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Personal prayer counteracts self-control depletion

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ABSTRACT

Praying over longer time spans can foster self-control. Less is known about the immediate, short-term consequences of praying. Here we investigated the possibility that praying may counteract self-control depletion. Participants suppressed or did not suppress thoughts about a white bear before engaging in a brief period of either personal prayer or free thought. Then, all participants completed a Stroop task. As expected, thought suppression led to poorer Stroop performance in the free thought, but not in the prayer condition. This effect emerged on a dependent variable devoid of any religious or moral associations (Stroop task). Possible mediating mechanisms and directions for future research are discussed.

1. Introduction

For millions of people all over the world, praying is a central part of their daily lives. In many major religions including Judaism, Christianity, Islam, and Hinduism praying is a core element of religious practices. Not only does regular praying comply with religious customs and prescriptions in many traditions, a large literature, comprising primarily correlational studies, suggests that frequent prayer can strengthen self-control (McCullough & Willoughby, 2009). Recent experimental evidence supports this notion and extends these findings by addressing questions of causality. For example, individuals who prayed daily for a period of four weeks consumed significantly less alcohol and were more faithful to their partners than individuals in control conditions (Fincham, Lambert, & Beach, 2010; Lambert, Fincham, Marks, & Stillman, 2010). In contrast to the ample knowledge on the long-term correlates and consequences of praying, evidence about the immediate, short-term effects of praying is surprisingly rare. In the present research, we investigated the hypothesis that a brief period of personal prayer can counteract the deleterious effects of self-control depletion (Baumeister, Vohs, & Tice, 2007; Muraven & Baumeister, 2000).

The strength model of self-control assumes that the ability to self-control relies on a domain-independent, limited resource (Baumeister et al., 2007; Muraven & Baumeister, 2000). An initial exertion of self-control depletes this resource to a certain extent and makes self-control failure in any subsequent activity requiring self-control more likely. Abundant empirical evidence is consistent with the model's predictions (Hagger, Wood, Stiff, & Chatzisarantis, 2010). For example, after initial acts of self-control such as the control of attention, thoughts, or emotions, individuals showed decrements in control in that they ate more of a tempting snack, engaged in riskier behavior, or performed more poorly on executive func-

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tion tasks (Freeman & Muraven, 2010; Friese, Binder, Luechinger, Boesiger, & Rasch, 2013; Schmeichel, 2007; Vohs & Heatherton, 2000). Given that self-control failures contribute to many serious individual and societal problems in domains like eating, drinking, drugs, sexuality, or crime (Baumeister, Heatherton, & Tice, 1994), it appears critical to identify strategies that counteract the deleterious effects of self-control depletion.

A decent amount of research has in fact investigated strategies to mitigate the effects of self-control depletion. This research revealed that individuals can overcome typical depletion effects by an increased motivation to perform well (Muraven & Slessareva, 2003), positive mood (Tice, Baumeister, Shmueli, & Muraven, 2007), a temporary increase in self-awareness (Alberts, Martijn, & de Vries, 2011), mindfulness meditation (Friese, Messner, & Schaffner, 2012), or an abstract information processing mode (high construal level; Agrawal & Wan, 2009; Schmeichel & Vohs, 2009).

In the present research, we argue that a brief period of personal prayer may have similar positive effects on self-control performance. A number of different literatures pave the way for this assumption. Psychologists as early as James (1902/1982) theorized that praying would activate "energy, which otherwise would slumber" (p. 477). Research supports the view that praying serves as a means to regain strength and resources necessary for a successful coping with daily problems and challenges (Ellison & Taylor, 1996; McCullough & Larson, 1999). Indeed, praying evokes feelings of inner strength, rest, and relief (Bänziger, van Uden, & Janssen, 2008; Janssen, Dehart, & Dendraak, 1990), and individuals often pray when demands on personal capacities are particularly high (Ellison & Taylor, 1996; McCullough & Larson, 1999). In a study investigating coping strategies with emotional distress following the terrorist attacks on September 11, 2001, higher levels of negative emotions in response to the attacks were associated with a higher frequency of prayer for coping, which in turn led to less distress (Ai, Tice, Peterson, & Huang, 2005).

In addition to these general observations on praying, several lines of research provide initial support for the idea that personal prayer could counteract self-control depletion. First, Rounding, Lee, Jacobson, and Ji (2012) provided support for the assumption that religious primes such as *God*, *spirit*, or *divine* foster self-control. In one study (Study 3), individuals depleted of self-control resources, but primed with religious concepts outside of conscious awareness, persisted longer on an unsolvable puzzles task than depleted participants who were primed with neutral concepts. Interestingly, participants in this study were only moderately religious, about a third of participants reported being agnostic or atheist, and results were similar for religious and non-religious participants.

Second, several studies investigated the effects of prayer on anger and anger-related behavior (Bremner, Koole, & Bushman, 2011). Participants who were provoked and prayed for an unrelated person after the provocation reported less anger (Study 1) and lower anger-typical likelihood estimates of certain fictitious events (Study 3). Participants who were asked to pray for the person who had insulted them retaliated less against this person when given the opportunity to do so (Study 2). Apparently, participants who had prayed for another person were better able to control their aggressive impulses than participants who had only thought about this person. From the perspective of the strength model of self-control, a provocation may be functionally equivalent to a resource depletion task in that it impairs self-control and is commonly associated with subsequent impulsive (aggressive) behavior (Denson, DeWall, & Finkel, 2012). Praying counteracted this effect of impaired self-control after provocation. Consistent with the research by Rounding et al. (2012), neither religiosity nor religious affiliation affected the results in any study.

Finally, in a recent study a brief period of personal prayer just before an effortful self-control task buffered the effect of self-control depletion (Friese & Wänke, 2014). Participants who had engaged in a control task at the start of the study showed the regular depletion effect (i.e. impaired performance on a Stroop task), but when they had initially prayed this effect was diminished. Again, this effect was not moderated by religiosity.

Based on these lines of research, we expected impaired self-control performance after initial attempts at self-control, but a brief period of personal prayer should counteract this effect. We did not expect praying to improve self-control performance of non-depleted individuals, as evidence suggests that it is difficult to improve self-control above baseline levels in the short-term (e.g., Bremner et al., 2011; Muraven & Slessareva, 2003; Robinson, Schmeichel, & Inzlicht, 2010; Schmeichel & Vohs, 2009). Participants engaged or did not engage in a thought suppression task that requires self-control (Wegner, 1989), prayed or did not pray for several minutes, and subsequently completed a Stroop task as the dependent variable.

2. Methods

2.1. Participants and design

Sixty-seven participants, predominantly students of psychology, were randomly assigned to a 2 (thought suppression: yes vs. no) × 2 (intermediate task: prayer vs. free thought) between-subjects design. We excluded one participant who reported being aware of the hypotheses and five participants who reported not having followed the instructions during the thought suppression task. The final sample (51 females, 10 males) had a mean age of 24.05 years (SD_{age} = 4.31). Thirty-eight participants (62%) described themselves as Christian, nine as agnostic, four as atheistic, and ten reported various other religious affiliations.