

The Journal of Positive Psychology

Dedicated to furthering research and promoting good practice

ISSN: 1743-9760 (Print) 1743-9779 (Online) Journal homepage: <http://www.tandfonline.com/loi/rpos20>

Recalling courage: An initial test of a brief writing intervention to activate a 'courageous mindset' and courageous behavior

Amanda Kramer & Richard Zinbarg

To cite this article: Amanda Kramer & Richard Zinbarg (2018): Recalling courage: An initial test of a brief writing intervention to activate a 'courageous mindset' and courageous behavior, The Journal of Positive Psychology, DOI: [10.1080/17439760.2018.1484943](https://doi.org/10.1080/17439760.2018.1484943)

To link to this article: <https://doi.org/10.1080/17439760.2018.1484943>



Published online: 21 Jun 2018.



Submit your article to this journal [↗](#)



View related articles [↗](#)



View Crossmark data [↗](#)



Recalling courage: An initial test of a brief writing intervention to activate a 'courageous mindset' and courageous behavior

Amanda Kramer  and Richard Zinbarg

Department of Psychology, Northwestern University, Evanston, IL, USA

ABSTRACT

Though theoretical models propose that courage can be 'activated,' little experimental work exists to support this idea. The current study examines a writing intervention that asks individuals to reflect on experiences in which they faced their fears (thus demonstrating courage) to determine if such reflection would promote more approach-oriented cognition (Study 1) and behavioral intentions (Study 2). As expected, when asked to decide if they could/would engage in various approach behaviors related to their fear, participants in the courage condition chose 'yes' more often and were comparatively faster to choose 'yes' and slower to choose 'no.' Furthermore, participants in the courage condition demonstrated greater intentions of approach behavior toward feared situations in the laboratory. These results, though small in effect, suggest that the writing intervention can activate a 'courageous mindset' and can promote more courageous behavioral intentions.

ARTICLE HISTORY

Received 22 February 2018
Accepted 25 May 2018

KEYWORDS

Courage; fear; positive psychology; approach behavior; response latency; writing

Introduction

***'Courage is resistance to fear, mastery of fear – not absence of fear.'* – Mark Twain**

Courage has long been lauded as a primary virtue of mankind, from the writings of Aristotle (Ostwald, 1962) to the much more recent *Classification of Virtues and Strengths* (Peterson & Seligman, 2004). As such, courage is something we ought to strive to demonstrate. After all, we tend to admire those who demonstrate extraordinary courage, like the soldier on the front line or the firefighter running into the flames. These examples are perhaps beyond the capability of most of us, but certainly we are capable of demonstrating more ordinary courage. Though its status as a virtue may make courage seem rare or inaccessible, many definitions of courage come down to a ubiquitous emotion – fear.

In one of the earliest writings on courage, Aristotle proposed that the virtue of 'courage' was the 'golden mean' between avoidance (or cowardice) and excessive or thoughtless pursuit of action (or recklessness). This suggests that avoiding action demonstrates a lack of courage, but actions taken with no fear are also not 'courageous,' but instead foolhardy. This perspective on courage also has a strong hold in the scientific literature. In his pioneering work on courage, Rachman (1984) came to define courage as 'the ability to act despite the presence of fear' and, though decades of

work have debated the meaning of courage, this definition still holds strong. Indeed, more recently, Pury, Kowalski, and Spearman (2007) reified this construct of courage by specifying it as *personal courage*, which is demonstrated in 'actions which are only courageous given the context of the actor's personal limitations.' The idea that courage requires fear is still strong in psychological research.

Furthermore, laypeople also seem to agree that actions are more 'courageous' when the actor is experiencing fear. When asked to evaluate the courage demonstrated by characters in a series of vignettes, participants rated actions in which there was clear and present danger AND in which the actor experienced fear were rated as the most courageous, whereas similar actions taken without fear were rated as less courageous. In fact, even when the action was not inherently dangerous, actions in which actors experienced fear were consistently rated as more courageous than actions taken without fear. According to many researchers and laypeople alike, then, courage requires the presence of fear.

Therefore, as nearly all people experience fear, nearly all people should be able to demonstrate, and perhaps increase their capacity for, courage. They simply must face the situations that bring them fear. How one calls upon their courage to face these situations, on the other hand, remains an open question. A theoretical

model of courage by Hannah, Sweeney, and Lester (2010), following the CAPS model put forth by Mischel and Shoda (1995), provides one potential answer. The authors posit that to promote courageous action in the face of fear, one starts by activating elements of a 'courageous mindset' characterized by the internal (positive traits, positive states, values and beliefs) and external (social forces) resources that one possesses to face the situation at hand. Activation of any of these resources can then activate a courageous 'cognitive affective processing system' (CAPS) that includes one's encoding categories, expectancies, goals, values, affects and self-regulatory plans. If adequately activated, these 'CAPS units' can increase the likelihood of courageous behavior, such as by increasing specific behavioral intentions to act in a courageous way in a given situation. Some situations will be more likely to elicit CAPS activation and, thereby, courageous behavior, making courage a dynamic construct. Taken together, the model suggests that to promote courageous behavior in a given context, one can activate the resources an individual has that would allow them to be courageous in that situation. As a result, expectancies or goals of courageous behavior will be activated that will make such behavior more likely.

