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Author manuscript

# Mindfulness in schizophrenia: Associations with self-reported motivation, emotion regulation, dysfunctional attitudes, and negative symptoms

**Naomi T. Tabak**[a,b], **William P. Horan**[b,c], and **Michael F. Green**[c,b]

[a]University of California, Los Angeles, Department of Psychology

[b]VA Greater Los Angeles Healthcare System

[c]UCLA Semel Institute of Neuroscience and Human Behavior

## Abstract

Mindfulness-based interventions are gaining empirical support as alternative or adjunctive treatments for a variety of mental health conditions, including anxiety, depression, and substance use disorders. Emerging evidence now suggests that mindfulness-based treatments may also improve clinical features of schizophrenia, including negative symptoms. However, no research has examined the construct of mindfulness and its correlates in schizophrenia. In this study, we examined self-reported mindfulness in patients (n=35) and controls (n=25) using the Five-Facet Mindfulness Questionnaire. We examined correlations among mindfulness, negative symptoms, and psychological constructs associated with negative symptoms and adaptive functioning, including motivation, emotion regulation, and dysfunctional attitudes. As hypothesized, patients endorsed lower levels of mindfulness than controls. In patients, mindfulness was unrelated to negative symptoms, but it was associated with more adaptive emotion regulation (greater reappraisal) and beliefs (lower dysfunctional attitudes). Some facets of mindfulness were also associated with self-reported motivation (behavioral activation and inhibition). These patterns of correlations were similar in patients and controls. Findings from this initial study suggest that schizophrenia patients may benefit from mindfulness-based interventions because they (a) have lower self-reported mindfulness than controls and (b) demonstrate strong relationships between mindfulness and psychological constructs related to adaptive functioning.

Correspondence: Naomi T. Tabak, Ph.D., University of California, Los Angeles & VA Greater Los Angeles Healthcare System, MIRECC 210A, Bldg. 210, 11301 Wilshire Blvd., Los Angeles, CA 90073, Phone: (310) 478-3711 x44319, Fax: (310) 268-4056, ntabak@ucla.edu.

## 1. Introduction

Based on consensus definition, mindfulness is a metacognitive process with two components: (1) the self-regulation of attention, which involves sustained attention, attention switching, and the inhibition of elaborative processing with (2) an orientation of curiosity, openness, and acceptance towards all aspects of the immediate experience, including thoughts, feelings, and sensations (Bishop et al., 2004). Though specific definitions vary, it is clear that mindfulness is a multifaceted construct that is strongly linked to improved self-regulation through its effects on attentional control, emotion regulation, and self-awareness (Tang et al., 2015).

Scientific interest in mindfulness has steadily increased over the past 30 years, and there has been a surge of published studies since 2011 (over 200 per year). In clinical psychology, mindfulness-based interventions have been developed to treat a wide variety of mental health concerns, from chronic recurrent depression (Segal et al., 2002) to substance use disorders (Bowen et al., 2010) and borderline personality disorder (Linehan, 1993).

Mindfulness-based interventions are also being applied to schizophrenia research. Historically, there was some hesitation about incorporating meditation into treatments for schizophrenia based on a handful of case reports that linked intensive meditation practice with psychosis and mania (e.g. Walsh and Roche, 1979; Yorston, 2001). However, the type of secular meditation that is practiced in mindfulness-based psychotherapy is typically brief (15–45 minutes) and encourages direct applications of the mindfulness cultivated in meditation to daily life. This style of meditation is very different from the meditation practiced in intensive, religious retreats that are typically offered in remote locations and may also involve fasting and sleep deprivation. In schizophrenia research, some additional modifications to mindfulness-based interventions have been suggested, such as limiting meditation to 10 minutes, starting sessions with a brief body scan to help ground patients, and offering frequent guidance to limit prolonged periods of silence (Chadwick et al., 2005).

Early clinical trials suggest that mindfulness-based approaches can reduce rehospitalization rates (Bach and Hayes, 2002), improve aspects of neurocognition (Tabak and Granholm, 2014), and enhance clinical improvement (Chadwick et al., 2009; Shawyer et al., 2012; Gaudiano & Herbert, 2006; Davis & Kurzban, 2012) in individuals with schizophrenia. In early psychosis, mindfulness training has also led to improved emotion regulation, anxiety, and depression (Khoury et al., 2013a; Samson and Mallindine, 2014). Interestingly, a handful of studies have now documented that mindfulness-based treatments may improve negative symptoms in schizophrenia (Johnson et al., 2011; Shawyer et al., 2012; White et al., 2011). In fact, an initial meta-analysis concluded that, while mindfulness interventions are moderately effective in improving several aspects of psychotic disorders, the effects on negative symptoms are higher than for positive symptoms (Khoury et al., 2013b). These

preliminary results are encouraging, as we still do not have effective treatments for persistent and debilitating negative symptoms, such as avolition, anhedonia, and blunted affect.

