Mindfulness, Self-esteem, Perceived Stress and Coping Strategies among Adolescents

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Abstract

Recent investigations of human potential and well-being have focused on mindfulness,as a psychological construct and a growing body of evidence exploring the beneßcial effects of mindfulness on mental health.However, fewer studies have examined trait mindfulness among college students. The current study attempted to study the relationship between mindfulness, self-esteem, perceived stress, and coping strategies and further assessed gender differences in these variables. A sample of 400 college students in Chandigarh (India) completed questionnaires that measured individual differences in mindfulness, self-esteem, perceived stress and Coping Strategies. Findings revealed signißcant negative relationship between mindfulness, perceived stress and disengagement coping strategies and also signißcant positive relationship between mindfulness,self-esteem and engagement coping strategies, further most potential predictors of mindfulness were investigated. Results showed that there were signißcant gender differences on coping styles between males and females. Overall, females scored higher than males on self-esteem, engagement and disengagement coping strategies and less on perceived stress. These ßndings can improve our understanding of mindfulness and its psychological correlates among adolescents, a stage of life with great potential for insight and mindfulness practice.

Keywords: *Mindfulness, Self-esteem, Perceived Stress, Coping, Adolescents, Students, Mental health, Well-being*

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Introduction

Contributing to the literature, and to provide a basis for this research, in the beginning clarification of mindfulness and its conceptual framework will be presented, followed by a discussion of the relevance of this topic to adolescents among non-clinical population.

Trait Mindfulness

Psychologists are becoming increasingly aware of mind/body unity and what it promises for our well-being. Therefore, every change in the human being is simultaneously a change at the level of the mind (e.g., cognitive changes) as well as the body (e.g., cellular, hormonal, neural changes). Mindfulness is an integrative, mind-body based approach that helps people change the way they think and feel about their experiences, especially stressful experiences.

The word mindfulness may be used to describe a psychological trait, a practice of cultivating mindfulness (e.g., mindfulness meditation), a mode or state of awareness, or a psychological process (Germer, Siegel, & Fulton, 2005).Mindfulness theory grew out of a contrast to the concept of mindlessness, Shapiro et al. (2006) propose what they call the three 'axioms' (referred to as principles henceforth) that they argue occur simultaneously to produce the process that is mindfulness. The principles are: Intention, Attention, and Attitude. The authors derived these principles from Kabat-Zinn's (1994) definition of mindfulness: “Paying attention (attention) in a particular way (attitude), on purpose (intention) in the present moment and non-judgmentally”.Further, Brown, Ryan, & Creswell, (2007) maintain that, as well as being a state of consciousness; mindfulness is also a trait, in that some individuals are more typically in a mindful state than other individuals.

Although mindfulness can be cultivated through meditation and behavioral skills training (Keng, Smoski, & Robins, 2011), mindfulness has also been conceptualized as a trait-like or dispositionalcharacteristic that varies naturally in the general population, even without mindfulness training (Brown & Ryan, 2003). Most recent findings suggest that the origins of dispositional mindfulness may indeed have their roots in early childhood experiences and attachment processes (Pepping, &Duvenage, 2016; Pepping et al., 2015; Ryan, Brown, & Creswell, 2007; Shaver et al., 2007; Walsh et al., 2009). Briefly, the quality of parenting received in childhood may influence not only attachment patterns, but also a range of other psychosocial outcomes, and well-being including the development of mindfulness. Findings revealed that high parental warmth was associated with higher dispositional mindfulness via low attachment anxiety and avoidance, and that high parental rejection was associated with low mindfulness via heightened attachment anxiety and avoidance (Ryan, Brown, & Creswell, 2007; Shaver et al., 2007), whereby individuals with a secure attachment style may have greater capacity to focus attention on the present moment without worrying about rejection and abandonment (attachment anxiety) and without defending against threatening emotions or intimacy (attachment avoidance). On the other hand, individuals higher in mindfulness may be less consumed with thoughts and emotions related to insecure attachment (Ryan et al., 2007; Shaver et al., 2007). Individuals who experience sensitive and responsive caregiving characterized by love and support for autonomy may have greater capacity for mindfulness. Such that those with a secure attachment style also tend to be more mindful. It is therefore important to understand the origins of naturally occurring individual differences in mindfulness. People who are high in dispositional mindfulness also tend to observe their thoughts and feelings without reacting to them in maladaptive ways and therefore are better able to behave constructively even when unpleasant thoughts and feelings are present (Hayes, Strosahl, & Wilson, 1999). Dispositional mindfulness is associated with a wide range of positive psychosocial outcomes. Indeed, the physical and psychological changes that occur in adolescence has long been recognized as a period of heightened risk-taking andaccordingly, a stage that requires special oversight from adults. Many adolescent risk behaviors also put others at risk, and all of these factors together make the prevention of risk behaviors in adolescence an important public health issue.The transitional period can bring up issues of independence and self-identity; many adolescents and their peers face tough choices regarding schoolwork, sexuality, drugs, and their social life.Therefore, based on mindfulness potential, and by considering a general paucity of research in the area of mindfulness and its relationship, it is obvious how important it is to study, promote, and enhance mindfulness and its vicissitudes extensively in the age group of adolescents.The importance of research on mindfulness lies not only in its potential for shedding light on basic aspects of mindfulness but also in the fact that mindfulness is a psychological construct related to health and well-being in clinical and non-clinical population.