The 'resources' available to any one individual are likely idiosyncratic – the things that allow one individual to face their fears are probably different than those of another individual. Activating the 'right' resources may thus prove challenging unless the activator is something broad enough to capture all of these idiosyncrasies. Therefore, in the present work, we examine whether or not reflection on a past demonstration of courage (and thereby the variety of resources that would have propelled that particular demonstration of courage) could begin the sequence hypothesized by Hannah et al. (2010). Specifically, we ask participants to write about a time in which they 'successfully faced a situation despite being afraid.' The prompt is left broad to account for both the wide variety of potential 'courageous' behaviors (at all levels of approach behavior) and the wide variety of potential resources the individual could call upon. The prompt thus allows any individual to recall any courageous experience in an effort to prime whatever resources are relevant to that individual. Furthermore, we intentionally leave the word 'courageous' out of the prompt to avoid the possibility that participants respond with any alternate definition of courage (such as acting without feeling fear).

We chose a writing task for several reasons. In recalling personal memories, writing produces similar affective (Murray, Lamnin, & Carver, 1989), cognitive (Donnelly & Murray, 1991), and biological (Esterling, Antoni, Fletcher,

Margulies, & Schneiderman, 1994) effects to speaking. Moreover, writing may possess unique benefits in boosting certain aspects of psychological well-being when recalling positive memories. Lyubomirsky, Sousa, and Dickerhoof (2006) found that mentally replaying a positive memory while writing it down (as opposed to talking about it) resulted in significantly higher ratings of environmental mastery, or the sense that one is able to influence the events in their own lives. This feeling of mastery is associated with self-efficacy, as defined by Bandura (1977). Considering we aim to boost this sense of self-efficacy to convince individuals that they are capable of facing their fears, the boost (even if it is slight) provided by writing would be useful. Furthermore, on a practical level, the act of writing will produce a record of the activity for the individual, allowing them to read the story again if they need a reminder later on. In past studies, this type of autobiographical mood induction had effects lasting approximately 15 minutes (Abele, 1989) so, while the effects are expected to be short lived, they should be sufficient for proof of concept studies testing the immediate effect of the induction.

We aim to investigate whether this brief and broadly-framed courage intervention is effective in activating the 'courageous mindset' (Study 1) and in making courageous behavior more likely by promoting more courageous behavioral intentions (Study 2). Given its brevity and its one-time administration, we expect that the courage intervention will produce small but noticeable effects both on mindset and on specific behavioral intentions. We expect that individuals who engage in the writing intervention will demonstrate greater expectancies of courageous behavior at both an explicit (as assessed by self-reported expectancy) and an implicit level (as assessed by response latency). We also expect that individuals who engage in the courage intervention will demonstrate more courageous behavioral intentions in the laboratory when directly confronted with fear-relevant tasks. These are, to the best of our knowledge, the first empirical studies to attempt to manipulate courage.

Study 1

Study 1 focused on the utility of the writing task in activating the courageous mindset, characterized by greater expectancies of courageous behavior, on both an explicit and an implicit level. Participants engaged either in the 'courage' intervention or in a contrasting 'avoidance' intervention, in which they were asked to recall a time in which they had avoided a situation because of their fear. Following the intervention, participants demonstrated their expectancies of courageous

behavior by deciding if certain fear-relevant behaviors were behaviors they could/would engage in or not. Their decisions (yes or no) served as an explicit measure. The speed with which they came to these decisions (response latency) served as an implicit measure. We expected that individuals who engaged in the courage intervention would express greater expectancies of courageous behavior both explicitly and implicitly. Specifically, we expected that those in the courage condition would choose more 'yes' responses than 'no' responses. Furthermore, we expected that there would be an interaction effect on response latency such that while those in the courage condition would be faster with their 'yes' responses and slower with their 'no' responses, those in the avoidance condition would show the opposite pattern and be slower with their 'yes' responses and faster with their 'no' responses. This would indicate greater accessibility of approach behaviors (and thus courageous behaviors) for those in the courage condition, as they would more rapidly come to the decision that they could do things and be more hesitant to decide that they couldn't.

Method

Participants

Three hundred and sixty-five undergraduate students at a mid-sized Midwestern university were recruited through introductory psychology courses and completed the research for course credit. All students participating in research were required to fill out a packet of questionnaires including the Medical Fear Survey – Short Form (MFS-SF; (Olatunji et al., 2012) and the Personal Record of Communication Apprehension (PRCA-24; (McCroskey, Beatty, Kearney, & Plax, 1985). Participants were recruited in two groups: one group with elevated fear of blood, injury, and injection (BII) and one group with elevated fear of public speaking. More specifically, any student scoring above the mean of all students completing the MFS-SF in each round of pre-screening was invited to participate in the BII version of the study. The average MFS-SF score in the sample was 28.61 (SD = 11.03). Similarly, any student scoring above 51, and therefore demonstrating average or above average communication apprehension (McCroskey et al., 1985), on the PRCA-24 were invited to participate in the public speaking version of the study. The average PRCA-24 score in the sample was 67.61 (SD = 7.91).

Though initially designed as two separate studies with converging dependent variables, the data from both sub-samples was combined for this report. Because effect sizes were hypothesized to be small

based on the brevity of the intervention, the samples were combined in order to maximize power. To account for possible variations between sub-samples, 'Sub-sample' was included as an independent variable in the ANOVA analyses.

