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Prosocial knowledge mediates effects of agreeableness and emotional intelligence on prosocial behavior

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ABSTRACT

We present two studies that replicate and extend predictions made by implicit trait policy theory about the association between basic traits, knowledge, and behavior. Study 1 examined relations between personality traits, prosocial knowledge, and performance in a role-play casting participants ($N = 102$) as a physician dealing with challenging interpersonal situations. Study 2 ($N = 197$) replicated and extended these findings to include emotional intelligence (EI). In both studies, participants with higher prosocial knowledge scores behaved more prosocially. Mediation analyses suggest the relationship between individual differences, such as agreeableness and EI, and prosocial behavior is mediated by prosocial knowledge. Findings suggest basic traits influence prosocial behavior indirectly, through the acquisition of knowledge about how to behave in interpersonally challenging situations.

1. Introduction

Prosocial behavior refers to "a broad category of acts that are defined by some significant segment of society and/or one's social group as generally beneficial to other people" (Penner, Dovidio, Piliavin, & Schroeder, 2005, p. 2) and includes behaviors such as helping, sharing, donating, cooperating, and volunteering. Although prosocial behavior yields obvious benefits for the targets of these behaviors, both actors that carry out these behaviors and society as a whole can benefit from prosociality. For instance, gratitude from the recipients of prosocial acts can result in positive feelings about oneself and may garner support from others when one is in need (Caprara, Alessandri, & Eisenberg, 2012; Oman, Thoresen, & McMahon, 1999). Moreover, in the medical field, research indicates that physicians displaying warmth and enthusiasm to help obtain more favorable patient outcomes (Gryll & Katahn, 1978). Consequently, understanding the determinants of prosocial behavior is an important area of research because these behaviors can yield economic benefits and also serve to improve the overall well-being of society.

Much of the work on the individual difference determinants of prosocial behavior has examined the tendency to engage in prosocial behavior using self-report measures (e.g., Caprara et al., 2012; Carlo, Okun, Knight, & de Guzman, 2005). We aim to expand on this existing work by proposing that individual differences affect prosocial behavior primarily through their effects on what we term *prosocial knowledge*, and examining prosocial behavior in a medical context directly via a laboratory simulation.

1.1. Prosocial behavior

Recently, there has been increased interest from the psychological research community in prosocial behavior both inside and outside of work, and in the positive effects of prosocial behavior on "the greater good" (cf. Garcia, Perry, Ellis, & Rineer, 2015). For instance, "patient-centered approaches" common in the medical field emphasize the benefits physicians' prosocial behavior have on patients and their well-being (Brown, Parker, Furber, & Thomas, 2011). The importance of prosocial behavior is especially salient in the field of medicine, where physicians' levels of caring and compassion for patients and respect for patients are explicitly valued (National Board of Medical Examiners, 2002). Although much of what physicians do as caretakers is centered around technical behaviors such as correctly diagnosing and prescribing treatment for patients, physicians' effectiveness in interacting personally with patients while delivering care is also important. Aspects of prosocial behavior are explicitly reflected in definitions of medical professionalism, as the National Board of Medical Examiners (2002) includes in its definition the expression of *Caring and Compassion* (e.g., treats the patient as an individual, taking into account lifestyle, beliefs, personal idiosyncrasies, support system; communicates bad news with sincerity and compassion) and *Respect* (e.g., respects patient's rights and dignity; knocks on door; introduces self; drapes patients appropriately; shows respect for the patient's privacy; demonstrates tolerance to a range of behaviors and beliefs). Consequently, in this investigation we plan to examine prosocial behavior and its antecedents in the context of interpersonal interactions between physicians and patients. Although we have chosen a specific context in which to couch our study, we expect that the pattern of relationships we observe

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in this investigation will generalize to other contexts where prosocial behavior is important.

1.2. Knowledge about prosocial behavior

Previous research on the antecedents of prosocial behavior has highlighted the role of affect in predicting helping behavior, suggesting that people who *feel* better, do better (George & Brief, 1992). However, our goal is to demonstrate that cognition can also be a meaningful determinant of prosocial behavior, by positing that beliefs about the value of behaving prosocially are predictive of actual prosocial behavior. We contend people who believe prosocial behavior is "effective" are more likely to behave prosocially than people who do not believe prosocial behavior results in positive outcomes. Thus, we predict that people who *know* better (i.e., have greater prosocial knowledge) *do* better (i.e., are more likely to act prosocially).

Prosocial knowledge specifically refers to an individual's cognitions about how to behave in interpersonal encounters, rather than cognitions about technical facts and principles. Consequently, these cognitions can be considered a type of procedural knowledge (Motowidlo, Martin, & Crook, 2013; Schmitt & Chan, 2006). Further, the knowledge these cognitions comprise can be measured by evaluating the extent to which individuals are able to recognize the effectiveness of prosocial actions and the ineffectiveness of antisocial actions in interpersonal interactions (Motowidlo, Hooper, & Jackson, 2006). The effectiveness and ineffectiveness of the actions described is determined using the mean of effectiveness ratings made by subject matter experts in the domain being assessed (Motowidlo et al., 2013).

