The Effect of Cognitive Anchoring on Exposure to Blood-Injection-Injury Stimuli

By

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Abstract

Blood-injection-injury (BII) phobia is associated with avoidance of needed medical treatment. Exposure therapy lessens distress related to viewing BII stimuli. However, service users with BII phobia are often reluctant to engage in exposures. This study assessed whether the cognitive heuristic of anchoring could encourage completion of and lessen the distress associated with exposures to BII stimuli. 141 college students were randomly assigned an anchoring point that was intended to make them either more or less distressed during and before their exposure to BII stimuli. No significant differences in outcomes between groups were detected. Though the study was underpowered, its results do not suggest promise for anchoring as a therapeutic tool.

Keywords: cognitive anchoring, exposure therapy, blood-injection-injury phobia

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The Effect of Cognitive Anchoring on Exposure to Blood-Injection-Injury Stimuli

Specific phobia, blood-injection-injury (BII) type, or BII phobia, has a prevalence rate of 3.0% among the general population (Fredrikson, Annas, Fischer & Wik, 1996). According to the *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision*, or *DSM-IV-TR* (American Psychiatric Association, 2000), those affected by BII phobia are excessively fearful of blood, injuries, or injections, or some combination of the three. Viewing these phobic stimuli results in their feeling anxious, and consequently they frequently avoid the stimuli. This avoidance increases nonadherence to medical regimens among persons with diabetes, multiple sclerosis, and other chronic medical conditions (Cox & Mohr, 2003). It may also result in delays in seeking needed medical services (Kleinknecht & Lenz, 1989). The present study represents an attempt to reduce avoidance among individuals exposed to images of BII.

BII phobics' avoidant behaviors derive from both fear and disgust (Sawchuk et al., 2000). Fear to a stimulus is common across all form of phobias and is codified as an essential component of BII phobia in the *DSM-IV-TR* (American Psychiatric Association, 2000). Fear in BII phobia takes the form of worrying about fainting upon viewing the phobic stimuli (Öst, 1992). Evidence also indicates that disgust figures prominently in the disorder. BII stimuli remind BII phobics of humans' creatureliness and of the various ways the human animal can be harmed (e.g., injury-related death, violations of the body via injection). This triggers disgust reactions (Olatunji et al., 2006). BII phobics subsequently attempt to avoid the disgust response by avoiding the associated BII stimuli. Supporting the role of disgust in the phobia, Sawchuck et al. (2000) found that BII phobics reported more fear and disgust after viewing surgery pictures than non-BII phobics, and that they reported higher levels of disgust than fear.

The most efficacious treatments for specific phobias are cognitive-behavioral in nature (Grös & Antony, 2006). They involve controlled, repeated exposure to the feared stimulus. Through systematic exposure, the individual physiologically habituates to the stimulus. Recent exposure protocols also emphasize the importance of individuals learning that they can tolerate distress even when it does not decrease due to habituation (e.g., Barlow et al., 2011).

Several studies support the efficacy of exposure-based therapy for BII phobia. For example, Olatunji et al. (2007) found that 30 minutes of exposure to BII stimuli reduced levels of fear and disgust in participants. Other studies have arrived at similar results (e.g., Öst, Hellström & Kåver, 1992; Hirai et al., 2008).

One of the difficulties with exposure therapy is compelling persons to complete the actual exposures. Patients are accustomed to fearing and avoiding the stimulus to which they are meant to be exposed. Exposures typically must be carried out over many weeks of treatment. Helping a patient to complete repeated exposures is a challenge for any clinician. Research on the cognitive phenomenon of *anchoring* suggests that it could be effective in aiding clinicians in this task.