The sorting task data from 6 individuals in the BII study and 3 individuals in the public speaking study were missing due to computer failure and therefore dropped. The remaining sample was aged 16 to 23 with an average age of 18.9 (both across and within sub-samples). The BII-fearful sub-sample was predominantly (70.4%) female whereas the PS-fearful sub-sample was more balanced between genders with 43% male participants and 55.5% female participants (the remaining 1.5% chose not to respond). The sample was mixed in terms of ethnic composition – 53.1% of the sample was Caucasian, 7.6% was African American, and 27.2% was Asian, with 12.1% reporting other ethnicities. This composition was similar in both versions of the study.

Procedure

Sessions began with a writing intervention in which participants were randomly assigned to one of two conditions. In the 'courage' condition, participants wrote about a time when they encountered their fear (either of blood, injury, and injection or of public speaking) and successfully faced the situation despite being afraid. In the 'avoidance' condition, they instead wrote about a time in which they encountered their fear and avoided the situation because of their fear. Participants were told to 'write about the experience in as much detail as [they could], putting special emphasis on any thoughts or feelings that [they] had during the experience' and were given a minimum of five minutes (and a maximum of ten minutes) in which to write their responses.

As soon as the participant informed the researcher they had finished writing, the participant was instructed to begin the sorting task. The delay between the end of the writing and the beginning of the sorting task was less than five minutes. The sorting task varied slightly per sub-sample. In the BII sub-sample, participants were shown 50 items describing behaviors related to blood, injury, and injection in plain text on a computer screen. They were asked to determine if they could handle engaging in the behavior described in that item ('tolerable') or not ('intolerable') as quickly as they could by pressing one of two indicated keys on their keyboard. In the PS condition, participants were instead shown 50 items describing behaviors relevant to communication apprehension (primarily fear of public speaking). The instructions in this version were modified so that

participants were asked to decide whether they would willingly engage in the behavior described ('would do') or not ('would not do') to avoid ceiling effects that were observed in pilot cases. In both sub-samples, sorting task items were shown in a random order until all 50 were seen. Both the response chosen ('tolerable' or 'intolerable', 'would do' or 'would not do') and the response latency of the choice (which was measured without participant awareness) were recorded.

Immediately following their completion of the sorting task, participants were administered a short questionnaire assessing their perceptions of their own courage. Following all experimental procedures, participants provided their demographic information and, using a funnel debriefing, were assessed for their level of knowledge about the purpose of the study before being fully informed about the nature of the study.

Measures

Sorting task responses. In the BII sub-sample, the sorting task items were descriptions of various behaviors related to blood, injury, and injection. All items were taken directly from the 50-item Medical Fear Survey (Kleinknecht, Kleinknecht, Sawchuk, Lee, & Lohr, 1999), which includes items such as 'seeing a small vial of your own blood,' 'seeing someone receive an injection in the arm,' and 'seeing photos of wounded soldiers from war.' Instead of rating the level of discomfort provoked by each item, participants decided whether the behavior described in the item was 'tolerable' or 'intolerable' to them. The number of 'tolerable' responses chosen were counted and used as an indicator of stronger expectancies of courageous behavior.

In the PS sub-sample, the sorting task items were descriptions of various behaviors related to communication apprehension. The items were created based on the four categories in the PRCA-24 (McCroskey et al., 1985): group discussion, meetings, interpersonal conversations, and public speaking. There were 12–13 items per category for a total of 50 items and included items such as 'answer a question in class when I don't know the answer,' 'give a presentation in a meeting,' 'initiate small talk with strangers,' and 'give a speech on a familiar topic for low stakes.' Rather than rating their level of agreement with the statements, as in the PRCA-24, participants decided whether the behavior described in the item was something they 'would do' willingly or 'would not do' willingly. The number of 'would do' responses chosen were counted and used as an indicator of stronger expectancies of courageous behavior.

Sorting task latencies. In addition to the 'tolerable' versus 'intolerable' or 'would do' versus 'wouldn't do' distinction, the time participants took to respond to each item was also recorded. For this task, shorter latencies were taken to indicate greater accessibility of either a courageous mindset or a avoidant mindset. Therefore, a profile in which there were shorter latencies for 'tolerable' or 'would do' responses and longer latencies for 'intolerable' or 'wouldn't do' responses would indicate greater accessibility of a courageous mindset.

For the latency data, any data point falling beyond three standard deviations of the mean latency for that particular participant were considered outliers and were removed from analysis. As demonstrated by Ratcliff (1993), when variability between subjects is high, standard deviation cutoffs have higher power to detect effects. Considering Ratcliff's definition of 'high variability' was a range of 300 ms, the range of 3416 ms for 'yes' responses and 4518 ms for 'no' responses for this task suggests it is reasonable to use a standard deviation cutoff. Furthermore, a cutoff of three standard deviations is highly conservative and avoids significant data loss while maintaining power. Once outliers had been eliminated, the average latency for all 'yes' responses and the average latency for all 'no' responses for each participant were calculated.

