Prosocial motivation as a mediator between dispositional mindfulness and prosocial behavior

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Abstract

Researchers have theorized that mindfulness leads to prosocial behavior through awareness of one's personal goals and motivations. The present research examined the mediating effect of internalized prosocial motivation on the link between dispositional mindfulness and prosocial behavior. Undergraduate students (N=232) completed questionnaires assessing prosocial motivation and mindfulness. Prosocial behavior was assessed with the social mindfulness decision-making task. The results indicated that internalized prosocial motivation mediated the link between the mindfulness facet of acting with awareness and social mindfulness. The results suggest the importance of individual characteristics such as internalized prosocial motivation as mediators of the link between dispositional mindfulness and prosocial behavior. Given that only one facet of mindfulness—acting with awareness—was indirectly associated with prosocial behavior, the results also indicate that general measures of dispositional mindfulness may not be sufficiently nuanced when investigating these associations.

Keywords: prosocial motivation; dispositional mindfulness; internalization; prosocial behavior

Highlights

- Mindful people may be more motivated to behave in a way that benefits others
- Internalized prosocial motivation explains why mindful people may be more prosocial
- Acting with awareness is an important mindfulness facet for prosocial behavior

1. Introduction

Prosocial behavior encompasses actions that benefit another person, such as helping, sharing, showing consideration and concern, and making amends for past wrongdoings (Grusec & Sherman, 2011). A unique form of prosocial behavior that has received relatively little attention is social mindfulness, defined as the recognition and respect of another's agency by allowing that person to make meaningful choices, often at the cost of satisfying one's own personal preferences (Mischkowski et al., 2018; Van Doesum et al., 2013). In social mindfulness tasks, participants are asked to choose one item from a set of three items—one unique and two identical (e.g. one black hat, two white hats)—then instructed to imagine that someone else would be selecting from the two remaining items after they made their selection. Selecting an identical item is thought to demonstrate social mindfulness, since this prosocial behavior allows for another person to have choice and agency. Van Doesum et al. (2013) originally hypothesized that dispositional mindfulness and social mindfulness would be linked, based on existing theoretical perspectives and empirical research suggesting that mindful individuals are empathetic and compassionate (e.g. Adair et al., 2018; Cameron & Fredrickson, 2015), characteristics that have been shown to correlate with greater prosocial behavior (see Condon, 2017). However, whereas the expected links to empathy and perspective-taking were found in their study, dispositional mindfulness and social mindfulness were not significantly correlated.

In the present study, we address two possible explanations for the lack of association found between dispositional mindfulness and social mindfulness. First, we propose that greater internalized prosocial motivation may mediate the link between dispositional mindfulness and prosocial behavior, i.e., social mindfulness. Van Doesum et al. (2013) proposed that the effects

of individual prosocial characteristics, such as an intrinsic motivation to be prosocial, may potentially be an intermediary mechanism underlying the association between mindfulness and prosocial behavior. Second, we propose that a more nuanced, multifaceted measure of dispositional mindfulness may demonstrate specific facet-level links to prosocial behavior. While Van Doesum et al. (2013) measured mindfulness using a single-facet measure (Mindful Attention and Awareness Scale), some argue that there exist a number of dispositional mindfulness facets (e.g. Baer et al., 2006). Like personality facets, each dispositional mindfulness facet may exert unique effects on motivation or behavior. To test this assertion, the present study examined the indirect association between dispositional mindfulness and social mindfulness using a path model that included five facets of mindfulness and prosocial motivation as a mediator of this indirect association.