Mindfulness and Self-esteem

Self- esteem is one of the most basic psychological needs and it isa disposition that a person has and which represents their judgments of their own worthiness (Lai et al., 2009; Olsen, Breckler, & Wiggins, 2008). Self-esteem is defined as a positive predictor of social acceptance, and thus regulates affect and behavior in social interactions (Donnellan et al., 2005; Leary et al., 1995).Accordingly, Self-esteem is a large part of adolescents' self-understanding and it is dynamic and susceptible to internal and external influences during adolescence (Agam, Tamir, & Golan, 2015).Additionally, according to Leary and MacDonald (2003), self-esteem is an important construct and is related to a variety of positive psychological outcomes, including

psychological adjustment, positive emotion, and prosocial behavior.It is important to note that, mindfulness can contribute to self-esteem through promoting authenticity instead of social comparison, and acceptance instead of evaluation (Carson & Langer, 2006). Because mindful processing enhances the clarity of one's thoughts, feelings, behaviors, and sensations (Brown et al., 2007), it may help people to recognize that, thoughts and feelings are events in the mind and not self-evident truths or aspects of the self. This might reduce the tendency to develop strong emotions as a consequence of cognitions related to low self-esteem (Michalak et al., 2011).

Perceived Stress and Coping Styles

Mohan (2008)defined stress as a"psycho-socio-physiological state which crosses thethreshold of tolerance. According to Mohan (1998a, 1998b), stress in adolescents is associated with high risk behaviors, and also stress coping has been found to be a function of individual differences (Mohan, 2001, 2003, 2003a).The experience of stress specifically results not only from events themselves but also from the appraisal that such events tax or exceed a person's adaptive capacity (Cohen, Kamarack, &Melmelstein, 1983; Lazarus, 1977).Stress appraisals concern the cognitive processes through which an individual evaluates or appraises events. Most basically, events are perceived as good, bad, or neutral, positive or negative, or as involving challenge (generally positive appraisals) or threat, harm, or loss (negative appraisals). Individuals often appraise a situation in a way that alters its emotional significance or meaning, either by changing their view of the situation or their perceived capacity to manage the demands that it presents(Weinstein, Brown, & Ryan, 2009).Further, Phillips (2013) describes Perceived Stress as feelings or thoughts that an individual has about how much stress they are under at a given point in time or over a given time period, and maintains that major reasons behind perceived stress are incorporated feelings about the uncontrollability and unpredictability of one's life.According to Lazarus and Folkman's stress and coping model, the activation of coping responses is initiated by an appraisal of an event as harmful, threatening, or challenging, and further defined coping as "constantly changing cognitive and behavioral efforts to manage specific external and/ or internal demands that are appraised as taxing or exceeding the resources of the person" (Lazarus & Folkman, 1984).There are many distinct ways to cope, and many different ways to assess coping (Compas et al., 2001; Folkman & Moskowitz, 2004; Skinner et al., 2003). The best known distinction, made very early in the analysis of coping, is between problem-focused coping aimed at doing something about the stressor itself to blunt its impact and emotion-focused coping aimed at soothing distress (Lazarus & Folkman, 1984). Another particularly important distinction is between engagement or approach coping aimed at dealing with the stressor or emotions stemming from it and disengagement or avoidance coping, aimed at escaping the stressor or emotions stemming from it (Roth & Cohen, 1986; Skinner et al., 2003).