Anchoring

Anchoring refers to a person's tendency to over-rely on a single piece of information when making decisions. Tversky and Kahneman coined the term and discussed it as follows:

> In many situations, people make estimates by starting from an initial value that is adjusted to yield the final answer. The initial value, or starting point, may be suggested by the formulation of the problem, or it may be the result of a partial computation. In either case, adjustments are typically insufficient. That is, different starting points yield different estimates, which are biased toward the initial values. (1974, p. 1128)

To demonstrate this point, Tversky and Kahneman (1974) reported on a study in which they asked participants to estimate the percent of African nation-states that were members of the United Nations. Prior to making their estimates, the participants witnessed the spinning of a wheel with numbers on it between 0 and 100. The researchers then asked them if the percent of African nation-states in the U.N. was higher or lower than the number the wheel landed upon. Subsequently, the participants were instructed to make their estimates by moving up or down from that number. Tversky and Kahneman found that the arbitrary number from the wheel had a significant effect on participants' estimates (i.e., lower numbers on the wheel led to lower estimates from participants).

Previous research on anchoring and other cognitive biases in relation to behavioral and physical medicine highlights how the biases handicap practitioners' decision making. Meehl (1954) examined the predictive abilities of mechanical versus clinical judgment. Mechanical judgment refers to decisions made according to statistical equations or actuarial tables. Clinical judgment refers to decisions made by psychologists and physicians that are subjective in nature and draw on clinical experience. The latter is susceptible to a host of cognitive biases, including anchoring. Anchoring in clinical judgment can cause a practitioner to place too much weight on the initial symptoms a patient reports. This restricts the number of disorders a practitioner considers and may lead her to make mistakes in differential diagnosis. Considering this, one finds it unsurprising that Meehl found predictions made via mechanical judgment consistently outperformed ones made via clinical judgment. Subsequent reviews of the literature arrived at similar results (e.g., Dawes, Faust & Meehl, 1989; Garb 1994). A meta-analysis by Grove and colleagues (2000) concluded that, across health behaviors, predictions from mechanical judgments were on average 10 percent more accurate than ones from clinical judgments.

Therapeutic Anchoring

These findings demonstrate that anchoring and associated biases often serve as a limit on human cognitive abilities. However, one can envision how anchoring could be useful in *enhancing* therapy. This sort of *therapeutic anchoring* would ask people to provide ratings of discomfort in their exposure trials, and then remind them of the ratings they provided which indicated low amounts of discomfort prior to their next exposure session. Hypothetically, doing so should anchor them to expect little discomfort. Persons with and without BII phobias may then be more likely to complete exposure trials, habituate quicker to BII stimuli, and learn more effectively that they can tolerate the stimuli to which they are exposed. The aim of this study was to test the efficacy of therapeutic anchoring on distress associated with BII stimuli among college students. It was primarily hypothesized that those participants receiving low as opposed to high anchors would evidence less distress when viewing the stimuli. It was further hypothesized that participants receiving the low anchors would report less distress prior to the second viewing of stimuli and score lower on a post-exposures general measure of fears of BII.

Methods

Participants

The University of Kansas Institutional Review Board approved this study. A prospective participant was eligible for the study if she was an adult student at a Midwestern community college or a large Midwestern research university who was enrolled in participating courses or the university's online experiment management system for general psychology courses, fluent in

written English, provided consent, did not have a health condition that had lasted longer than 12 months and which required frequent injections (e.g., Type 1 diabetes when an insulin pump is not used), and had sufficient time to participate.

Sample Size Calculation

The investigator conducted a power analysis using G*Power 3.1.7 (Faul, Erdfelder, Lang & Buchner, 2007). It indicated that a sample size of 200 participants would have 80% power to detect a difference from anchoring, assuming a small effect size (f = .1) using a mixed ANOVA with a 0.05 significance level. The investigator conservatively assumed a small effect size due to the novelty of therapeutic anchoring and the corresponding lack of prior literature from which to estimate an effect size.

Procedures

Students in psychology and history courses at a community college were given the opportunity to receive extra credit either via participating in the study or writing a 4 page paper. Participants were also recruited via a research university's online experiment management system. A total of 240 participants were recruited, 95 from the community college and 145 from the research university. 16 participants did not wait two weeks to complete the study, as per the experimental instructions. 29 participants completed the first half of the study, but not the second half. 44 participants signed up for the experiment, but never started it. 141 participants completed the experiment correctly and in full, 68 from the community college and 73 from the research university.