1.1 Mindfulness

Mindfulness can be defined as a state of present-oriented, nonjudgmental attention and awareness (e.g. Baer et al., 2006). Of many models describing mindfulness, the five-facet model proposes five mindfulness characteristics that include 1) observing: paying attention to sensations, perceptions, and internal states such as thoughts and feelings; 2) describing: the ability to label and describe internal states with words; 3) acting with awareness: being focused and undistracted when enacting desired behaviors; 4) nonjudging: not criticizing or judging oneself for thoughts or feelings, and; 5) nonreactivity: noticing and pausing in response to thoughts or feelings (Baer et al., 2006). Dispositional mindfulness research using these five facets has found positive associations between the facets of mindfulness and emotional intelligence, persistence in problem solving, self-regulation of behavior, and executive functioning (Baer et al., 2006; Baer et al., 2008; Feldman et al., 2014, Short et al., 2016). High

levels of mindfulness have also been found to correlate with less neuroticism and more extraversion, openness to experience, agreeableness, and conscientiousness (Giluk, 2009). Dispositional mindfulness has also been linked to various interpersonal factors, including lower social anxiety, objective observation of emotions in social situations, and relationship satisfaction in couples (Cameron & Fredrickson, 2015; Hayes-Skelton & Graham, 2013; Lenger et al., 2017).

There has been considerable and growing interest in the association between mindfulness and prosocial behavior. A recent meta-analysis reported that elevated mindfulness is linked to both self-reported and observed ratings of prosocial behavior, although the effect size for the former was significantly stronger (see Donald et al., 2019). Further, increasing mindfulness through mindfulness training appears to lead to more prosocial behavior. Condon et al. (2013) found that mindfulness meditation training had a significant direct link to whether or not someone would be prosocial by giving up their seat to someone who was in need. However, this link is not consistent: Ridderinkhof et al. (2017) found no effect of mindfulness training on empathic responding or prosocial behavior. Regarding dispositional mindfulness and prosocial behavior, as noted above, Van Doesum et al. (2013) reported no direct link between self-reported mindfulness and prosocial behavior in the social mindfulness task. Several reasons for this discrepancy are possible: for example, self-report measures and behavioral tasks do not always target the same phenomenon, nor do they consistently correlate (Suen & Ary, 2014).

In the present study, we propose that one possible reason for the lack of association between mindfulness and social mindfulness is that the separate facets of mindfulness do not all relate to prosocial behavior to the same extent. Although Van Doesum et al. (2013) used a single-facet measure of mindfulness and found no link with social mindfulness, mindfulness

facets do not consistently intercorrelate, suggesting that distinct characteristics of mindfulness may be uniquely associated with prosocial behavior. These unique associations cannot be tested using a combined, single facet measure of mindfulness. To address this issue, in the present study, we measured mindfulness using the five-facet model to assess the unique links of each facet to social mindfulness.

1.2 Prosocial Motivation as a Mediator

A second reason for the lack of association between mindfulness and social mindfulness reported by Van Doesum et al. (2013) may be that the link is indirect. In the present study, prosocial motivation was proposed as a mediator of this indirect link. According to self-determination theory (SDT; Ryan & Deci, 2000), there are three sources of prosocial motivation: 1) external motivation, defined as wanting praise or rewards and avoiding punishment; 2) introjected motivation, combining internal and external pressures that act through esteem-based pressures, such as avoidance of guilt or seeking social approval, and; 3) identified motivation, acting in line with one's own values or goals and the most internalized form of motivation among these three sources (Ryan & Connell, 1989).

Internalized prosocial motivation may be heightened in those with high dispositional mindfulness. It has been theorized that mindful individuals have an enhanced capacity to assess the world and react to situations in accord with their motivations (Schultz & Ryan, 2015). Research supporting this assertion has found that mindfulness is positively related to prioritizing internalized goals such as feelings of community and having interpersonal relationships, rather than external goals such as financial success or public self-image (e.g., Brown & Kasser, 2005). Thus, both theory and research suggest that mindful individuals can better understand their internalized motives, and potentially behave in line with those motives.

There is also a wealth of research evidence to support a link between internalized forms of prosocial motivation and prosocial behavior. For example, Wentzel et al. (2007) found in adolescents that internalized motivation was linked to prosocial goal motivation, which ultimately linked to peer ratings and teacher ratings of prosocial behavior. Similarly, Grant (2008) found that volunteers who reported greater internalized prosocial motivation were more likely to persist in their prosocial behavior, and Hodge and Lonsdale (2011) found that sportsmen with greater internalized motivation were more likely to be prosocial with teammates. On the other hand, use of rewards, which is related to external motivation, has been found to be related to lower rates of prosocial behavior (Fabes et al., 1989). In the case of social mindfulness, we proposed that those who act prosocially are likely to be acting with identified motivation, the most internalized form of prosocial motivation of the three motivations, because no external rewards or consequences are associated with choices made in the social mindfulness task.