1.2.1. Assessment of knowledge about prosocial behavior

As a kind of procedural knowledge, prosocial knowledge is amenable to being measured by situational judgment tests (SJTs). Most commonly, SJTs consist of descriptions of difficult interpersonal situations, with each followed by a series of response options describing potential behavioral responses to the situations that differ in effectiveness (Wagner & Sternberg, 1985). Individuals who consistently choose options deemed more effective by experts earn higher scores and have more knowledge.

As an alternative to multiple-response SJTs, single-response SJTs may also be used to measure prosocial, procedural knowledge about the effectiveness of prosocial and antisocial actions. Short behavioral episodes can be gathered using the critical incident technique (Flanagan, 1954) and then edited for form and content to create the items that comprise the measure. Thus far, measures of prosocial knowledge constructed in this manner have successfully predicted prosocial behavior in the medical field. For instance, Kell, Motowidlo, Martin, Stotts, and Moreno (2014) found that prosocial knowledge measured with an SJT correlated .20 ($p < .05$) with medical students' clinical skill in interacting with patients. Measures of prosocial knowledge have also been found to be predictive of American (Kell et al., 2014) and Indian (Ghosh, Motowidlo, & Nath, 2015) medical students' clinical performance.

Importantly, research on the predictive validity of measures of prosocial behavior constructed using critical incidents has revealed that personality traits do not account for incremental variance in the prediction of prosocial behavior beyond what is accounted for by prosocial knowledge (Crook et al., 2011; Motowidlo et al., 2013). The theoretical rationale for this finding is that personality traits influence prosocial behavior indirectly, through the acquisition of prosocial knowledge (Campbell, McCloy, Oppler, & Sager, 1993; Motowidlo et al., 2006). As distal antecedents of prosocial behavior, the influence of basic traits (Costa & McCrae, 1992) is mediated by beliefs about the effectiveness of that behavior. The studies reported here aim to replicate these findings in regard to personality traits and extend this prior work by also exploring the role of emotional intelligence (EI) as an antecedent of prosocial knowledge and behavior.

1.3. Individual difference antecedents of prosocial behavior

1.3.1. Personality

Several researchers have proposed theories to explain why basic personality traits predict behavior (e.g., Ackerman, 1996, McCrae & Costa, 1996, Motowidlo & Beier, 2010). Motowidlo et al. (2006) proposed a causal mechanism to explain why people in the possession of a basic personality trait are more likely to believe expressing their basic trait is effective. This theory, about what are called *implicit trait policies* (ITPs), draws on McCrae and Costa's (1996) "model of the person" in proposing that people's basic tendencies (e.g., abilities, personality traits) interact with their experiences to shape their implicit beliefs about the effectiveness of various kinds of behaviors across various situations (Motowidlo & Beier, 2010; Motowidlo et al., 2006). These beliefs can be conceptualized as ITPs about the relationship between expressions of personality traits and effective performance in a given job. People have different life experiences that teach them about the effectiveness and utility of expressing certain personality traits in certain situations, whether these are in the form of work experiences or social interactions that occur outside of work. For instance, someone who is naturally disagreeable may learn over time that expressing disagreeableness when trying to convince someone to do a favor may not be the most effective course of action in that particular situation. In the same way individuals form policies in the policy capturing literature (Karren & Barringer, 2002), ITP theory proposes that people form policies about the effectiveness of trait expression. Thus, ITPs can denote knowledge about effective trait expression when they are aligned with the beliefs of experts. ITPs represent an individual's procedural knowledge about how to behave prosocially (or antisocially). Consequently, individuals with more knowledge about effective trait expression are more likely to both recognize when situations call for the expression of a particular trait and actually engage in that trait-consistent behavior.

We propose that people consider behavior expressive of their standing on a trait to be effective because in much of their past experience it *has* been effective. People tend to select themselves into situations and environments based partially on congruence with their standings on basic traits (Roberts, Caspi, & Moffitt, 2003). This self-selection principle underlies prominent theories of fit, such as the Theory of Work Adjustment (Dawis & Lofquist, 1984), the theory of individual-environment fit (Pervin, 1968), and the Attraction-Selection-Attrition model (Schneider, 1987), which stipulates that people are more likely to be attracted to (and selected by) environments that complement their personality traits, and more likely to leave (or be dismissed from) environments that do not complement their personalities. Individuals may seek out and maintain contact with environments congruent with their traits because those environments allow them to express their trait standings behaviorally, which has been linked to the elicitation of positive affect for several traits (Côté & Moskowitz, 1998).

Agreeableness, specifically, is likely to be an important antecedent of prosocial behavior. Agreeable people are generally empathetic, have a tendency to get along with others, and are more likely to respond constructively to interpersonal conflict than disagreeable people (Graziano & Eisenberg, 1997; Graziano, Jensen-Campbell, & Hair, 1996). Consequently, in domains that involve interpersonal interaction, agreeableness should be positively related to prosocial behavior. Several experimental studies have found empirical support for the association between agreeableness and prosocial behavior (Graziano & Eisenberg, 1997; Graziano, Habashi, Sheese, & Tobin, 2007). Moreover, meta-analytic research (Organ & Ryan, 1995) has also supported this claim, showing that agreeableness is marginally correlated with altruistic action ($\rho = .10$).

1.3.2. Emotional intelligence

Another individual difference that may be an antecedent of prosocial behavior is emotional intelligence (EI). The two most popular models of