Each participant was asked to log on to a website featuring the Qualtrics (Provo, Utah) survey software to look at pictures of BII. Participants provided basic demographic information and completed the Medical Fear Survey-Short Version (Olatunji et al., 2012), which assessed

their feelings of anxiety regarding BII. Following this, the website explained the concept of Subjective Units of Distress (SUDs) and asked them to rate their pre-trial SUDs about looking at 10 pictures of BII. Participants were then exposed to the 10 pictures, which the investigator selected from the International Affective Picture System (IAPS; Lang, Bradley & Cuthbert, 2008). The photos were presented for 30 seconds apiece in order of increasing severity. Each picture's severity level was determined by its IAPS normed rating of arousal. After each photo, participants were asked to rate the maximum amount of SUDs they experienced while viewing the photo.

Two weeks later (Time 2), participants were emailed and reminded to log on and complete the rest of the experiment. Once they logged on, half the participants were randomized to be provided with feedback regarding their average SUDs rating for the first picture they viewed (establishing their low, therapeutic anchors). The other half of the participants were provided with feedback regarding their average SUDs rating for the last picture they viewed (establishing higher anchors since the averages were derived from pictures of more severe BII). All participants once again rated their pre-trial distress about viewing the BII pictures on a SUDs scale. After this, participants viewed the same pictures again under the same conditions, and were once again asked to rate their SUDs for each picture after they viewed it. Participants then completed the Medical Fear Survey-Short Version again. Following this, they were debriefed.

Table 1 displays the procedures at Times 1 and 2, presented in sequential order from left-to-right.

Measures

Demographic data. The investigator collected info concerning participants' gender, age, ethnicity, and family income.

Average distress. Participants' distress while viewing the BII pictures was assessed using SUDs ratings. After each photo, participants rated their SUDs on a 0-8 scale (the same SUDs scale used in Barlow et al., 2011). The "0" was labeled as "no distress," the "2" as "slight distress," the "4" as "definite distress," the "6" as "strong distress," and the "8" as "extreme distress." From each participant's ratings of the 10 slides, the investigator derived a mean rating that served as that participant's average distress score for the particular trial (Time 1 or Time 2). SUDs evidences acceptable concurrent validity with the State/Today Form of the Multiple Affect Adjective Check List, a measure of state anxiousness (r = .53) (Kaplan & Smith, 1995).

Pre-trial distress. Participants' distress before viewing the BII pictures was assessed using SUDs ratings. Before viewing the 10 pictures for Time 1 and again before Time 2, participants rated their SUDs on the same 0-8 scale described above.

Medical Fear Survey-Short Version. The Medical Fear Survey-Short Version consist of 25 items across five subscales, assessing medical fears related to Injections and Blood Draws, Sharp Objects, Blood, Mutilation, and Examination and Symptoms. The internal consistency alpha coefficients of its five subscales range from .81 to .89. The subscales also evidence acceptable levels of convergent validity with measures of injection fear, fearfulness and disgust sensitivity (mean r = .53), as well as acceptable levels of discriminant validity with measures of anxiety sensitivity and trait anxiety (mean r = .35) (Olatunji et al., 2012).

Results

Demographics

Demographics between groups were compared use either independent *t*-tests or chi-squared tests where appropriate. No significant differences were detected with respect to gender, age, ethnicity, and family income. Table 2 present these data.

Baseline comparison

Independent *t*-tests were used to asses for Time 1 (baseline) differences between groups on Medical Fear Survey-Short Version scores and pre-trial SUDs ratings. Table 3 displays descriptive data. There were no significant baseline differences on Medical Fear Survey-Short Version scores; t (139) = -1.301, p = .195, or on pre-trial SUDs ratings; t (139) = -1.189, p = .237.

Average distress

Average distress ratings for the 10 pictures were analyzed using a 2 x 2 mixed-ANOVA with the within-subjects factor of time of rating (Time 1 and Time 2) and the between-subjects factor of anchor received (first or last picture). Table 4 presents descriptive data. There were no significant main effects for the time of rating; F(1,139) = .00, p = .994, or for the anchor received; F(1,139) = .155, p = .694. There was no significant interaction between time of rating and anchor received; F(1,139) = .752, p = .387. Table 5 displays these data.