1.3 The Present Study

The aim of the present study was to address why mindfulness and social mindfulness were not linked in the Van Doesum et al. (2013) study by including a five-facet measure of mindfulness and investigating how prosocial motivation may indirectly link the two constructs. We hypothesized that higher levels of mindfulness may be linked to internalized prosocial motivation (i.e. identified motivation), indirectly linking mindfulness and social mindfulness. We made no assumptions regarding which mindfulness facet might be most related to prosocial motivation, with the exception of acting with awareness. We hypothesized acting with awareness would be positively linked to social mindfulness since it is the most outwardly-oriented facet of mindfulness (i.e., targeting behavior rather than internal states; Baer et al., 2006). That is, mindful individuals who are aware of and intentional in their actions were hypothesized to be

more likely to respond to the social mindfulness task in a prosocial way, i.e., to recognize another's agency.

2. Methods

2.1 Participants

First-year students ($N=232$; 66.4% female) participated at an urban Canadian university. Participants were 17 to 25 years of age ($M_{\text{age}} = 18.99$; $SD = 1.50$). They were East Asian (31.0%), Western or Eastern European (23.3%), South Asian (15.5%) and West and Central Asian (8.2%) in background, or were from other ethnic or multiple ethnic origins (22.0%).

2.2 Procedure

The procedure was approved by the university's ethics board. Participants were recruited from introductory psychology courses and received a small course credit for their participation. Consent was obtained from all participants, and they completed all measures at the lab on a computer. Upon completion, they were debriefed.

2.3 Measures

2.3.1 Five Facet Mindfulness Questionnaire (FFMQ). Mindfulness was assessed using the FFMQ, which consists of 39 items corresponding to 5 subscales (Baer et al., 2006) observing (e.g., "I pay attention to how my emotions affect my thoughts and behavior."), describing (e.g., "Even when I'm feeling terribly upset, I can find a way to put it into words."), acting with awareness (e.g., "I find myself doing things without paying attention."; reverse-scored), nonjudging of inner experience (e.g., "I tell myself I shouldn't be thinking the way I'm thinking."; reverse-scored), and nonreactivity to inner experience (e.g., "I perceive my feelings and emotions without having to react to them."). Participants rated their agreement with each item (1=never or very rarely true; 5=very often or always true).

2.3.2 Prosocial Motivation. Motivation to be prosocial was measured using the Prosocial Regulation Questionnaire (PSR-Q; Ryan & Connell, 1989). The PSR-Q consists of five situations potentially requiring prosocial action (e.g., Why would you help someone who is in distress?). For each situation, participants indicate their agreement with 5 different reasons for a prosocial response (1 = not at all true; 4 = very true). The total of 25 items combine to form 3 subscales: external motivation (“Because I could get in trouble if I didn’t.”; 5 items), introjected motivation (e.g., “Because I’d feel bad about myself if I didn’t.”; 10 items) and identified motivation (e.g., “Because I think it’s important to give help when it’s needed”; 10 items).

2.3.3 Social Mindfulness. The social mindfulness paradigm (Van Doesum et al., 2013) is a computer-based social decision making task that assesses prosocial behavior. Participants are shown three objects, among which one is unique and the other two identical (e.g., one pink bottle, two yellow bottles), then instructed to imagine that someone would be selecting from the two remaining items after they made their selection (see Figure 1 in Supplementary Material). Five different sets of three objects were presented, and responses were binary: 0 = unique object chosen (e.g., pink bottle); 1 = identical item chosen (e.g., yellow bottle). An average across the five sets resulted in a score between 0.0 and 1.0, with higher values indicating greater frequency of prosocial choices. Psychometric properties, in particular convergent validity, of the social mindfulness task have been previously established in similar samples (Dou et al., 2018; Mischkowski et al., 2018; Van Doesum et al., 2013).