Results

Yes vs. no responses

To examine differences in the number of 'yes' versus 'no' responses in the sorting task, a 2 (condition: courage vs. avoidance) $\times$ 2 (sub-sample: BII vs. PS) ANOVA with number of yes responses as the dependent variable was conducted. As predicted, there was a main effect of condition such that participants in the 'courage' condition ($M = 33.56$, $SE = 0.61$, 95% $CI = [32.38, 34.76]$) chose significantly more yes responses than did those in the 'avoidance' condition ($M = 30.89$, $SE = 0.57$, 95% $CI = [29.76, 32.01]$); $F = 10.32$, $p = 0.001$, partial $\eta^2 = 0.029$. On an explicit level, participants writing about courageous experiences reported that they could engage in a greater number of fear-relevant behaviors across conditions. There was no significant interaction effect ($F = 0.167$, $p = 0.683$, partial $\eta^2 = 0.000$), thus failing to provide evidence that the effect of the writing task on increasing 'yes' responses differed across sub-samples. The results of these analyses can be seen in Figure 1.

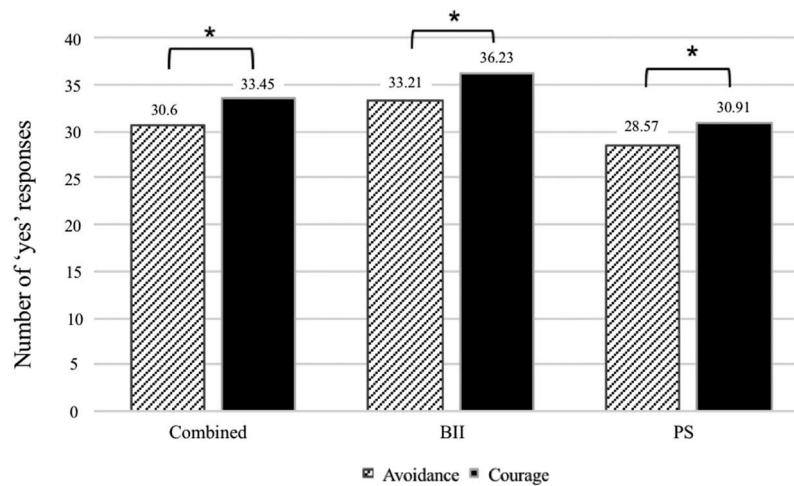


Figure 1. Number of 'yes' responses in sorting task between conditions.

Sorting task latencies

To examine differences in latency times between conditions and across sub-samples, a 2 (response: yes versus no) $\times$ 2 (condition: courage versus avoidance) $\times$ 2 (sub-sample: BII versus PS) mixed ANOVA with response latency as the dependent variable was conducted. As predicted, the response by condition interaction was significant; $F(1,344) = 4.817$, $p = 0.03$, partial $\eta^2 = 0.01$. Individuals in the courage condition showed faster yes responses compared to their no responses whereas individuals in the avoidance condition showed slower yes responses compared to

their no responses. This indicates more accessible expectancies of courageous behavior at an implicit level marked by a more confident pattern of responding in the courage condition than in the avoidance condition. These results can be seen in Figure 2. Analysis of the simple effects showed that 'yes' response latencies ($M = 2130.92$, $SE = 42.75$, 95% CI = [2046.83, 2215.01]) were significantly faster than 'no' response latencies ($M = 2240.06$, $SE = 48.78$, 95% CI = [2144.11, 2336.01]) in the courage condition; $F(1,344) = 6.75$, $p = 0.01$, partial $\eta^2 = 0.02$. There were no significant simple effects in

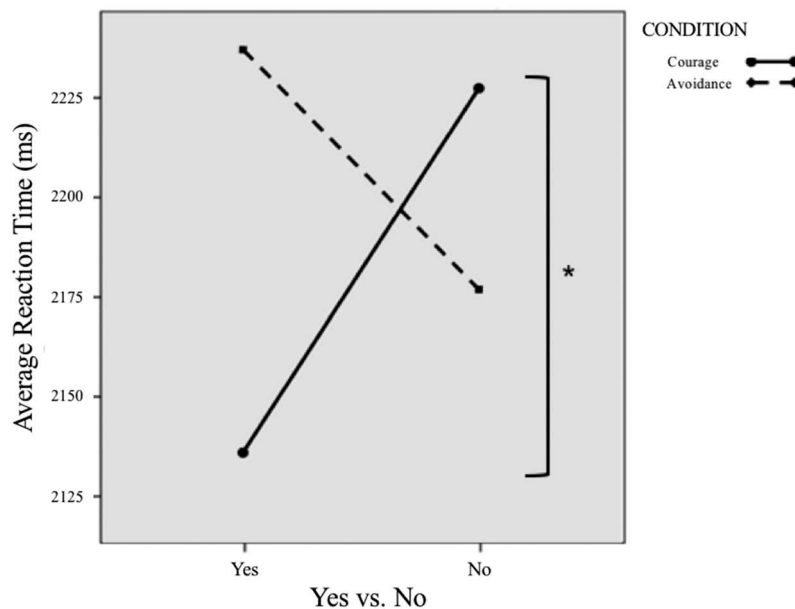


Figure 2. Interactions between millisecond response latency (yes/no) and condition (courage/avoidance).

the avoidance condition, indicating more polarization between yes and no response latencies in the courage condition than in the avoidance condition.

