

Exploring the Relationship between Superstition and Defensive Pessimism

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Abstract

This study examines the relationship between superstitious beliefs and defensive pessimism. Superstitions are beliefs or rituals that help control stress and increase positive or reduce negative outcomes (Vyse, 2014). Defensive pessimism is a coping strategy that helps control fears and anxieties during performance by analyzing every scenario that could go wrong in order to prepare and harness one's energy to produce positive outcomes (Norem, 2001). Participants were recruited via Facebook to complete survey measures of both factors. Results of a Pearson's r correlation revealed that a positive relationship exists between defensive pessimism and superstition, however this relationship was only significant for women. Future studies should examine this relationship to determine if the two work synonymously or independently of one another to reduce anxiety or enhance performance.

Keywords: defensive pessimism, superstitions, correlation

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When placed in a stressful situation, the brain actively begins to identify ways to diminish the impact that these stressors have on one's life. In some cases, this happens through the use of coping mechanisms. One such mechanism is the implementation of rituals, or superstitions, which help them to gain a sense of perceived control over the situation (Lazarus & Folkman, 1984). For example, a former third baseman for the New York Yankees, Wade Boggs engaged in numerous rituals prior to each game. The first thing Boggs would do on game day was eat a meal of chicken. Then he would move on to the following extensive rituals:

Ending his grounder drill by stepping on third base, second, and first base taking two steps in the first-base coaching box and jogging to the dugout in exactly four strides. He never stepped on the foul when running onto the field and always stepped on it on his way back to the dugout. At

precisely 7:17 P.M. he ran wind sprints in the outfield, and when he finally stepped into the batting box he drew the Hebrew word *ni* in the dirt with his bat (Vyse, 2014, p.4).

Each of these rituals was performed with the intention of gaining control over his upcoming game performance.

While some may turn to superstitions to create a sense of control, others may resort to other types of coping behaviors, particularly in situations in which someone is trying to avoid failure. For example, some individuals attempt to anticipate every possible negative outcome that could occur in a situation. This negative thinking then results in a set of actions to reduce the likelihood of any of those negative outcomes to occur. This strategy is known as defensive pessimism (Norem, 2001). Like the superstitious person, the defensive pessimist feels as though their strategy helps them feel more in control of the end result, regardless of a negative or positive outcome (Martin, Marsh, Williamson, & Debus, 2003).

Both of these two coping strategies help prepare an individual for events and to avoid failure. They believe that those rituals or strategies enhance their performance resulting in higher rates of success. Given these similarities, the purpose of this study is to investigate whether the people who believe in superstitious rituals are also the same people who would enact defensive pessimistic planning strategies or if these two strategies are used independently of one another.

Superstition

To be superstitious is to have a fear of the unknown, and use faith in magic or luck to control the unknown (VandenBoss & American Psychological Association, 2013). A superstitious person believes that certain actions, events, or objects will bring about good luck (e.g. finding a four leaf clover) or help them to avoid bad luck (e.g. not allowing a black cat to cross your path) (Wiseman & Watt, 2004). Superstitions typically surface when a person feels distress and lack of control over their environment (Jahoda, 1969). When these situations arise an instinctive urge to control one's situation surfaces (Lazarus & Folkman, 1984). In order to gain a sense of control, individuals may employ superstitious rituals (Dudley, 1999; Keinan, 1994; Malinowski, 1954). The type of environment does not seem to matter, when someone feels out of control, the natural tendency is to find a method to regain control within the current situation.

Superstitions have been recorded for thousands of years and currently exist within many cultures (Jhoda, 1969; Hamerman & Morewede, 2015; Kramer & Block, 2008, Vyse, 2014). Some superstitions may be found across

different cultures; however, there are many superstitions that are unique within specific cultures. For example, in the Trobabin tribes in Melanesia, Malinowski (1954) observed that the women in these tribes utilize rituals to enhance their crop yields. Another example of this would be the use of the mezuzah in the Jewish culture. The mezuzah, is a tiny scroll that is supposed to be placed on the door post of one's home. Touching it and then kissing your hand is believed to bring good luck. The impact of this ritual was examined on Israeli students (Siniver & Yaniv, 2015). The students performed better on an exam when they were allowed to perform the ritual of kissing a mezuzah when entering the room than students who were not allowed to exercise their ritual (Siniver & Yaniv, 2015). Regardless of the culture, many groups of people use superstitious rituals as a way to produce a desirable result.