2.4 Analysis

Path analysis was conducted using MPlus7, allowing for simultaneous and robust testing of the association of each mindfulness facet to each type of prosocial motivation, and the latter to social mindfulness, in a single model. We did not include paths between mindfulness facets and

social mindfulness, since the two constructs were unrelated in previous studies (i.e., Van Doesum et al., 2013). Age and gender were controlled in the analysis to minimize demographics-driven statistical variation (Boehnke et al., 1989; Eagly & Crowley, 1986). Ethnicity was not controlled due to lack of significant correlations with any variables of interest. Bootstrapping was implemented with 10,000 samples. A bootstrapped confidence interval that does not include zero indicates statistically significant effects (Preacher & Hayes, 2008). Significance of paths was concluded when both *p*-values and bootstrapped confidence intervals were significant, to address concerns about inflated alpha from testing multiple paths. Model fit was assessed with the following criteria: chi-square (χ^2) *p*-value below .05, root mean square error of approximation (RMSEA) below .07, Tucker-Lewis Index (TLI) above .95, and standardised root mean square residual (SRMR) below .08 (Barrett, 2007; Hu & Bentler, 1999; Steiger, 2007).

3. Results

Table 1 presents descriptives, inter-item reliability and bivariate correlations. Observing and acting with awareness were negatively correlated with external motivation, and positively correlated with identified motivation. Nonjudging was negatively correlated with external and introjected motivation. Introjected motivation was positively correlated with external and identified motivation. Identified motivation was positively correlated with social mindfulness.

Table 1.

Descriptive statistics, Cronbach's α , and zero-order correlations

	<i>M</i>	<i>SD</i>	α	1	2	3	4	5	6	7	8	9	10
Mindfulness													
1. Observe	14.60	2.62	.63										
2. Describe	15.67	3.80	.85	.05									
3. Act with awareness	16.26	3.16	.75	.14*	.22**								
4. Non-judging	14.29	3.48	.75	-.01	.19**	.26**							
5. Non-reactivity	14.74	3.48	.77	.11	.12	.07	.17**						
Prosocial Motivation													
6. External	10.18	2.95	.71	-.18**	-.09	-.20**	-.13*	-.05					
7. Introjected	28.77	5.77	.82	.02	.04	-.01	-.13*	-.08	.55**				
8. Identified	35.43	4.24	.83	.17*	.12	.28**	.05	.02	-.04	.42**			
9. Social mindfulness	0.57	0.22	-	.03	-.09	.05	-.02	.03	-.01	.05	.22**		
10. Gender	-	-	-	-.11	.14*	-.19**	.02	.21**	.003	-.11	-.24**	.04	
11. Age	18.99	1.50	-	-.08	.10	.10	-.07	-.07	.02	.11	-.003	.05	.03

Note. ** $p \leq .01$; * $p \leq .05$. Gender: 1=male, 2=female.

The tested path model showed good fit: $\chi^2(5) = 5.085$, $p = .406$; RMSEA = .009 [CI = .000, .092]; TLI = .997; SRMR = .016. Path estimates are depicted Figure 1. Mindfulness facets observing and acting with awareness were negatively related to external motivation. Acting with awareness was positively related to identified motivation. Identified motivation was positively related to social mindfulness. Only the two latter paths were significant in both confidence intervals and p -values after manually correcting for inflated alpha ($p = .05/23$ paths) due to multiple tests (also see Table 1, Supplementary Material). There were significant positive correlations between external and introjected motivation, and between introjected and identified motivation. Considering the significant paths among acting with awareness, identified motivation, and social mindfulness, we tested whether identified motivation may mediate between acting with awareness and social mindfulness. This test of indirect effects with bootstrapping at 10,000 was significant, $\beta = .060$, $SE = .023$, $p = .010$, 95% CI = .022, .098, suggesting that acting with awareness was linked to social mindfulness through identified motivation for prosocial behavior.

Figure 1. Path model demonstrating the effects of the FFMQ facets of mindfulness on social mindfulness via prosocial motivation.

Unstandardized regression coefficients are reported, with standard error in parentheses. Black lines indicate significant paths based on p -values and bootstrapped confidence intervals; grey lines indicate non-significant paths that were entered into and tested in the model. ** $p \leq .01$; * $p \leq .05$. Confidence intervals and indirect effects can be found in the Supplementary Materials, Table 1.