While mindfulness is increasingly being applied to schizophrenia, basic behavioral research on mindfulness in this disorder is lacking. For example, it is notable that no studies to our knowledge have compared schizophrenia patients with healthy controls on self-reported mindfulness. In addition, no research has examined the correlates of mindfulness in patients with schizophrenia.

This initial study of mindfulness in schizophrenia had three primary objectives: First, we sought to compare levels of self-reported mindfulness in patients with schizophrenia and healthy controls. Because the core mechanisms of mindfulness (attention, emotion regulation, and self-awareness; Tang et al., 2015)) are known to be impaired in schizophrenia, we hypothesized that patients would report lower mindfulness than controls. Second, we examined correlations between mindfulness and two interview-based assessments of negative symptoms in patients. The mindfulness-based treatment effects noted above led us to hypothesize that higher mindfulness would correlate with lower negative symptoms. Third, we assessed relationships between mindfulness and key variables linked to negative symptoms and adaptive functioning in schizophrenia, including self-reported motivational tendencies (behavioral activation and behavioral inhibition), emotion regulation, and dysfunctional attitudes (Blanchard et al., 2011; Grant and Beck, 2009; Henry et al., 2007). We hypothesized that mindfulness would be associated with lower behavioral inhibition, greater behavioral activation, more adaptive emotion regulation (i.e., higher use of reappraisal and lower use of suppression) and less dysfunctional attitudes (including defeatist performance beliefs and need for approval) in patients. For comparison, we additionally examined these correlations in control participants. Finally, exploratory analyses examined correlations among mindfulness and other clinical characteristics in patients, including positive symptoms and neurocognition.

## 2. Methods

### 2.1 Participants

Participants included 35 outpatients with schizophrenia and 25 healthy controls. Control participants were recruited through online advertisements. They were administered the Structured Clinical Interview for DSM-IV (SCID) Axis I Disorders (First et al., 1996) and portions of the SCID for Axis II Disorders (First et al., 1994). Controls were excluded if they had a history of schizophrenia, other psychotic disorder, bipolar disorder, recurrent major depressive disorder, substance dependence, or substance abuse in the past month, or if they met criteria for avoidant, paranoid, schizoid, schizotypal, or borderline personality disorder. They were also excluded for family history of psychotic disorders among first-degree relatives.

Patients were recruited from outpatient clinics at University of California, Los Angeles (UCLA), the Veterans Affairs Greater Los Angeles Healthcare System (VAGLAHS), and from local clinics and board and care facilities. Patients met criteria for schizophrenia based

on the SCID. They were excluded if they met criteria for substance dependence in the past six months, substance abuse in the past month (determined by the SCID), or had an estimated premorbid IQ < 70 (based on review of medical records). All patients were clinically stable as defined by: no mood episodes in the past month (determined by the SCID), no hospitalizations in the past 3 months, and no changes in living situation or medication in the past 6 weeks. Additional exclusion criteria for all participants were: history of loss of consciousness for more than one hour, significant neurological disorder, or insufficient fluency in English.

All interviewers were trained through the Treatment Unit of the VA VISN 22 Mental Illness Research, Education, and Clinical Center. Interviewers were trained to a minimum kappa of 0.75 for key psychotic and mood items on the SCID and to a minimum kappa of 0.75–0.80 for other symptom measures (Ventura et al., 1998). All participants had the capacity to give informed consent and provided written informed consent after procedures were fully explained, in line with procedures approved by the institutional review board at VAGLAHS.

The majority of patients were on atypical antipsychotic mediations (82.9%); three patients (8.6%) were taking typical antipsychotics and three patients (8.6%) were not on antipsychotic medications. In addition to self-report measures, patients were administered the MATRICS Consensus Cognitive Battery (MCCB; Nuechterlein et al., 2008) and two symptom rating interviews; the Positive and Negative Syndrome Scale (PANSS; Kay et al., 1987) and the Clinical Assessment Interview for Negative Symptoms (CAINS; Kring et al., 2013). The sample mean for the MCCB composite was 37.71 (SD = 11.23). On the PANSS, mean symptom scores were 14.88 (SD = 7.27) for positive symptoms and 14.88 (SD = 6.83) for negative symptoms. On the CAINS, mean negative symptom scores were 15.65 (SD = 7.45) for the experiential subscale and 4.94 (SD = 4.26) for the expressive subscale.