The Present Study

A lot of research has been done on mindfulness. But very little has been done to explore specifically the role of mindfulness in relation to different variables like self-esteem, coping strategies and stress. It is a serious limitation in view of the mindfulness construct. Many studies to date have demonstrated the benefits of mindfulness-based treatments for a range of clinical disorders (Kabat- Zinn, 1982 ; Kristeller& Hallett, 1999;Marlatt, 2002; Roemer &Orsillo, 2002; Segal et al., 2002). However, fewer studies have been conducted with community populations; the benefits of this are, therefore, less known.Furthermore, as a variable mindfulness has not been studied extensively in the age group of adolescents. The current study seeks to know that to what extent as a variable mindfulness prevails among adolescents. Finally, gender differences in mindfulness have been neglected or

investigated insufficiently by the previous researches. For examining mindfulness, researcher cannot afford to neglect gender. More important, the majority of the work in mindfulness and related areas have been done in the West with adult population,therefore, there is a need to focus on adolescents in India. To fulfill the purpose of this study, we hypothesized that: (1) Mindfulness is expected to be related positively to self-esteem (2) It was expected that females in comparison to males would score higher on self-esteem (3) Mindfulness is expected to be negatively related to perceived stress and disengagement coping. (4) Mindfulness is expected to be positively related to engagement coping. (5) No significant gender differences are expected on mindfulness. (6) There would be significant gender differences in coping strategies in response to stressful life events.

METHOD

Participants

With the cooperation of the affiliated colleges of Panjab University of Chandigarh (India), 400 college students (age range of 17-20 years) only those individuals who met the criteria, randomly selected. Of the subject pool, 200 were females and 200 were males with a mean age of 18.5 Years.

Procedure andMeasures

Each participant received a questionnaire package that included a letter of information explaining the purpose and objectives of the study, a survey of demographical information, and the mindfulness attention awareness scale (Brown & Ryan, 2003), perceived stress scale (Cohen, Kamarack, &Melmelstein, 1983), and Coping strategies inventory (Tobin, Holroyd, Reynolds, &Wigal, 1989).

General Demographic Questionnaire

A one-page survey of the present study was used to solicit information regarding participants' age, gender, living with parents, urban or rural.

Mindfulness Attention Awareness Scale (Brown & Ryan, 2003)

The MAAS is a 15-item, 6-point Likert scale (1 = almost always to 6 = almost never) designed to assess participants' frequency of mindfulness over time, specifically the presence or absence of attention to and awareness of what is happening in the present moment (Brown & Ryan, 2003). Participants' responses on each item are summed to create a total score. Sample items include “I rush through activities without being really attentive to them” and “I find myself doing things without paying much attention.” A high score indicates a high degree of mindfulness. The MAAS has been demonstrated to be a reliable and valid measurement in assessing mindfulness, Cronbach alphas for the MAAS range from .80 to .87 across samples (Brown & Ryan, 2003).

Self-esteem Scale (Rosenberg, 1965)

The Self esteem Scale is a widely used scale to assess globalself-esteem (e.g., "I feel that I have a number of good qualities", "I takea positive attitude towards myself"). It is a 10-item scale thatmeasures global self-worth by measuring both positive and negativefeelings about the self. The scale is an attempt to achieve a one dimensionalmeasure of global self-esteem. It was designed torepresent a continuum of self-worth, with statements that areendorsed by individuals with low self-esteem to statements that areendorsed only by persons with high self-esteem.All items are answered using a 4-point Likert scale formatranging from strongly agree to strongly disagree. The scale generallyhas high reliability: test-retest, correlations are typically in the rangeof .82 to .88, and Cronbach's alpha for various samples is in therangeof .77 to .88 (Rosenberg, 1986).Rosenberg Self-Esteem Scale is a commonly used and well-validatedmeasure of self-esteem (Blascovich&Tomaka, 1991; Robins, Hendin,&Trzesniewski, 2001).

Perceived Stress Scale (Cohen, Kamarack, &Melmelstein, 1983)

The 10-item PSS (Cohen et al., 1983) assesses

participants' current level of stress and the extent to which they find their lives uncontrollable, unpredictable, and overwhelming. Participants indicated how often they felt or thought a particular way in the last month on a Likert-type scale (0 = never, 1 = almost never, 2 = sometimes, 3 = fairly often, 4 = very often). Sample items include "In the last month, how often have you felt that you were unable to control the important things in your life?" and "In the last month, how often have you felt that things were going your way?"The PSS measures perceptions of stressful experiences during the past month (Cohen, Kamarck, &Mermelstein, 1983).