Pre-trial SUDs

Pre-trial SUDs ratings were analyzed using a 2 x 2 mixed-ANOVA with the within-subjects factor of time of rating (Time 1 and Time 2) and the between-subjects factor of anchor received (first or last picture). Table 6 displays descriptive data. There was a statistically significant main effect for the time of rating; F(1,139) = 29.76, p < .001. There was no

significant main effect for the anchor received; $F(1,139) = 1.02$, $p = .315$. There was no significant interaction between time of rating and anchor received; $F(1,139) = .498$, $p = .481$. Table 7 presents these data.

Medical Fear Survey-Short Version

Medical Fear Survey-Short Version scores were analyzed using a 2 x 2 mixed-ANOVA with the within-subjects factor of time of rating (Time 1 and Time 2) and the between-subjects factor of anchor received (first or last picture). Table 8 presents these data. There were no significant main effects for the time of rating; $F(1,139) = 1.27$, $p = .262$, or for the anchor received; $F(1,139) = .252$, $p = .616$. There was no significant interaction between time of rating and anchor received; $F(1,139) = 2.11$, $p = .148$. Table 9 displays these data.

Discussion

This study assessed the efficacy of therapeutic anchoring at lessening distress before and during exposure to BII stimuli. The results did not support the primary and secondary hypotheses. No statistically significant differences were detected between groups receiving either a high or low anchor with regard to SUDs ratings assessed during or before the viewing of BII pictures. There was also no difference between groups in their post-exposures Medical Fear Survey-Short Version scores.

Contrary to expectations, anchoring did not result in lower distress ratings for those receiving the therapeutic anchor. This may be attributable to the study's lack of power to detect an effect. The power analysis conducted prior to the beginning of the study indicated 200 participants would need to complete the study to have 80% power to detect an effect. The size of the study's actual sample was significantly below that number ($n = 141$).

The difficulty obtaining a larger sample was in part due to the inability of some participants to complete the experiment fully and correctly. The investigator provided instructions repeatedly before and during the experiment with regard to how and when to complete it. Despite this, 16 participants finished the procedures without waiting two weeks, and 29 completed the first half of the experiment but not the second half. Another 44 participants signed up for the experiment, but never started it. Many participants contacted the investigator, claiming they never received the email to start the study or that they could not find a hyperlink with which to continue the study. These problems were usually the result of the experiment's emails being labeled as "spam" or "junk mail" by email service providers or by participants having simply deleted emails containing hyperlinks. Once it became clear that these problems were occurring for multiple participants, the investigator sent messages notifying all participants of the issues and how to fix them. However, some participants still never started or completed the study. It is unknown if they did not do so because of the aforementioned technical difficulties. A future study could reduce these problems either by utilizing a research system that does not rely on personal email service providers to distribute study materials or by conducting the experiments in an in-person format. Failing these changes, investigators in a future study could accept the high attrition rate and recruit from additional campuses and classes to obtain an appropriate sample size.

One possibility for the lack of an observed anchoring effect is that the participants who were the most anxious dropped out of the study after the Time 1 trial rather than completing the Time 2 trial and viewing the BII stimuli again. Such participants might have evidenced the greatest decrease in SUDs at Time 2 if anchoring were efficacious. However, the average Time 1 SUDs rating of the 29 participants who dropped out (M = 2.25) was actually significantly *less*

than the average Time 1 SUDs rating of the 141 participants who completed the entire study (*M* = 2.79); *t* (168) = 2.48, *p* = .014. This indicates that the 29 participants who completed only half the study were not especially anxious; hence, their dropping out cannot explain why no anchoring effect was detected in the analyses.

The significant decrease in pre-trial distress ratings, regardless of anchoring condition, is consistent with previous studies that demonstrated efficacy for exposure in reducing distress associated with BII stimuli (Öst, Hellström & Kåver, 1992; Olatunji et al., 2007; Hirai et al., 2008). Given the apparent utility of exposure, future experiments should continue exploring novel methods for increasing motivation to complete exposure protocols. However, while the small sample size limits the conclusions that one can draw from this study, the lack of both significant findings and large effects indicate that therapeutic anchoring may not be a novel method worthy of further investigation.

