy and disorganized.*
21. In most social conflicts, I can easily see which side is right and which is wrong.
22. I have never known someone I did not like.
23. I tend to struggle with most decisions.*
24. I believe orderliness and organization are among the most important characteristics of a good student.
25. When considering most conflict situations, I can usually see how both sides could be right.*
26. I don't like to be with people who are capable of unexpected actions.
27. I prefer to socialize with familiar friends because I know what to expect from them.
28. I think that I would learn best in a class that lacks clearly stated objectives and requirements.*
29. When thinking about a problem, I consider as many different opinions on the issue as possible.*
30. I don't like to go into a situation without knowing what I can expect from it.
31. I like to know what people are thinking all the time.
32. I dislike it when a person's statement could mean many different things.
33. It's annoying to listen to someone who cannot seem to make up his or her mind.
34. I find that establishing a consistent routine enables me to enjoy life more.
35. I enjoy having a clear and structured mode of life.
36. I prefer interacting with people whose opinions are very different from my own.*

- 37. I like to have a plan for everything and a place for everything.
- 38. I feel uncomfortable when someone's meaning or intention is unclear to me.
- 39. I believe that one should never engage in leisure activities.
- 40. When trying to solve a problem I often see so many possible options that it's confusing.*
- 41. I always see many possible solutions to problems I face.*
- 42. I'd rather know bad news than stay in a state of uncertainty.
- 43. I feel that there is no such thing as an honest mistake.
- 44. I do not usually consult many different options before forming my own view.
- 45. I dislike unpredictable situations.
- 46. I have never hurt another person's feelings.
- 47. I dislike the routine aspects of my work (studies).*

Answered on a scale of 1 (Strongly Disagree) to 6 (Strongly Agree)

*Item is reverse-scored.

APPENDIX G: NEED FOR COGNITION SCALE

1. I would prefer complex to simple problems.
2. I like to have the responsibility of handling a situation that requires a lot of thinking.
3. Thinking is not my idea of fun.*
4. I would rather do something that requires little thought than something that is sure to challenge my thinking abilities.*
5. I try to anticipate and avoid situations where there is likely a chance I will have to think in depth about something.*
6. I find satisfaction in deliberating hard and for long hours.
7. I only think as hard as I have to.*
8. I prefer to think about small, daily projects to long-term ones.*
9. I like tasks that require little thought once I've learned them.*
10. The idea of relying on thought to make my way to the top appeals to me.
11. I really enjoy a task that involves coming up with new solutions to problems.
12. Learning new ways to think doesn't excite me very much.*
13. I prefer my life to be filled with puzzles that I must solve.
14. The notion of thinking abstractly is appealing to me.
15. I would prefer a task that is intellectual, difficult, and important to one that is somewhat important but does not require much thought.
16. I feel relief rather than satisfaction after completing a task that required a lot of mental effort.*
17. It's enough for me that something gets the job done; I don't care how or why it works.

18. I usually end up deliberating about issues even when they do not affect me personally.

Answered on a scale of -4 (Very Strong Disagreement) to +4 (Very Strong Agreement)

*Item is reverse-scored.

APPENDIX H: INTOLERANCE OF UNCERTAINTY (IU) SCALE

1. Uncertainty stops me from having a firm opinion.
2. Being uncertain means that a person is disorganized.
3. Uncertainty makes life intolerable.
4. It's unfair not having any guarantees in life.
5. My mind can't be relaxed if I don't know what will happen tomorrow.
6. Uncertainty makes me uneasy, anxious, or stressed.
7. Unforeseen events upset me greatly.
8. It frustrates me not having all the information I need.
9. Uncertainty keeps me from living a full life.
10. One should always look ahead so as to avoid surprises.
11. A small unforeseen event can spoil everything, even with the best of planning.
12. When it's time to act, uncertainty paralyses me.
13. Being uncertain means that I am not first rate.
14. When I am uncertain, I can't go forward.
15. When I am uncertain I can't function very well.
16. Unlike me, others always seem to know where they are going with their lives.
17. Uncertainty makes me vulnerable, unhappy, or sad.
18. I always want to know what the future has in store for me.
19. I can't stand being taken by surprise.
20. The smallest doubt can stop me from acting.
21. I should be able to organize everything in advance.
22. Being uncertain means that I lack confidence.

23. I think it's unfair that other people seem sure about their future.

24. Uncertainty keeps me from sleeping soundly.

25. I must get away from all uncertain situations.

26. The ambiguities in life stress me.

27. I can't stand being undecided about my future.

Answered on a scale of 1 (Not at All Characteristic of Me) to 5 (Entirely Characteristic of

Me)