Discussion

These data provide evidence that this brief writing intervention was effective in activating the 'courageous mindset,' characterized by greater expectancies of courageous behavior, at both an explicit and an implicit level. Not only did participants engaging in this writing intervention *say* that they could/would engage in more fear-relevant behaviors, but they did so at a faster rate, suggesting that the belief that these behaviors were possible was more accessible to them as a result of this writing intervention. This convergence of explicit and implicit measures gives us confidence that the results are not due solely to demand, as might have been the case if the measures were only explicit. Additionally, this activation of the 'courageous mindset' held across two sub-samples that differed slightly in terms of selection, task specifics, and of course, type of fear without significant moderation by sub-sample, suggesting generalizability of the intervention. These results suggest that the courageous mindset can be manipulated with this brief writing task.

Admittedly, without a neutral control condition present, it is difficult to determine with certainty that it was the courage intervention that was creating positive effects and not the avoidance intervention that was creating negative effects. Of course, it could also be that both interventions created opposite and nearly equal effects. All of these speculations will need to be tested by including a neutral control in future studies.

As it stands, this study provides initial evidence that the 'courageous mindset' can be manipulated. Though the effects are small, they provide proof of concept for the idea that this task can produce changes in mindset. However, the lack of neutral control does leave room for doubt, and it remains to be seen if this intervention can produce any change at a more behavioral level, as the theoretical model would posit. Therefore, in Study 2, we include a neutral control group and examine the effects of this writing intervention in making courageous behavior more likely by increasing specific behavioral intentions.

Study 2

In Study 2, participants engaged either in the 'courage' intervention, the 'avoidance' intervention, or a third writing task in which they were asked to recall the events of their morning routine. Following the

intervention, participants were told to deliver a short speech about themselves in front of a panel of three judges. They were told they could take up to 10 minutes to prepare and that they would speak for approximately 5 minutes. Following their speech, they were asked if they would be willing to return to the lab for a similar task in the future and, if so, if they would be willing to be evaluated at that time. Because participation in the speech task was expected (and non-compliance with study expectations is generally rare, as Milgram's (1963) obedience studies would suggest), our primary dependent variable was the participants' willingness to return to the lab, or their *intention* to engage in future courageous behavior. Given that we expected the courage intervention to promote specific intentions of courageous behavior, we expected that participants in the courage condition would be more willing to return to the lab and to be evaluated (compared to the control condition and the avoidance condition). Furthermore, since we posit that courage is not an absence of fear, we expected that this increase in courageous behavioral intentions would not be due lower anxiety. That is: 1) there would be no significant differences in anxiety, either before or during the speech, between the three conditions, and 2) the effects of the manipulation on behavioral intentions would remain when including any change in anxiety as a covariate.

Method

Participants

One hundred and forty-seven undergraduate students at a mid-sized Midwestern university were recruited through introductory psychology courses and completed the research for course credit. All students participating in research were required to fill out a packet of questionnaires including the Personal Record of Communication Apprehension (PRCA-24; (McCroskey et al., 1985). Participants scoring above a 19 on the public speaking subscale on the PRCA-24, and therefore demonstrating average or above average levels of public speaking apprehension, were invited to participate in the study. All of these participants also scored above 51 on the PRCA-24 in total, indicating average or above average communication apprehension in general (as corresponds to Study 1). In this sample, the average score on the public speaking subscale was 23.16 ($SD = 3.29$) and the average score on the PRCA-24 in total was 78.16 ($SD = 13.68$).

The sample was aged 18 to 22 (with an average age of 18.9) and was predominately (66%) female. The

sample was mixed in terms of ethnic composition – 53.1% of the sample was Caucasian, 4.8% was African American, and 28.6% was Asian, with 13.6% reporting other ethnicities.

Procedure

As in Study 1, sessions for Study 2 began with a writing intervention. Participants were assigned to one of three conditions – the ‘courage’ or ‘avoidance’ conditions (as described in Study 1) or a third control condition in which participants wrote about the details of their morning routine. In all three conditions, participants were again told to ‘write about the experience in as much detail as [they could], putting special emphasis on any thoughts or feelings that [they] had during the experience’ and were given a minimum of five minutes (and a maximum of ten minutes) in which to write their responses.

Following the manipulation, participants were told that they would soon be asked to deliver a short speech in front of a panel of judges and were asked to give a rating of their preparatory anxiety. At that time, a researcher entered the room and told the participant to imagine that they were being interviewed for their dream job and have approximately 5 minutes to impress the panel of judges. They were told that they could have up to 10 minutes to prepare and to let the researcher know when they were ready to begin. After the participant indicated they had finished preparing, the researcher returned to the room along with two other confederates and sat across a table from the participant. The researcher also set up a video camera to record the participant’s speech. All judges were trained to maintain neutral expressions while the participants spoke. Participants spoke until they were ‘done’ with their speech with no further prompting from the research team.

After delivering their speech, participants were asked if they would be willing to return to the lab and perform a similar speech (‘in order to test new prompts’) and whether or not they would be willing to be evaluated for the effectiveness of their speech and speaking ability. After responding, participants answered several questions about the judging panel (in order to assure neutrality was maintained) and provided demographic information. Following all procedures, participants were assessed for their level of knowledge about the purpose of the study using a funneled debriefing protocol.