References

American Psychiatric Association. (2000). *Diagnostic and statistical manual of mental disorders: DSM-IV-TR®*. American Psychiatric Pub.

Barlow, D. H., Ellard, K. K., Fairholme, C. P., Farchione, T. J., Boisseau, C. L., Allen, L. B., & Ehrenreich-May, J. T. (2010). *Unified Protocol for Transdiagnostic Treatment of Emotional Disorders: Workbook*. Oxford University Press.

Cox, D., & Mohr, D. C. (2003). Managing difficulties with adherence to injectable medications due to blood, injection, and injury phobia and self-injection anxiety. *American Journal of Drug Delivery*, *1*(3), 215-221.

Dawes, R. M., Faust, D., & Meehl, P. E. (1989). Clinical versus actuarial judgment. *Science*, *243*(4899), 1668-1674.

Faul, F., Erdfelder, E., Lang, A. G., & Buchner, A. (2007). G* Power 3: A flexible statistical power analysis program for the social, behavioral, and biomedical sciences. *Behavior Research Methods*, *39*(2), 175-191.

Fredrikson, M., Annas, P., Fischer, H., & Wik, G. (1996). Gender and age differences in the prevalence of specific fears and phobias. *Behaviour Research and Therapy*, *34*(1), 33-39.

Garb, H. N. (1994). Judgment research: Implications for clinical practice and testimony in court. *Applied and Preventive Psychology*, *3*(3), 173-183.

Grös, D. F., & Antony, M. M. (2006). The assessment and treatment of specific phobias: a review. *Current psychiatry reports*, *8*(4), 298-303.

Grove, W. M., Zald, D. H., Lebow, B. S., Snitz, B. E., & Nelson, C. (2000). Clinical versus mechanical prediction: a meta-analysis. *Psychological assessment*, *12*(1), 19.

Hirai, M., Cochran, H. M., Meyer, J. S., Butcher, J. L., Vernon, L. L., & Meadows, E. A. (2008). A preliminary investigation of the efficacy of disgust exposure techniques in a subclinical population with blood and injection fears. *Behaviour Change*, *25*(03), 129-148.

Kaplan, D.M., & Smith, T. (1995). A validity study of the Subjective Unit of Discomfort (SUD) score. *Measurement & Evaluation In Counseling & Development*, *27*(4), 195.

Kleinknecht, R. A., & Lenz, J. (1989). Blood/injury fear, fainting and avoidance of medically-related situations: a family correspondence study. *Behaviour Research and Therapy*, *27*(5), 537-547.

Lang, P. J., Bradley, M. M., & Cuthbert, B. N. (2008). International affective picture system (IAPS): Affective ratings of pictures and instruction manual. *Technical Report A-8*.

Meehl, P. E. (1954). Clinical versus statistical prediction: A theoretical analysis and a review of the evidence. Minneapolis, MN: University of Minnesota Press.

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.

Olatunji, B. O., Smits, J. A., Connolly, K., Willems, J., & Lohr, J. M. (2007). Examination of the decline in fear and disgust during exposure to threat-relevant stimuli in blood–injection–injury phobia. *Journal of Anxiety Disorders*, *21*(3), 445-455.

Olatunji, B. O., Williams, N. L., Sawchuk, C. N., & Lohr, J. M. (2006). Disgust, anxiety and fainting symptoms associated with blood-injection-injury fears: a structural model. *Journal of Anxiety Disorders*, *20*(1), 23-41.

Öst, L. G. (1992). Blood and injection phobia: Background and cognitive, physiological, and behavioral variables. *Journal of Abnormal Psychology*, *101*(1), 68.

Öst, L. G., Hellström, K., & Kåver, A. (1992). One versus five sessions of exposure in the treatment of injection phobia. *Behavior Therapy*, *23*(2), 263-281.

Sawchuk, C. N., Lohr, J. M., Tolin, D. F., Lee, T. C., & Kleinknecht, R. A. (2000). Disgust sensitivity and contamination fears in spider and blood–injection–injury phobias. *Behaviour Research and Therapy*, *38*(8), 753-762.