## 2.2 Self-report measures administered to patients and controls

**2.2.1 Mindfulness—**The Five-facet Mindfulness Questionnaire (FFMQ; Baer et al., 2006) was developed based on factor analyses of a combined pool of items from five previously existing mindfulness questionnaires. It includes 39 items across five facets of mindfulness: observing (noticing and attending to present-moment sensations, perceptions, thoughts, and feelings); describing (labeling these inner stimuli with words); acting with awareness (rather than acting on automatic pilot); nonjudging (not judging of inner experience, including sensations, thoughts, and emotions); and nonreacting (allowing thoughts and feelings to pass, without getting caught in them). Items are rated from 1 (never or very rarely true) to 5 (very often or always true). While the five facets are separable, confirmatory factor analysis also identified a broad mindfulness factor, composed of four of the five facets (describing, acting with awareness, nonjudging, and nonreacting). Cronbach's alpha coefficients for the FFMQ factor score were .81 for patients and .94 for controls.

**2.2.2 Motivation—**The Behavioral Inhibition and Activation Scales (BIS/BAS; Carver and White, 1994) were used to measure self-reported motivational tendencies. As described by Gray (1987), the BAS responds to appetitive stimuli and the termination of punishment, elicits positive emotions, and leads to approach and active avoidance behavior. The BAS

also correlates positively with relatively greater left frontal cortical activity, a validated index of approach motivation (Coan and Allen, 2003). The BIS is sensitive to aversive stimuli, is associated with heightened anxiety and arousal, and leads to withdrawal and passive avoidance (Hewig et al., 2004). While BIS is generally associated with avoidance motivation, the relationship between these constructs is complex (Coan and Allen, 2003).

The BIS/BAS scales include 20 items, each rated from 1 (strongly agree) to 4 (strongly disagree). BAS sensitivity is measured by three subscales: drive, fun seeking, and reward responsiveness. We calculated BAS subscales and a BAS Total score. Results are reported for the BAS Total score only, as the subscales were all highly intercorrelated and results followed a similar pattern when we used the total scale and the subscale scores. Cronbach's alpha coefficients for BIS were .68 for patients and .84 for controls. Alphas for BAS were. 72 for patients and .79 for controls.

**2.2.3 Emotion Regulation—**The Emotion Regulation Questionnaire (ERQ; Gross and John, 2003) is a 10-item assessment of individual differences in two emotion regulation strategies (reappraisal and suppression). Participants indicate how much they agree with each statement from 1 (strongly disagree) to 7 (strongly agree). Cronbach's alpha coefficients for reappraisal were .83 for patients and .91 for controls, and for suppression were .62 for patients and .73 for controls.

**2.2.4 Dysfunctional Attitudes—**Following Grant and Beck (2009), the Dysfunctional Attitudes Scale (DAS; Weissman, 1978) was used to measure two types of dysfunctional attitudes. Defeatist performance beliefs were assessed with 15 items about the tendency to overgeneralize one's ability to perform tasks based on past failures. The need for acceptance subscale includes 10 items that assess the exaggerated importance of being accepted by others. Cronbach's alpha coefficients for defeatist beliefs were .86 for patients and .62 for controls, and for need for approval were .73 for patients and .43 for controls.

## 3. Results

### 3.1 Demographics

Patients and control participants did not differ on sex, age, race, ethnicity, or parental education (Table 1). There were group differences on personal education; schizophrenia patients had lower education levels compared to controls. In each group, mindfulness was unrelated to all demographic variables.

### 3.2 Group differences in mindfulness

We first conducted an independent samples *t*-test to compare groups on the FFMQ factor score; control participants endorsed significantly greater FFMQ factor scores compared to patients (Table 2). We then conducted a 5 (FFMQ facets) × 2 (group) repeated-measures ANOVA to examine whether facets of mindfulness differed between groups. The ANOVA revealed significant main effects for group, $F(1,58) = 13.64$, $p < .01$, and FFMQ facets, $F(4,58) = 20.52$, $p < .01$, as well as a significant group x facet interaction, $F(4,58) = 5.94$, $p < .01$. Follow-up comparisons (independent samples *t*-tests) indicated that control participants scored higher on several of the separate mindfulness facets (describing, acting

with awareness, and nonjudging). All of the significant between-group effect sizes were medium to large.