Superstitions have been observed in many different contexts such as school and athletic performance. Within an academic context, superstitious rituals have been commonly found to occur when students are in high stress situations, such as when studying for or taking an exam (Gallagher & Lewis, 2001; Siniver & Yaniv, 2015; Vyse, 2014). A recent study by Rudski and Edwards (2007) found that students are more likely to utilize superstitions when they feel the need to gain a sense of control over their anxiety, stress levels, or performance on a task. Superstition has also been extensively studied within the athletic community (Cibrowski, 1997). For example, in studies using basketball players, it has been found that free throw performance suffers when players are unable to implement their rituals (Czech, Ploszay, & Burke, 2014; Lobmeyer & Wasserman, 1986). Similar performance benefits from ritual use have also been found amongst collegiate golfers (Christensen & Smith, 2015).

Additionally, some studies have found that there may be gender differences in the use of superstitions (Auton, Pope, & Seeger, 2003; Wiseman & Watt, 2004). For example, Lobmeyer and Wasserman (1986) found that women, more so than men, reported that their superstitious rituals contributed to their success at a free throw task in basketball. Superstitions may affect anyone, but past research has found it to be more common in women. It has recently been found that superstitions may help a person regain control of a situation and improve performance during stressful times. Next, the similarities between defensive pessimism and superstitions are examined.

Defensive Pessimism

Defensive pessimism is a two faceted self-protection strategy used to manage anxiety and improve performance (Norem, 2001). The first facet regards the negative expectations regarding the possible outcomes. The

second is rumination, otherwise known as the thinking through all of the possible outcomes and then identifying situations to each of those possible outcomes (Lim, 2009; Norem et al., 1993). Students are often the subjects in studies on defensive pessimism and student performance. Therefore, this act of planning often results in a student who may think about all of the possible things that could result in failure on an exam. For the defensive pessimist, they will then turn this negative thinking into an action plan to make sure that outcome does not occur. For instance, a student who thinks about failing a big exam will plan extra study times, make additional notecards, and will most likely bring more than one pencil on exam day to make sure they are prepared.

Individuals who use this strategy harbor anxiety and often feel out of control. In order to control for this, they will set low expectations for themselves in their planning, even if they have done well in previous similar events. By reducing expectations and anticipating obstacles, people who use defensive pessimism seem to motivate themselves, reduce anxiety, and reach their goals effectively (Norem, 2001). For example, Lim (2009) conducted a study on students in Singapore and found that students who scored higher on defensive pessimism also possessed a higher need for achievement and were more likely to be successful. Interestingly, similar to some of the research regarding superstition, this study also found that women were more likely to acknowledge a defensive pessimistic approach. While interesting, this finding has not been consistently noted in the defensive pessimism literature (Norem, 2001).

Defensive pessimism is a cognitive coping strategy which is present only when the person needs to use it. For example, when a defensive pessimist is in a familiar setting, it may not be necessary to use a coping strategy, because the situation has a familiar comfortable feeling and does not require the use of a coping mechanism (Cantor, Norem, Niedenthal, Langston, & Brower, 1987). After interviewing defensive pessimists and individuals with depression, Showers and Ruben (1990) found that a defensive pessimist does not feel long-term anxiety as a result of a stressful situation. Once the stressful event has passed, the defensive pessimist typically resorts back to a normal level of anxiety.

The thought process of the defensive pessimist is important to their success. It helps them to gain desired control over situations which makes anxiety more manageable, and they will feel more confident that the outcome will be favorable even if the opposite may be true (Langer, 1975; Presson & Benassi, 1996). For example, nursing students who were able to reflect on their progress on a regular basis reported feeling less anxious and more in control of their success (Norem & Illingsworth, 1993). Similarly, numerous studies have found that inhibiting the use of a defensive pessimistic

strategy may hinder performance. If defensive pessimists were placed in a situation which did not allow them to use their coping mechanism, then their performance suffered (Norem & Cantor, 1986; Rich & Dahlheimer, 1989). Furthermore, a final study found that a defensive pessimist needs time to go through the motions of their coping mechanism. When the defensive pessimist was not allowed the necessary time to feel like they have gained control of a situation then performance suffers (Norem et al., 1993).