Measures

Preparation and speaking time. The time between the door shutting and the participant re-opening the door served as a measure of preparation time, and the

time between the participant starting their first word and ending their final word served as a measure of speaking time. These measures served as a manipulation check in order to ensure participants in all conditions engaged in the fear-inducing speech task (and thus knew what they were signing up for by agreeing to return).

Anxiety (pre- and post-speech). Before beginning their speech, participants were shown a screen on their computers that said, ‘In a moment, you will be asked to give a short speech which will be evaluated by a panel of judges. On the scale below, please indicate how much anxiety you feel about giving this speech.’ Participants rated their pre-speech anxiety on a scale from 0 (‘none at all’) to 100 (‘the most possible’).

After completing their speech, participants were shown a screen on their computers that said, ‘Now that you have finished your speech, please indicate your peak level of anxiety during the speech task. That is, how anxious did you feel at your most anxious point during the speech?’ Participants rated their anxiety on a scale from 0 (‘none at all’) to 100 (‘the most possible’).

Panel evaluations. Following their anxiety ratings, participants were shown a screen that said, ‘During your speech, you were watched by a panel of three judges. On average, how would you rate the panel in terms of positivity, negativity, energy, and interest?’ The four descriptors were each rated separately on a scale from 1 (‘extremely low’) to 7 (‘extremely high’). This served to ensure that the judges were equally neutral in all conditions *and* to assess if perceptions of the judges varied between conditions.

Willingness to return. After their speech, the lead researcher told the participant that the laboratory was ‘testing a few different prompts for this project’ and asked the participant if they would be ‘willing to come back to the lab later on to do a similar task with a different prompt.’ Participants were ensured that it was ‘totally voluntary.’ If they indicated they would return, they were asked to give their contact information (to solidify the commitment) and then were asked to indicate, on the form, ‘whether or not [they] would want feedback on [their] performance on the later task, such as [their] strengths and weaknesses as a speaker.’ There were three levels of agreement – 0 indicating they would not return, 1 indicating they would return, but would not be evaluated, and 2 indicating that they would return and would be evaluated.

Results

Manipulation checks

To ensure there were no differences in preparation time, an ANOVA with preparation time (in seconds) as the dependent variable was conducted. There were no significant differences between groups in preparation time; $F(2,144) = 0.67$, $p = 0.52$, partial $\eta^2 = 0.01$.

To ensure there were no differences in speaking time, an ANOVA with speaking time (in seconds) as the dependent variable was conducted. There were no significant differences between groups in speaking time; $F(2,143) = 0.07$, $p = 0.93$, partial $\eta^2 = 0.00$.

Anxiety ratings

To examine differences in anxiety ratings, two ANOVAs were conducted, one in which pre-speech anxiety was the dependent variable and one in which post-speech anxiety was the dependent variable. There were no significant differences between groups in either pre-speech ($F(2,144) = 1.15$, $p = 0.32$, partial $\eta^2 = 0.02$), or post-speech ($F(2,144) = 0.61$, $p = 0.55$, partial $\eta^2 = 0.01$) anxiety.

Panel evaluations

To ensure there were no differences between groups in their perceptions of the panel, a MANOVA was conducted with each of the four panel ratings (positivity, negativity, energy, and interest) included as dependent variables. There were no significant differences between conditions in their ratings of positivity ($F(2,143) = 1.63$, $p = 0.20$, partial $\eta^2 = 0.02$), negativity ($F(2,143) = 1.67$, $p = 0.19$, partial $\eta^2 = 0.02$), or interest ($F(2,143) = 1.77$, $p = 0.18$, partial $\eta^2 = 0.03$). The omnibus test indicated a significant difference in energy; $F(2,143) = 3.06$, $p = 0.05$, partial $\eta^2 = 0.05$.

The LSD post-hoc test indicated that there was a significant difference between ratings of panel energy in the avoidance condition ($M = 3.25$, $SE = 0.17$, 95% CI [2.92, 3.58]) and in the control condition ($M = 2.70$, $SE = 0.16$, 95% CI [2.38, 3.02]); mean difference = 0.55, $p = 0.02$. Those in the control condition perceived less energy from the panel than did those in the avoidance condition. There is no clear theoretical explanation for this – it may reflect the dull nature of the control prompt rather than the panel itself.

Willingness to return

To examine whether or not those who completed the courage intervention were more willing to return (and thus more willing to face their fears), a Kruskal-Wallis test by ranks was conducted with willingness to return (on a 0–2 ordinal scale) as the dependent variable. The omnibus test indicated a significant difference between groups; $H(2,141) = 6.858$, $p = 0.03$. Post hoc pairwise comparisons (using Dunn's tests) indicated those in the courage condition ($M = 1.52$, $SD = 0.79$) were significantly more willing to return than those in the avoidance condition ($M = 1.04$, $SD = 0.93$); $Z = -19.919$, $p = 0.009$, Bonferroni corrected $p = 0.027$. Neither the courage ($Z = 9.146$, $p = 0.224$, Bonferroni corrected $p = 0.671$) nor the avoidance ($Z = -10.783$, $p = 0.144$, Bonferroni corrected $p = 0.433$) conditions were significantly different than the control condition ($M = 1.32$) in their willingness to return. The results of this analysis can be seen in Figure 3.