### 3.3 Mindfulness and clinical characteristics in the schizophrenia group

In patients, there were no significant relationships among mindfulness (FFMQ factor and facet scores) and negative symptoms on the PANSS or CAINS (all $r$'s < .27, $p$'s > .05). For comparison, we also examined associations between the FFMQ factor score and positive symptoms ($r = .26$; $p > .05$) and between the FFMQ factor score and neurocognition ($r = -.12$, $p > .05$) and found no significant relationships.

### 3.4 Mindfulness and other self-report constructs

Results are presented in Tables 3 (patients) and 4 (control participants).

**3.4.1 Motivation—**In patients, there were no significant relationships between the FFMQ factor score and behavioral inhibition or activation. However, there were several significant relationships among mindfulness facets and motivation in patients. In particular, acting with awareness was associated with lower behavioral inhibition and, unexpectedly, with lower behavioral activation. Additionally, nonjudging was related to lower behavioral inhibition and nonreacting was associated with higher behavioral activation. A similar pattern emerged in control participants; the FFMQ factor score was associated with lower behavioral inhibition and lower behavioral activation. In terms of facet scores, acting with awareness, nonjudging, and nonreacting were all negatively correlated with behavioral inhibition in controls. The relationship between mindfulness and behavioral activation in controls was accounted for by a strong negative correlation with the acting with awareness facet.

**3.4.2 Emotion Regulation—**In patients, higher FFMQ factor scores were related to greater use of reappraisal, which largely reflected a moderate correlation between reappraisal and the nonjudging facet. In control participants, there were no significant relationships between mindfulness and reappraisal or suppression.

**3.4.3 Dysfunctional Attitudes—**Among patients, there were strong negative correlations among the FFMQ factor score and both DAS subscales. Acting with awareness and nonjudging were both associated with lower defeatist beliefs, while describing, acting with awareness, and nonjudging were all associated with lower need for approval in patients. In control participants, the FFMQ factor score was also inversely correlated with need for approval, which was accounted for by a large negative correlation between need for approval and acting with awareness, but there were no significant correlations for defeatist beliefs.

## 4. Discussion

In our study, schizophrenia patients endorsed lower levels of overall mindfulness (FFMQ factor score) than control participants. Group differences were significant for the facets of describing, acting with awareness, and nonjudging and the magnitudes of these effects were medium to large. Among patients, mindfulness showed essentially no relations to demographic or clinical characteristics. Regarding clinical characteristics, we did not find

support for our hypothesis that greater mindfulness would be inversely correlated with negative symptoms. We also failed to find significant relationships between mindfulness and positive symptoms. It is notable that self-reported mindfulness was not linked to education or neurocognition, suggesting that the disturbances in self-reported mindfulness do not merely reflect intellectual limitations. Mindfulness was, however, associated with several self-report variables that are key correlates of negative symptoms and poor functioning, including motivation, emotion regulation, and dysfunctional attitudes.

### 4.1 Negative symptoms

The lack of a significant relationship between mindfulness and negative symptoms may be explained in several ways. First, the mindfulness-based treatment effects reported in Khoury et al.'s (2013) meta-analysis are preliminary and may not reflect a true causal relationship. The three studies responsible for this purported effect were small and varied substantially in their methodology (control group, type of intervention, etc.). Without more rigorous randomized controlled trials, it is not yet possible to link mindfulness-based interventions to improved negative symptoms with any certainty. Second, it is possible that mindfulness-based interventions do improve negative symptoms, but, because the interventions are relatively broad in their focus, the improvement could occur through a mechanism other than increased mindfulness per se. We measured mindfulness with the FFMQ, which, according to some researchers, may confound the construct of mindfulness with the methods used to cultivate mindfulness (e.g. labeling/describing ) and with other beneficial effects that come from mindfulness practice (e.g., non-reacting; Brown et al., 2007). Therefore, it is possible that one or more of these third variables is responsible for improved negative symptoms over the course of mindfulness-based interventions in schizophrenia. Third, there may be a disconnect between how individuals rate their levels of mindfulness in daily life and their ability to effectively utilize mindfulness skills taught in mindfulness interventions. This disconnect may also be responsible for the apparent lack of convergence between our findings and the results from early clinical trials.