Current Study

Looking at these two bodies of literature together, it can be seen that superstitions and defensive pessimism have many similar attributes. Both are coping strategies that are used in times of uncertainty to reduce stress and enhance performance. No previous research has studied the relationship between superstitions and defensive pessimism. Given the numerous similarities between superstition and defensive pessimism, it is hypothesized that the reporting of superstitious beliefs will positively correlate with defensive pessimism. Additionally, the current study re-examines the belief that females will embrace more superstitions than males.

Method

Participants

A total of 365 participants responded to this survey study. The range of ages of the participants was quite broad, ranging between 18 and 77 ($M = 39$; $SD = 10.87$). A total of 82.8% of participants were female, and the remaining 17.2% were male. Of the 365 participants, 92.9% reported that they were Caucasian, 0.3% Black or African American, 1.7% American Indian or Alaska Native, 1.7% Asian, 0.3% Native Hawaiian or Pacific Islander, and 3.1% of the participants chose other. Participants were recruited via Facebook postings on the researchers' Facebook pages. Participation was strictly voluntary: no compensation was given for participating in this study.

Materials

Participants utilized a personal electronic device, such as a smart phone, laptop, tablet, or personal computer to access the Qualtrics hosted survey via a link on Facebook. Participants were asked to complete the survey on their own time, so no devices were provided by the researcher.

Measures

The Defensive Pessimism Questionnaire.

This scale has twelve items asking participants about the types of defensive pessimism behaviors they exhibit (Norem, 2007). This survey

contains a Likert type scale rating with seven response options 1 (*Not at all true of me*) – 7 (*Very true of me*). Example items from this survey include questions such as "I often start out expecting the worst, even though I will probably do OK" and "Considering what can go wrong helps me to prepare." In the current study, Cronbach's alpha was .87.

Superstitiousness Questionnaire.

This scale has eighteen items which ask participants about the superstitions that they possess (Zebb & Moore, 2003). This survey is based on six response options (0 = *Strongly disagree*, 1 = *Moderately disagree*, 2 = *Slightly disagree*, 3 = *Slightly agree*, 4 = *Moderately agree*, 5 = *Strongly agree*). Example items from this survey includes questions such as, "I have a lucky number" and "I believe that seeing a black cat will bring me bad luck." In the current study, Cronbach's alpha for this scale was .91.

Procedure

An invitation for the study and link to the survey was posted on the researchers' Facebook pages with a brief description of the study. Participants were able to access the survey in the comfort of their own home on a personal electronic device. After the participants gave informed consent, the survey began. All of the questions were administered in the same order for each participant. First they were asked demographics, followed by the defensive pessimism questionnaire, and then the Superstitiousness Questionnaire. The survey lasted no longer than ten minutes. Once the participants completed the survey they received an automated thank you and a request that they share the link with others.

Results

The purpose of this study was to examine whether a positive correlation exists between defensive pessimism and superstition. Since previous research has identified gender differences for superstition, a set of two-tailed independent sample t-tests were conducted to examine whether any such differences existed within the current data set for both measures of superstition and defensive pessimism. The means and standard deviations for the men and women's scores on each of these scales can be found on Table 1. In accordance with previous research, it was predicted that women, relative to the men, would report higher agreement with the superstitious statements (Wiseman & Watt, 2011). As predicted, the results of an independent sample t-tests indicated that men were less superstitious than women when responding to the Superstitiousness Questionnaire, $t(306) = -3.70, p < .001, r^2 = .33$.

Table 1

		Mean	Standard Deviation
Defensive Pessimism	Male	4.38	0.87
	Female	4.29	1.20
Superstitiousness	Male	1.60	0.64
	Female	2.13	0.97

Table 1. Means and Standard Deviations of Defensive Pessimism and Superstition Measures by Gender

Next, an independent samples t-test was conducted to examine the relationship between reported levels of defensive pessimism between men and women. No significant difference was found, $t(314) = .47, p = .638$.