4. Discussion

In the present study we investigated the indirect association between dispositional mindfulness and social mindfulness, mediated by internalized prosocial motivation. We addressed this association using a five-facet model of mindfulness to distinguish the independent effects of each characteristic of mindfulness. Specifically, we had hypothesized that mindful individuals would show more internalized prosocial motivation. The results confirmed our hypothesis, demonstrating positive links between acting with awareness and identified prosocial motivation, and negative links between observing and acting with awareness and external prosocial motivation. We had also hypothesized that more internalized prosocial motivation would indirectly link mindfulness and prosocial behavior in the form of social mindfulness. The results also confirmed this hypothesis, demonstrating indirect associations between acting with awareness and social mindfulness through identified prosocial motivation.

Although existing research suggests that mindfulness and prosocial behavior are directly related (Donald et al., 2018), in the case of social mindfulness, Van Doesum and colleagues (2013) reported no significant correlation. Further, while empirical findings support the association between general mindfulness and prosocial motivation (e.g., Chatzisarantis & Hagger, 2007; Howell & Buro, 2011) and prosocial motivation and prosocial behavior (e.g. Grant & Berry, 2011), there has yet to be a facet-based assessment highlighting the unique contributions of each component of mindfulness to prosocial behavior via prosocial introspection and motivation. The present study provides preliminary evidence that the mindfulness facet of acting with awareness may be a key factor connected to greater internalized motivation in the prosocial domain, and indirectly to prosocial behavior in the form of social mindfulness. This mindfulness-motivation-behavior link may be explained by mindful individuals' heightened

awareness of their actions, given that mindful individuals have an enhanced capacity to translate internal values and motives into behaviors that align with these beliefs (i.e. Brown et al., 2007; Shapiro & Schwartz, 2000; Vago & David, 2012). Potentially, mindful awareness of one's own actions may drive the values-to-behavior pathway for prosocial behavior, with further examination of this link necessary to deduce causality.

The present results confirm Van Doesum et al.'s (2013) speculations that mindfulness is not directly linked to prosocial behavior in the form of social mindfulness, and that the link may be indirect through prosocial motivation. The mediating role of prosocial motivation in the link between dispositional mindfulness and prosocial propensity echoes related literature. For example, in a study of adolescents, Hardy and Carlo (2005) found that religious adolescents' prosocial behavior was mediated through the internally held value to be kind to others. Further, Carlo et al. (2005) found that individuals high in personality traits of openness and extraversion were more likely to act prosocially, with the link mediated by prosocial motivation. Similarly, we found that a disposition for mindfulness, particularly acting with awareness, is linked to a greater tendency to be prosocially motivated and act correspondingly. Indeed, mindful individuals feel greater empathy and compassion in social situations (Beitel et al., 2005; Condon et al., 2013), making them act in line with their internally held beliefs (i.e. motivations), and leading to their enhanced desire to help others.

The present study underlines the importance of the motivation for prosocial behavior as a mediator between certain facets of mindfulness and concern for others. The study, of course, is cross-sectional, and causal inferences cannot be made. It is also possible that other mediators indirectly link mindfulness facets and prosocial behavior. For example, existing research suggests that emotional empathy, perspective taking, and compassion are linked to both

dispositional mindfulness and prosocial behavior (e.g., Baer et al., 2006; Berry et al., 2018). It also remains to be seen whether prosocial motivation may moderate, rather than mediate, the association between mindfulness and prosocial behavior. Further, considering the relatively small coefficients seen in the model, it is possible that other variables not measured in this study, such as personality factors, may more strongly mediate between mindfulness and prosocial behavior. Simultaneously considering all of these factors, as well as prosocial motivation, in a parsimonious model linking mindfulness and prosocial behavior would provide an extended understanding of the process by which the two variables are connected.