### 4.2 Motivation

In patients and controls, higher mindfulness was associated with lower behavioral inhibition, indicating a lower drive to move away from aversive stimuli. This finding is consistent with the theoretical and empirical literature, as mindfulness promotes a willingness to accept all aspects of immediate experience (Bishop et al., 2004). In fact, mindfulness can be conceptualized as an exposure therapy, as meditators learn to observe and tolerate unpleasant internal sensations, without responding in habitual ways (e.g. avoidance; Baer, 2003; Treanor, 2011).

The pattern of correlations between mindfulness and behavioral activation is harder to interpret. We are aware of two other studies that examined associations between mindfulness and BIS/BAS (Keune et al., 2012; Reese et al., 2015). Both reported significant negative correlations between self-reported mindfulness and BIS (which we also found) and significant positive correlations between some facets of mindfulness and BAS subscales (which we did not consistently find).

In the current study, higher nonreacting scores were associated with higher behavioral activation in patients. This converges with prior studies reporting that individuals receiving mindfulness interventions showed significant increases in approach motivation, as indexed by resting EEG frontal asymmetry(Davidson et al., 2003; Keune et al., 2013). In contrast, we found that both groups showed higher acting with awareness scores to be correlated with significantly lower behavioral activation. The fact that different mindfulness subscales were associated with either increased or decreased behavioral activation may reflect the fact that the BAS scale incorporates aspects of both active approach and withdrawal tendencies (Hewig et al., 2004). In addition, recent neuroscience-based evidence suggests a more complex relationship between different facets of mindfulness and approach motivation. For example, a recent fMRI study found that people who meditate showed less regional activation during anticipation and receipt of monetary incentives (Kirk et al., 2014), which is consistent with diminished attachment to extrinsic rewards. To further address the nature of these relationships, it will be useful to include more fine-grained measures of both mindfulness and motivation in future studies.

### 4.3 Emotion regulation

Individuals with schizophrenia report high levels of negative affect and tend to utilize less effective strategies for regulating emotions (Horan et al., 2008; Kimhy et al., 2012). Mindfulness may be especially useful in this area, as there is strong evidence that it can lead to improved emotion regulation (Tang et al., 2015). In the current study, mindfulness was associated with more adaptive emotion regulation (greater use of cognitive reappraisal) among patients with schizophrenia, though unexpectedly, this relationship was not detected among controls. Incorporating mindfulness into cognitive-behavioral therapies for psychosis (which directly addresses cognitive reappraisal) may enhance the efficacy of these interventions.

### 4.4 Dysfunctional attitudes

We also found strong negative correlations between mindfulness and both types of dysfunctional attitudes among patients. A similar relationship was found between mindfulness and need for approval in controls. Hence, mindfulness interventions may help to address dysfunctional attitudes in schizophrenia. This is one target of mindfulness-based cognitive therapy, which has demonstrated efficacy in reducing relapse in depression (Piet and Hougaard, 2011). The proposed mechanism for this effect is that mindfulness practice allows patients to view negative, depressogenic thoughts as passing events, that do not necessarily reflect reality (Teasdale et al., 2000). Facilitating this detached view in patients with schizophrenia may help lessen the strength that defeatist beliefs have on their behavior (possibly leading to lower negative symptoms and better functional outcome). Dysfunctional attitudes are typically addressed in CBT for psychosis; this finding suggests another way in which mindfulness may be a valuable adjunctive approach.

### 4.4 Limitations

This initial study of mindfulness in schizophrenia has some limitations. First, our assessment of mindfulness was based on self-report. Although there is considerable evidence that people with schizophrenia provide valid self-report data, it would be useful to incorporate

alternative methods to assess mindfulness. The development of such measures is currently an active area of research (Levinson et al., 2014). Second, our data were cross sectional, limiting our ability to make any causal inferences about the relationships among variables. Third, significance levels were not adjusted for the number of correlations examined in this initial study, and replication of the current findings in independent samples will be important. Fourth, our sample included medicated patients with average illness duration of 25 years; it is not clear whether our findings will generalize to patients in early phases of schizophrenia.

Although mindfulness is being extensively studied in various physical and mental health disorders, our results suggest it may be clinically valuable to study mindfulness in schizophrenia as well. Patients appear to start out with lower baseline levels of mindfulness than controls and have substantial room to show improvement in the context of treatment studies. If replicated, our findings suggest at least three ways in which mindfulness may lead to more productive and fulfilling lives for patients with schizophrenia. Specifically, mindfulness may (1) decrease behavioral inhibition, (2) support more adaptive emotion regulation, and (3) facilitate detachment from dysfunctional attitudes. Further investigation of these constructs within the context of mindfulness-based interventions may be useful for understanding how and for whom these interventions may be most beneficial.

