



# Fasting and acquired capability for suicide: A test of the interpersonal-psychological theory of suicide in an undergraduate sample



Kelly L. Zuromski, Tracy K. Witte\*

Department of Psychology, Auburn University, Auburn, 226 Thach Hall, AL 36849-5214, USA

## ARTICLE INFO

### Article history:

Received 16 May 2014

Received in revised form

21 October 2014

Accepted 29 November 2014

Available online 6 December 2014

### Keywords:

Fasting

Suicide

Acquired capability

Interpersonal-psychological theory

## ABSTRACT

Though some preliminary research within the framework of the interpersonal-psychological theory of suicide (IPTS; Joiner, 2005) has postulated that restrictive eating may contribute to increased risk for suicide through its effect on the acquired capability for suicide (ACS; i.e., increased fearlessness about death and heightened physical pain tolerance), existing studies have not conducted direct tests of this relationship. To enhance understanding of this relationship, we compared undergraduates who endorsed one form of restrictive eating, fasting, ( $n=99$ ) to controls endorsing no forms of eating pathology over the lifetime ( $n=94$ ). We hypothesized that the fasting group would have higher ACS and higher likelihood of suicide attempt history. Contrary to hypotheses, no differences emerged between groups on ACS, and frequency of fasting within the fasting group was not significantly associated with ACS. Consistent with hypotheses, the fasting group was more likely to have suicide attempt history. Though results were not entirely consistent with hypotheses, the current study represents the first attempt at isolating and examining one form of restrictive eating (i.e., fasting) within the context of the IPTS. Results suggest that, in isolation, fasting may not be directly contributing to increases in ACS.

© 2014 Elsevier Ireland Ltd. All rights reserved.

## 1. Introduction

Although the relationship between eating disorders and risk for suicide is well established (e.g., Preti et al., 2011), growing research indicates that eating pathology within non-clinical samples also confers elevated risk for suicidal behavior (e.g., Crow et al., 2008). In attempting to understand and explore the relationship between suicide and disordered eating, existing research is limited by its predominant focus on clinical diagnostic status, rather than on presence of specific types of eating pathology (e.g., fasting). This focus may confound the examination of particular behaviors on risk for suicide, above and beyond associated clinical features (e.g., clinical distress). This emphasis on diagnostic status exists despite evidence that individuals without clinical eating disorder diagnoses often endorse significant eating pathology (Crow et al., 2002; Chamay-Weber et al., 2005). Moreover, studies that have investigated this relationship in non-clinical samples are limited by their atheoretical nature. In the current study, we used the interpersonal-psychological theory of suicide (IPTS; Joiner, 2005; Van Orden et al., 2010) as a framework by which to address this limitation within a non-clinical sample to explore potential

mechanisms underlying the relationship between one form of restrictive eating (i.e., fasting) and suicide attempts.

### 1.1. The interpersonal-psychological theory of suicide

The IPTS suggests that three separate constructs must be in place before a lethal suicide attempt can occur: thwarted belongingness, perceived burdensomeness, and an acquired capability for suicide (Van Orden et al., 2010). According to the IPTS, the joint presence of thwarted belongingness, perceived burdensomeness, and hopelessness will produce suicidal desire. However, according to the IPTS, suicidal desire alone is not sufficient to lead to lethal (or near-lethal) suicidal behavior. In addition, an individual must also possess a lowered fear of death, as well as elevated physical pain tolerance in order to engage in the fearsome and painful act of lethal self-injury. Lowered fear of death and elevated physical pain tolerance together comprise the third construct of the theory, known as the acquired capability for suicide (ACS; Van Orden et al., 2010).

### 1.2. Fasting and the acquired capability for suicide

Joiner (2005) and Van Orden et al. (2010) suggest that ACS develops through exposure to painful and/or fear-inducing life experiences. In support of this notion, a growing empirical literature

\* Corresponding author.