Additionally, further research must be conducted to address whether specific components of mindfulness are linked to specific forms of prosocial behavior. While the present study found an indirect association from acting with awareness to social mindfulness through internalized prosocial motivation, a different facet may be demonstrated to drive a different type of prosocial behavior. For example, the facet of non-reactivity may be linked to prosocial donating when watching distressing fundraising videos (i.e. illness in hospitals, starvation in low and middle income countries) due to its unique links to emotion regulation (Coffey et al., 2010), potentially regulating the autonomic reaction to distressing thoughts and allowing for impactful action. These future studies would shed light on our understanding of the way in which present-oriented, nonjudgmental attention and awareness have an impact on concern for others. Further, given that mindfulness has been found to be more strongly associated with self-reported compared to observed ratings of prosocial behavior (Donald et al., 2019), future studies of these links may help to elucidate whether different mindfulness facets link to greater self-reported versus observed prosocial behavior.

The present study focused on an important but rarely studied aspect of prosocial behavior—sacrificing one’s own choices in order to allow another individual to make meaningful choices for themselves. One facet of mindfulness was associated with this manifestation of concern for others—acting with awareness or being attentive when engaging in a desired action. What also appears to be important in actions relevant to social mindfulness is the existence of an internalized motive of caring or consideration for others. We suggest that acting with awareness facilitates social mindfulness because it encourages inhibition of automatic responses such as negative internal reactions to situations and promotes internalized motivation to be prosocial.

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Supplementary Material

Table 1.

Model path statistics

Path	B	SE	<i>p</i>	CIL	CIU
FFMQ Observe → External Motivation	-.180	.077	.019	-.305	-.052
FFMQ Observe → Introjected Motivation	.034	.151	.821	-.207	.286
FFMQ Observe → Identified Motivation	.165	.105	.116	.000	.347
FFMQ Describe → External Motivation	-.022	.057	.698	-.117	.070
FFMQ Describe → Introjected Motivation	.121	.110	.274	-.059	.305
FFMQ Describe → Identified Motivation	.114	.067	.090	.006	.228
FFMQ Act with Awareness → External Motivation	-.148	.065	.022	-.255	-.043
FFMQ Act with Awareness → Introjected Motivation	-.055	.133	.679	-.280	.156
FFMQ Act with Awareness → Identified Motivation	.278	.083	.001	.139	.411
FFMQ Non-judging → External Motivation	-.072	.061	.231	-.172	.027
FFMQ Non-judging → Introjected Motivation	-.202	.113	.075	-.383	-.012
FFMQ Non-judging → Identified Motivation	-.035	.087	.690	-.182	.103
FFMQ Non-reactivity → External Motivation	.004	.056	.937	-.089	.096
FFMQ Non-reactivity → Introjected Motivation	-.065	.126	.607	-.271	.142
FFMQ Non-reactivity → Identified Motivation	.034	.079	.662	-.094	.163
External Motivation ⇔ Introjected Motivation	9.061	1.123	<.001	6.915	10.600
External Motivation ⇔ Identified Motivation	.330	.732	.652	-.901	1.501
Introjected Motivation ⇔ Identified Motivation	9.557	1.648	<.001	6.498	11.912
External Motivation → Social Mindfulness	.004	.007	.543	-.007	.015
Introjected Motivation → Social Mindfulness	-.004	.004	.309	-.010	.002
Identified Motivation → Social Mindfulness	.015	.004	<.001	.009	.021

Note. CIL = 95% Confidence Interval Lower; CIU = 95% Confidence Interval Upper. Unstandardized estimates depicted. Double-sided arrows indicate correlations. Bolded paths are significant in both *p*-values and confidence intervals after adjusting *p*-value limit with a manual Bonferroni correction, .05 (alpha) / 21 (paths) = .002 (maximum *p*-value for significance).

Figure 1.

An example of the social mindfulness task

Block A

Block B

Note. These images are only examples of social mindfulness tasks. In each block, participants are presented with a set of three items. One of the items differs from the other two, e.g., by color.

Using Block A as an example, participants are presented with one pink and two yellow water bottles. They are asked to choose one of these bottles, keeping in mind that someone else will be choosing from the remaining items after the participant makes their selection. Participants make a selection by clicking on the radio button below each bottle. Example instruction: Please choose an item. Please keep in mind that another person will be selecting an item from the two remaining items after you have made your selection.