Coping Strategies Inventory (Tobin, Holroyd, Reynolds, &Wigal, 1989)

The Coping Strategies Inventory—Short Form is a 32-item, 5-point Likert scale ranging from 0 (not at all) to 4 (very much) that measures coping strategies. Higher scores reflect greater use of a particular coping strategy. The CSI short formconsists of 32 items with eight primary subscales (problem solving, cognitive restructuring, express emotions, social contact, problem avoidance, wishful thinking, self-criticism, and social withdrawal); four secondary subscales (problem engagement, problem disengagement, emotion engagement, and emotion disengagement); and two tertiary subscale items (engagement and disengagement).The CSI measures the hierarchical structure of coping via two higher order factors (engagement and disengagement) that subsume four secondary coping factors and eight primary coping factors. The primary coping factors in the engagement categories are problem solving, cognitive restructuring, social support, and express emotions, and the primary coping factors in the disengagement categories are problem avoidance, wishful thinking, social withdrawal, and self-criticism. For the purposes of this study, we used only the tertiary factors: engagement coping (CSI Engagement) and disengagement coping (CSI Disengagement). Examples of CSI items include "I work on solving the problems in the situation" (engagement coping) and "I wish that the situation will go away or somehow be over with" (disengagement coping). Tobin et al. (1989) provided evidence for the hierarchical factor structure and for the divergent and convergent validity of the CSI. Cronbach's alpha ranges from .70 to .90 for primary, secondary, and tertiary subscales (Tobin, 1995). The purpose of this questionnaire is to find out the kinds of situations that trouble people in their day-to-day lives and how people deal with them.

RESULTS

Scores

The MAAS mean item score for total sample (N=400) was 3.74(SD=3.73), for males (N=200) was 3.72 (SD=0.69) and for females (N=200) was 3.75 (SD=.80).The RSES score for overall sample (N=400) was 17.85 (SD=18.00), for males was 17.39 (SD=4.87) and for females was 18.30 (SD=3.93).The PSS score for overall sample (N=400) was 20.01 (SD=20.00), for males was 20.80 (SD=5.15) and for females was 19.21 (SD=5.88). For coping strategies; mean score for males engagement subscale was 49.42 (SD=9.61) and for females engagement was 54.09 (SD=9.55), further, mean score for males disengagement subscale was 44.64 (SD=8.24) and for females disengagement subscale of coping was 46.56 (SD=8.56). Scores on variables were separated by gender to identify possible difference in mindfulness, self-esteem, perceived stress, and coping strategies (Table 1).

Table 1: Means, S.Ds and t-ratio on Mindfulness and other Psychological variables for Total Sample (N=400) Males (N=200), and Females (N=200)

Variables	Mean			SD			t-ratio	p-value
	Total	Males	Females	Total	Males	Females		
Mindfulness	3.74	3.72	3.75	3.73	.69	.80	.505	.614
Self esteem	17.85	17.39	18.30	18.00	4.87	3.93	2.04*	.041*
Perceived Stress	20.01	20.80	19.21	20.00	5.15	5.88	2.85**	.004**
Engagement	51.75	49.42	54.09	52.00	9.61	9.55	4.87**	.001**
Disengagement	45.60	44.64	46.56	46.00	8.24	8.56	2.27*	.023*

* t-ratiossignificant at .05 Level= 1.96
* * t-ratiossignificant at .01 Level= 2.58

Correlationsamong mindfulness, self-esteem, perceived stress and coping strategies (engagement and disengagement) are presented in table 2.

Of note is the significant positive correlation found between mindfulness and self-esteem (r=.892, at p ‘‘0.01) and engagement (r= .315, at p ‘‘0.01), showing support that individuals who are more mindful will use more engagement coping strategies (e.g. problem focused engagement and emotion focused engagement), and high dispositional mindfulness is associated with increased self-esteem.Results revealed significant negative correlation between mindfulness and perceived stress (r= -.898, at p ‘‘0.01) and similar trend was found for the significant negative correlation between mindfulness and disengagement (r=-.338, at p ‘‘0.01), showing support that individuals who are less mindful will use more disengagement coping strategies (e.g. problem focused disengagement and emotion focused disengagement) and vice versa, individuals high on mindfulness will use more engagement coping strategies.

Table 2: Inter-Correlation Matrix for Hypotheses Psychological variables Among the Total Sample (N=400)

S.No.	Variables	1	2	3	4	5
1	Mindfulness	1	.892**	-.898**	.315**	-.338**
2	Self esteem		1	-.972**	.346**	-.203**
3	Perceived Stress			1	-.357**	.226**
4	Engagement				1	-.020
5	Disengagement					1

*.Correlationissignificantatthe0.05level(2tailed).
**.Correlationissignificantatthe0.01level(2tailed).