E-mail address: [tracy.witte@auburn.edu](mailto:tracy.witte@auburn.edu) (T.K. Witte).

suggests that various painful life experiences (e.g., combat exposure, Kang and Bullman, 2008) are linked to suicidal behavior. The range of behavior associated with disordered eating (e.g., fasting, purging, etc.) may also be considered painful experiences that could facilitate the habituation to physical pain, and possibly, fear of death. Indeed, previous research has found that methods of weight control damage tissues, exert pain, and have adverse health consequences (Baker and Sandle, 1996; Hellstrom, 2007; Sidiropoulos, 2007).

Related to fasting specifically, individuals diagnosed with anorexia nervosa (AN)—a disorder characterized by severe fasting—have high rates of suicide (e.g., Preti et al., 2011). The suggestion that fasting increases ACS, and therefore may explain the link between AN and suicide, was first posited by Joiner (2005). However, the existing literature on this topic is limited and has utilized problematic measures of fasting, ACS, or both (e.g., only assessing for the presence of eating pathology dichotomously; Witte et al., 2012). In addition, although individuals with AN have higher pain tolerance compared to control subjects (e.g., Raymond et al., 1999a), no study has demonstrated this relationship between people who only engage in fasting (as opposed to having a diagnosis of AN) and increased physical pain tolerance, which leaves open the possibility that other associated features of AN (e.g., genetic risk factors) explain the association between this disorder and pain tolerance. Moreover, no study has explored the possible relationship between fasting and the other component of ACS—fearlessness about death.

Three recent studies provide additional, albeit, indirect support for the relationship between fasting and ACS. Holm-Denoma et al. (2008) demonstrated that individuals with AN use highly lethal suicide methods that would likely result in death even in individuals of normal weight status. Selby et al. (2010) found an association between the restrictive subtype of AN and the frequency and lethality of suicidal behavior, even after controlling for endorsement of other types of painful and/or provocative behavior (e.g., self-induced vomiting, non-suicidal self-injury). On the basis of these results, both Holm-Denoma et al. (2008) and Selby et al. (2010) reasoned that the habitual starvation experienced by individuals with AN results in habituation to fear of death and physical pain. In addition, Witte et al. (2012) found that restrictive eating (i.e., dieting or restricting eating to improve appearance of body areas) was associated with suicide attempts, but not with suicidal ideation, in a sample of patients diagnosed with body dysmorphic disorder (BDD). The authors argued that this finding indicates a specific relationship between restrictive eating, as defined more broadly, and ACS, as opposed to desire for suicide. Although these studies provide preliminary support for the relationship between fasting and ACS, no direct measures of ACS were utilized. In addition, measures of fasting were limited—no measure was utilized by Holm-Denoma et al. (2008), whereas Selby et al. (2010) only specified AN, restrictive subtype, rather than using a direct measure of fasting frequency, and Witte et al. (2012) used a dichotomous measure of restrictive eating. Thus, studies of the relationship between fasting and ACS in clinical samples are limited; furthermore, to our knowledge, there have been no investigations of the link between ACS and fasting in non-clinical samples.

### 1.3. Current study

Based on preliminary evidence within the IPTS framework on fasting, we tested three primary hypotheses: (1) individuals engaging in fasting (i.e., fasting group) would have higher likelihood of past suicide attempts compared to controls, (2) the fasting group would have higher ACS (i.e., pain tolerance and fearlessness about death) than controls, and (3) within the fasting group, frequency of fasting within the past month and over the lifetime would be positively associated with ACS.

## 2. Method

### 2.1. Participants and procedure

Participants were undergraduates enrolled in psychology courses at a large public university in the southeastern United States. Following approval from the university's institutional review board, potential participants first completed a brief online screener created for this study, which assessed for exclusion criteria, described below, and for the presence/absence of disordered eating. The latter information was asked to roughly approximate the groups recruited for the study, and to increase likelihood that participants who signed up and came to our laboratory to participate would be eligible. This screener also allowed us to filter participants to different study sign-ups for laboratory sessions to prevent control participants (who were more prevalent) from signing up for every study session. This screener was used over several successive semesters of data collection; thus, it is possible that students took the screener more than once over different semesters to determine eligibility, although no participants came to the research laboratory more than once. As such, a total N for participants screened is unavailable.