Tversky, A., & Kahneman, D. (1974). Judgment under uncertainty: Heuristics and biases. *Science*, *185*(4157), 1124-1131.

Table 1: Procedures at Times 1 and 2

Time 1	Demographics	Medical Fear Survey-Short Version	Pre-Trial SUDs	SUDs for each slide
Time 2	Anchor (experimental group) or No Anchor (control group)	Pre-Trial SUDs	SUDs for each slide	Medical Fear Survey-Short Version

Table 2: Demographic Data

		Low Anchor Group		High Anchor Group			
		n	*M* or %	*n*	*M* or %	*df*	*p*
Gender (female)		47	67.1%	40	56.3%	1	.187
Age		70	20.61	71	20.89	139	.758
Ethnicity		70		71		4	.434
	Asian / Asian American	2	2.9%	4	5.6%		
	Black / African American	3	4.3%	7	9.9%		
	Hispanic / Latino	4	5.7%	5	7.0%		
	White / Caucasian	61	87.1%	54	76.1%		
	Other			1	1.4%		
Family Income		70		71		7	.104
	Under $25,000	8	11.4%	14	19.7%		
	$25,000 to $39,000	8	11.4%	8	11.3%		
	$40,000 to $49,999	5	7.1%	3	4.2%		
	$50,000 to $74,999	17	24.3%	13	18.3%		
	$75,000 to $99,999	7	10.0%	15	21.1%		
	$100,000 to $124,999	9	12.9%	6	8.5%		
	$125,000 to $150,000	5	7.1%	9	12.7%		
	Over $150,000	11	15.7%	3	4.2%		

Table 3: Baseline Descriptive Data

	Low Anchor Group			High Anchor Group		
	n	*M*	*SD*	*n*	*M*	*SD*
MFS-Short Version Scores	70	39.41	6.48	71	37.93	7.01
Pre-Trial SUDs	70	3.07	1.69	71	2.75	1.56

Table 4: Average Distress Descriptive Data

	Low Anchor Group			High Anchor Group		
	n	*M*	*SD*	*n*	*M*	*SD*
Time 1	70	2.85	1.00	71	2.73	1.04
Time 2	70	2.80	1.09	71	2.78	1.19

Table 5: Effect of Anchor on Average Distress

	SS	*df*	*MS*	*F*	*p*	eta^2	Power
Time	< .01	1	< .01	< .01	.994	< .01	.05
Time x Anchor	.15	1	.15	.75	.387	.01	.14
Error (Time)	27.71	139	.20				
Anchor	.33	1	.33	.16	.694	< .01	.07
Error (Anchor)	297.90	139	2.14				

Table 6: Pre-Trial SUDs Descriptive Data

	Low Anchor Group			High Anchor Group		
	n	*M*	*SD*	*n*	*M*	*SD*
Time 1	70	3.07	1.69	71	2.75	1.56
Time 2	70	2.29	1.55	71	2.14	1.51

Table 7: Effect of Anchor on Pre-Trial SUDs

	SS	*df*	*MS*	*F*	*p*	eta^2	Power
Time	34.12	1	34.12	29.76	< .001	.18	1
Time x Anchor	.57	1	.57	.50	.481	< .01	.11
Error (Time)	159.37	139	1.15				
Anchor	3.89	1	3.89	1.02	.315	.01	.17
Error (Anchor)	531.59	139	3.82				

Table 8: Medical Fear Survey-Short Version Descriptive Data

	Low Anchor Group			High Anchor Group		
	n	*M*	*SD*	*n*	*M*	*SD*
Time 1	70	39.41	6.48	71	37.93	7.01
Time 2	70	39.21	7.87	71	39.49	10.07

Table 9: Effect of Anchor on Medical Fear Survey-Short Version Scores

	SS	*df*	*MS*	*F*	*p*	eta^2	Power
Time	32.60	1	32.60	1.27	.262	< .01	.20
Time x Anchor	54.24	1	54.24	2.11	.148	.02	.30
Error (Time)	3566.26	139	25.66				
Anchor	25.61	1	25.61	.25	.616	< .01	.08
Error (Anchor)	14102.86	139	101.46				