Furthermore, this difference remains when adjusting for any changes in anxiety. Though non-parametric tests are more appropriate for this data, a one-way ANCOVA was conducted in this case to easily allow for the presence of covariates. In one-way ANCOVA analyses, the difference between conditions remained

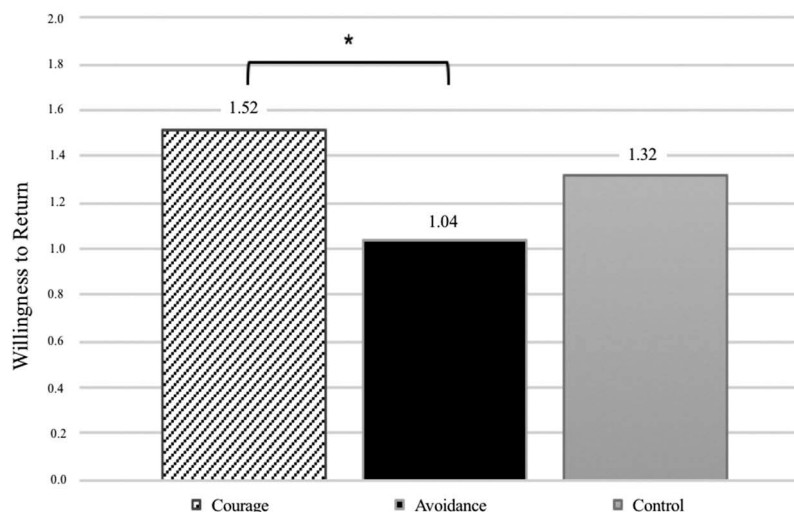


Figure 3. Willingness to return between conditions.

significant when including the change in anxiety (pre-speech anxiety minus post-speech anxiety) as a covariate, ($F(2,137) = 3.80$, $p = 0.03$, partial $\eta^2 = 0.05$), indicating that the effects of the intervention on courageous behavior extend above and beyond any reductions (or increases) in the individuals self-reported anxiety.

Discussion

Study 2 provides initial evidence that a brief writing intervention can produce observable differences in specific behavioral intentions in a fear-inducing context. Participants who engaged in the courage intervention, and thus ostensibly activated the resources that once allowed them to be courageous, were more likely to volunteer to return to the lab to face their fears again. Though all participants were expected to engage in the in-session speech task, and therefore all did participate to a similar extent, volunteering to return was in no way expected and thus represented an act of courage rather than mere compliance with expectations.

Unfortunately, it remains unclear which condition is driving this effect. Though participants in the courage condition demonstrated greater willingness than those in the avoidance condition, neither experimental condition differed significantly from the control condition. As seen in Figure 3, willingness in the control condition does lie between willingness in the two experimental conditions, which is consistent with both the courage and avoidance conditions having effects (albeit small ones such that power was only sufficient when comparing these two conditions against each other), but further testing will be required to see if either (or both) of the conditions is truly driving the effect. As it stands, these data do suggest that courageous versus avoidant behavioral intentions in a fear-inducing situation can be manipulated by asking individuals to reflect on previous instances in which they have encountered their fears.

General discussion

These studies were the first we are aware of to attempt to manipulate courage. Using a brief writing intervention that asked people to reflect on past instances of courage, we were able to see changes both in mindset, in that courageous behaviors were more cognitively accessible, and in specific behavioral intentions. This is the first empirical support for the heretofore theoretical notion that courage can be momentarily activated to produce detectable results.

As of now, despite the addition of the control condition in Study 2, it is not entirely clear whether the

courage intervention is promoting courage, that the avoidance intervention is demoting courage, or some combination of the two. Further studies will need greater power to effectively tease these effects apart. For the time being, it is clear that courage can be manipulated, for better or worse.

Admittedly, the effects in these studies are small. However, the intervention is also quite small and, as Prentice and Miller (1992) would suggest, there are times 'when small effects are impressive.' For a writing task that only lasted 6.58 minutes on average to produce any significant effect is promising. At a minimum, these studies provide proof-of-concept that this brief intervention is sufficient to produce changes in courage. Future studies will focus on strengthening the intervention to bolster the results. This could be done in multiple ways. The intervention itself could be expanded, such as by expanding the time taken for the intervention or adding a second level of elaboration (like reading the narrative out loud) to the initial intervention. If the intervention remains the same, it could be administered multiple times to see if repeating the intervention increases the strength of the response, as Hannah, Sweeney, and Lester's (2007) model would suggest.

Due to the predicted small size of the effects, we focused this study on behavioral *intentions* rather than overt behavior. Given that a meta-analysis by Webb and Sheeran (2006) suggests that a medium-to-large change in behavioral intentions produces a small-to-medium change in actual behavior, and our effects were quite small, this was a sensible choice. However, the fact that behavioral intentions were affected by this manipulation is promising. Based on the results of the same meta-analysis, our results suggest that, were we to increase the strength of the manipulation, we could produce demonstrable increases in courageous behavior as engendered by the increase in courageous behavioral intentions. Current studies in this laboratory are investigating changes in actual behavior with more concretely measurable behavioral approach tasks, such as asking a spider-phobic individual to approach a tarantula and measuring the physical distance of their approach. We hope to find that by increasing the strength of the intervention, we can increase the size of the effects and produce observable changes in behavior.