Participants were filtered into the fasting group if they endorsed recently (i.e., over past 3 months) engaging in fasting ( $N=152$ ) on the screener. However, participants were ultimately grouped in analyses based on responses to measures completed at data collection sessions. Thus, from this filtered group, participants were included the fasting group if they endorsed the EDE-Q item *Within the past month, have you gone for long periods of time (8 h or more) while awake without eating anything in order to influence your shape or weight?* As such, some participants were excluded based on not engaging in fasting within the past month.

Participants were filtered into the control group ( $N=142$ ) if they did not endorse engaging in any eating pathology (i.e., fasting, self-induced vomiting, excessive exercise, laxative/diuretic use, binge eating) over their lifetime on the screener. As with the fasting group, control participants were asked these questions again during their data collection sessions using a measure generated for this study, and were excluded if they endorsed any form of eating pathology on the lab questionnaires.

In addition, all participants were subject to certain exclusion criteria, which were included in the brief online screener and also administered again to participants upon first arriving to data collection sessions, in order to ensure accurate and consistent measures of pain tolerance, as well as to protect participants from possible negative outcomes from the pain tolerance assessment. These criteria excluded individuals taking any over-the-counter or prescription medications that increase the chance of bleeding; individuals with bleeding disorders; and participants who were smokers (Pomerleau et al., 1984), had consumed alcohol within one hour of participation, or taken any type of analgesic within eight hours of participation. Following two incidents involving participants fainting or having a seizure when undergoing algometer measurements in our research laboratory, we also began to exclude participants with a history of these conditions (i.e., fainting and seizures) midway through data collection, as directed by our university IRB. Seven participants were excluded from participation based on endorsing any of these exclusion criteria prior to their data collection sessions.

A priori power analysis with G\*Power version 3.1.2 (Erdfeulder et al., 1996) indicated that for Hypothesis 3, which only includes the fasting group, 92 participants were required to have 0.80 power to detect a medium effect size ( $f^2=0.15$ ) in a regression with five predictors. Assuming an equally large control group yielded a total required sample of 184, giving us sufficient power (0.99) to detect a medium effect size ( $f^2=0.25$ ) for a MANOVA with up to five outcome variables. The final sample used in the current study included 99 participants in the fasting group and 94 controls. The fasting group was comprised primarily of female (85.90%;  $n=84$ ) participants of White/European origin (90.90% of sample [ $n=90$ ]; 7.10% were Black/African American [ $n=7$ ]; 1.00% were Asian American [ $n=1$ ]; 1.00% Pacific Islander [ $n=1$ ]. 97.00% of sample was of Non-Hispanic/Latino ethnicity [ $n=96$ ] whose mean age was 19.80 (S.D.=1.74; range 17–25). The control group had similar demographics, also comprised mostly of female (81.90%;  $n=77$ ) participants of White/European origin (89.40% of sample [ $n=84$ ]; 8.50% were Black/African American [ $n=8$ ]; 1.10% were Asian American [ $n=1$ ]; 1.10% Pacific Islander [ $n=1$ ]. 98.90% of sample was of Non-Hispanic/Latino ethnicity [ $n=93$ ] whose mean age was 19.60 (S.D.=2.20; range 18–35).

Upon determining eligibility, all participants were invited to participate in the study in our research laboratory, where they provided informed consent and were counterbalanced to complete two sets of tasks. The first task was a battery of questionnaires administered on a laboratory computer. The second task included measurement of physical pain tolerance, height, and weight, which were conducted by trained undergraduate research assistants. All participants were compensated with extra credit points for their respective psychology courses.

### 2.2. Measures

#### 2.2.1. Current eating pathology and attitudes

The Eating Disorder Examination—Questionnaire Version 6 (EDE-Q; Fairburn and Beglin, 1994, 2008) is a 28-item, self-report version of the EDE-Interview (Fairburn and Cooper, 1993) that assesses eating disorder symptomatology over the past 28 days. This questionnaire yields four subscales: restraint, weight concern, shape concern, and eating concern, and assesses for the occurrence and frequency

Download English Version:

<https://daneshyari.com/en/article/10303769>

Download Persian Version:

<https://daneshyari.com/article/10303769>

[Daneshyari.com](https://daneshyari.com)