## Acknowledgments

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**Table 1**

Sample demographics

| | Schizophrenia (N = 35) | Control (N = 25) | Statistic |
|---|---|---|---|
| Sex (% male) | 54.30 | 52.00 | $\chi^2(1, 60)= 0.03$ |
| Age (SD) | 46.83 (9.93) | 46.60 (8.32) | $t(58)= -0.09$ |
| Race (%) | | | $\chi^2(5, 60)= 4.07$ |
| White | 57.10 | 52.00 | |
| African American | 31.40 | 24.00 | |
| Asian | 2.90 | 4.00 | |
| Other | 8.60 | 20.00 | |
| Ethnicity (% Hispanic) | 20.00 | 24.00 | $\chi^2(1, 60)= 0.21$ |
| Education (SD) | 13.06 (2.01) | 14.80 (1.61) | $t(58)= 3.56$ [**] |
| Parental Education (SD) | 13.90 (4.00) | 14.75 (3.17) | $t(53)= 0.85$ |
| Duration of Illness (SD) | 25.94 (10.60) | | |

Notes: Patients had lower personal education levels than controls but the groups did not differ on parental education, which was used as a proxy for family socio-economic status.

[**] $p < 0.01$

**Table 2**

Group differences in mindfulness

| | Schizophrenia (N = 35) | Control (N = 25) | Statistic | Effect Size (Cohen's *d*) |
|---|---|---|---|---|
| FFMQ Factor Score | 102.49 (15.66) | 120.60 (16.82) | $t(58) = 4.29^{**}$ | 1.11 |
| Observing | 27.89 (6.00) | 26.88 (6.13) | $t(58) = -0.64$ | .17 |
| Describing | 27.66 (5.94) | 32.88 (4.36) | $t(58) = 3.73^{**}$ | 1.00 |
| Acting | 28.43 (6.89) | 32.56 (4.75) | $t(58) = 2.59^{*}$ | .70 |
| Nonjudging | 24.20 (6.82) | 31.64 (6.06) | $t(58) = 4.36^{**}$ | 1.15 |
| Nonreacting | 22.20 (4.86) | 23.52 (5.32) | $t(58) = 1.00$ | .26 |

Notes: FFMQ = Five Facet Mindfulness Questionnaire;

[*]
$p < 0.05$,

[**]
$p < 0.01$

**Table 3**

Correlations among mindfulness and other variables in patients

| | FFMQ | | | | | |
|---|---|---|---|---|---|---|
| | Factor | Observe | Describe | Act | Nonjudge | Nonreact |
| Motivation | | | | | | |
| Avoidance | −.30 | .12 | −.08 | −.34* | −.35* | −.11 |
| Approach | −.18 | .19 | −.19 | −.46** | −.04 | .35* |
| Emotion reg. | | | | | | |
| Reappraisal | .36* | −.20 | .06 | .28 | .40* | .14 |
| Suppression | −.17 | −.26 | −.33 | .05 | −.07 | −.13 |
| Dys. attitudes | | | | | | |
| Defeatist | −.52** | .18 | −.19 | −.55** | −.45** | −.03 |
| Approval | −.66** | .19 | −.34* | −.55** | −.55** | −.15 |

Notes: FFMQ = Five Facet Mindfulness Questionnaire;

*
$p < 0.05$,

**
$p < 0.01$

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**Table 4**

Correlations among mindfulness and other variables in control participants

| | FFMQ | | | | | |
|---|---|---|---|---|---|---|
| | Factor | Observe | Describe | Act | Nonjudge | Nonreact |
| Motivation | | | | | | |
| Avoidance | −.47[*] | −.03 | −.30 | −.41[*] | −.41[*] | −.40[*] |
| Approach | −.44[*] | .33 | −.29 | −.56[**] | −.37 | −.24 |
| Emotion reg. | | | | | | |
| Reappraisal | .00 | .01 | .03 | .05 | .02 | −.08 |
| Suppression | −.10 | −.01 | .04 | .11 | −.23 | −.19 |
| Dys. attitudes | | | | | | |
| Defeatist | −.03 | .11 | .22 | .21 | −.22 | −.22 |
| Approval | −.49[**] | .18 | −.37 | −.54[**] | −.38 | −.34 |

Notes: FFMQ = Five Facet Mindfulness Questionnaire;

[*]
$p < 0.05$,

[**]
$p < 0.01$