Given that there was a significant gender difference in the responses for the measures of superstitions, the correlational analyses to examine the link between superstitions and defensive pessimism were conducted separately, for men (see Table 2) and women (see Table 3). Looking at these results separately, an interesting dichotomy arose. Specifically, for males, the correlation between defensive pessimism and superstitions was not present. For females, however the relationship between defensive pessimism and superstition was positively correlated, $r(249) = .21, p = .002$. Thus the hypothesis that defensive pessimism and superstitions would be positively correlated was partially supported. Specifically, the predicted relationship was found for women, but not for men.

Table 2

Variables	1	2
1. Defensive Pessimism	-	
2. Superstitiousness	-.10	-

Note. * $p < 0.05$ level, two-tailed. ** $p < .01$ level two-tailed.

Table 2. Correlations between Defensive Pessimism and three measures of superstition (for men).

Table 3

	Variables	1	2
1.	Defensive Pessimism	-	
2.	Superstitiousness	.21**	-

Note. ** $p < .01$ level two-tailed.

Table 3. Correlations between Defensive Pessimism and three measure of superstition (for women).

Discussion

The purpose of the current study was to examine the relationship between superstitions and defensive pessimism. It was found that defensive pessimism and superstitions were positively correlated; however this relationship was only found to be true for women. In general, women endorsed superstitious beliefs more so than men, which is consistent with previous findings (Keinan, 1994; Lobmeyer & Wasserman, 1986; Wiseman & Watt, 2004). A statistically significant difference between males and females on the defensive pessimism measure was not discovered, and both females and males scored high on the defensive pessimism questionnaire.

The results are not surprising given that both defensive pessimism and superstitions seem to be cognitive coping strategies. A careful examination of previous literature indicates that both superstitions and defensive pessimism allow a person to manage stress and regain control of their situation, which allows for the possibility of enhanced performance (Lim, 2009; Norem et al., 1993; Roney & Lehman, 2008; Siniver et al., 2015).

There are a number of limitations to consider when examining the results of this study. First, the sample had a narrow participation pool and was bound to the confines of Facebook users whom had access to the researchers' Facebook pages. Furthermore, the survey was administered by a snowball technique and was subjected to issues of convenience sampling. Additionally, response bias and self-selection bias must be considered. For example, some participants may have been more or less inclined to participate because superstitions were mentioned in the invitation. For some the topic may have been intriguing, while for others listing that topic may have caused a negative reaction, disinclining them to participate. For some who responded they may not want to admit to their own superstitions, or may not be aware of the frequency in which they act upon of some of the

rituals identified in the survey. It is possible that they feel embarrassed by them or may become worried because the act of participating in a survey on superstition could invite a positive or negative situation to happen. On the other hand, others may shy away from participation because they believe it would be bad luck to discuss their superstitions. The act of acknowledging a superstition may be superstitious in itself.

Future directions for this research should further examine the connection between defensive pessimism and superstition. Specifically, is there a causal relationship between the two, such that females use superstitions to manage defensive pessimism or vice versa. Exploring how these two variables relate to anxiety and neuroticism may also be beneficial.

Anxiety is a common theme in both the defensive pessimist and the superstitious person. A link between superstitions, anxiety, and anxiety disorders has already been found (Zebb & Moore, 2003). Additionally, Auton and colleagues (2003) have identified links between neuroticism and superstitions. It is possible that all of these items are linked and would bring a better understanding to the subject of trait anxiety. It may help the mental health professionals better understand how to help their clients work through stressful situations. Learning about the strategies may lead to developing methods of teaching their clients that using a coping strategy can be helpful. The end result of this education may reduce the reoccurrence of the out-of-control feeling that some might feel.

The findings from this study suggest that at least among women, if one is likely to think in a defensive pessimistic, it is likely that they may also be more prone to utilizing superstitions as well. By learning that these two strategies work in tandem as opposed to alternative coping strategies that different individuals might adopt, this opens the door for future research questions to identify just how these coping mechanisms may work together

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