In sum, though the current effects are small, our data provide proof-of-concept that courage can be manipulated, at the level of mindset and of behavioral intention, through the use of a brief writing intervention designed to activate an individual's courageous resources. Though it may not be enough to send the average person into a burning building, it may be

enough to encourage people to face their fears. This type of activation may be of particular use to those who, by profession, frequently ask people to face their fears, such as doctors talking patients through frightening medical procedures or therapists conducting exposure therapy with anxious clients. If one is asking a patient or client to do something scary, they are asking them to demonstrate courage – this intervention may encourage them to do just that. If these fearful individuals were to engage in this intervention (or one like it) just prior to engaging in the fear-inducing situation, they might more readily face the situation and therefore see better results. Indeed, future work in this laboratory will apply this intervention to individuals struggling with specific phobias to investigate if the activation of courage increases compliance with (and outcomes for) exposure therapy. We hope that other researchers in these domains will lend further empirical support to this notion. Ultimately, we aim to show that by asking people to think about times they demonstrated courage, they may in fact be more likely to demonstrate such courage again.

Disclosure statement

No potential conflict of interest was reported by the authors.

ORCID

Amanda Kramer  <http://orcid.org/0000-0003-0652-4369>

References

- Abele, A. (1989). Recall of positive and negative life events. Studies of mood-inducing effect and production of texts. *Zeitschrift Fur Experimentelle Und Angewandte Psychologie*, 37(2), 181–207.
- Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review*, 84(2), 191–215.
- Donnelly, D. A., & Murray, E. J. (1991). Cognitive and emotional changes in written essays and therapy interviews. *Journal of Social and Clinical Psychology*, 10(3), 334–350.
- Esterling, B. A., Antoni, M. H., Fletcher, M. A., Margulies, S., & Schneiderman, N. (1994). Emotional disclosure through writing or speaking modulates latent Epstein-Barr virus antibody titers. *Journal of Consulting and Clinical Psychology*, 62(1), 130–140.
- Hannah, S. T., Sweeney, P. J., & Lester, P. B. (2010). The courageous mind-set: A dynamic personality system approach to courage. In C. L. S. Pury & S. J. Lopez (Eds.), *The psychology of courage: Modern research on an ancient virtue* (pp. 125–148, 247, xvi). Washington, DC: American Psychological Association.
- Hannah, S. T., Sweeney, P. J., & Lester, P. B. (2007). *Toward a courageous mindset: The subjective act and experience of courage* (Vol. 2). United Kingdom: Taylor & Francis.
- Kleinknecht, R., Kleinknecht, E. E., Sawchuk, C. N., Lee, T. C., & Lohr, J. (1999). The medical fear survey: psychometric properties. *The Behavior Therapist*, 22(6), 109–112, 119.
- Lyubomirsky, S., Sousa, L., & Dickerhoof, R. (2006). The costs and benefits of writing, talking, and thinking about life's triumphs and defeats. *Journal of Personality and Social Psychology*, 90(4), 692.
- McCroskey, J. C., Beatty, M. J., Kearney, P., & Plax, T. G. (1985). The content validity of the PRCA-24 as a measure of communication apprehension across communication contexts. *Communication Quarterly*, 33(3), 165–173.
- Milgram, S. (1963). Behavioral study of obedience. *The Journal of Abnormal and Social Psychology*, 67(4), 371.
- Mischel, W., & Shoda, Y. (1995). A cognitive-affective system theory of personality: Reconceptualizing situations, dispositions, dynamics. *Psychological Review (Psycarticles)*, 102, 2.
- Murray, E. J., Lamnin, A. D., & Carver, C. S. (1989). Emotional expression in written essays and psychotherapy. *Journal of Social and Clinical Psychology*, 8(4), 414–429.
- Olatunji, B. O., Ebesutani, C., Sawchuk, C. N., McKay, D., Lohr, J. M., & Kleinknecht, R. A. (2012). Development and initial validation of the medical fear survey–short version. *Assessment*, 19(3), 318–336.
- Ostwald, M. (1962). *Aristotle, nicomachean ethics, translated with an introduction and notes* (11th ed.). Indianapolis: Bobbs-Merrill.
- Peterson, C., & Seligman, M. E. (2004). *Character strengths and virtues: A handbook and classification* (Vol. 1). New York: Oxford University Press and Washington, DC: American Psychological Association.
- Prentice, D. A., & Miller, D. T. (1992). When small effects are impressive. *Psychological Bulletin*, 112(1), 160–164.
- Pury, C. L. S., Kowalski, R. M., & Spearman, J. (2007). Distinctions between general and personal courage. *The Journal of Positive Psychology*, 2(2), 99–114.
- Rachman, S. (1984). Fear and courage. *Behavior Therapy*, 15(1), 109–120.
- Ratcliff, R. (1993). Methods for dealing with reaction time outliers. *Psychological Bulletin*, 114(3), 510–532.
- Webb, T. L., & Sheeran, P. (2006). Does changing behavioral intentions engender behavior change? A meta-analysis of the experimental evidence. *Psychological Bulletin*, 132(2), 249.