Gender Differences

Findings of this study revealed that, there was no significant gender difference on mindfulness, similar to the results reported in MacKillop& Anderson (2007) study, indicated that, no gender differences in MAAS performance were evident.According to our resultsthere was a significant gender difference on self-esteem ($t=2.04$, $P<0.05$), and interestingly females scored higher than males on self-esteem, similar to the results showed in a recent study within a sample of North India (Bhardwaj & Agrawal, 2013),and also there was a significant gender difference on engagement($t=4.87$, $P<0.01$) and disengagement ($t=2.27$, $P<0.05$) subscales of coping strategies between males and females. In other words females scored higher on coping strategies than males. Same results suggest significant gender differences on perceived stress ($t=2.85$,$P<0.01$), overall males scored higher in perceived stress.Here, it is imperative to emphasize that previous studies failed to take cognizance of gender for the purpose of analysis. Although the current study also failed to reveal gender differences in global measure of mindfulness, there was clear evidence of gender differences in the potent predictors of mindfulness.

Regression

Current study found evidence to support the important role of mindfulness in relation to self-esteem, perceived stress and coping strategies using multiple stepwise regression. We completed regression analyses in order to ascertain whether knowledge of level of self-esteem, perceived stress and particular styles of coping, can predict level of mindfulness. Findings revealed that self-esteem, disengagement subscale of coping strategies and perceived stress (PSS), are highly predicted by mindfulness (MAAS) almost 87%, 82% and 80% respectively.

Discussion

There are only a few studies related to mindfulness, self-esteem, perceived stress and coping strategies in adolescents.The statistical analyses presented here revealed significant positive relationship between mindfulness and self- esteem and s ignificant negative relationships between mindfulness and perceived stress in both males and females.

The results of this study, thus show support for the hypotheses (I & III) that mindfulness will be positively related to self-esteem and negatively related to perceived stress, in consistent with previous research that indicated significant negative relationship between mindfulness and perceived stress (Baer et al., 2006; Palmer & Rodger, 2009; Prakash, Hussain, &Schirda, 2015), and positive association of self-esteem and dispositional mindfulness(Randal, Pratt, &Bucci, 2015; Rasmussen & Pidgeon, 2011; Thompson & Waltz, 2008).

Male adolescents who were high on self-esteem also had high mindfulness, and female adolescents who were high on perceived stress had low score on mindfulness. There is a common core between mindfulness and self-esteem. An accepting, allowing and non-judgmental stance might be the reason for association between mindfulness and self-esteem and also increased awareness and describing through mindfulness may encourage people to maintain attention on present experiences, making them less likely to experience negative beliefs or critical thoughts, further enhancing self-esteem. Many of the specific behaviors typical of males and females vary greatly from society to society. Adolescence involves dramatic changes in physical function and appearance, in social roles, and in interpersonal relationships; cognition and emotions also undergo changes,as such the perception of dramatic change in sex-roles of males might be responsible for higher perceived stress. In the same vein, studies (T Flaherty, 2011) suggest that, the way an individual responds is shaped by social and cultural forces, in addition to his/her own resources.This assertion gains ground from the fact that male adolescents in comparison to female adolescents of the current

study scored low on self-esteem, in accordance with our hypothesis (II). Similar results within a sample of North India (Bhardwaj & Agrawal, 2013), showed that, the general self-esteem of females was higher than males.Moreover, higher mindfulness makes an individual less engrossed by negative feelings and thoughts that represent low self-esteem (Pepping et al., 2013).Here, it is imperative to emphasize that mindfulness is associated with self-esteem, and self-esteem is associated with well-being. Self-esteem and mindfulness often facilitated an integral aspect of one's coping skills.Generally, females express their emotions through many different modalities: facial expression, verbal expression, and physiological response, and may be more likely than males to cope with stress using emotion-focused coping strategies. Likewise, males are more sensitive to internal cues and females are more sensitive to external cues. These assertions account for higher score obtained on perceived stress by male adolescents in the current study.Given the findings that participants with a high level of mindfulness scored significantly higher on engagement (subscale of coping strategies), supporting our hypothesis (IV), which indicates more mindful individuals used more engagement coping strategies, namely; problem focused and emotion focused engagement and less disengagement coping strategies. Overall, females scored higher than males in coping strategies and self-esteem. These findings indicated that mindfulness may increase one's ability to cope with stress and less mindful individuals tend to experience a higher degree of perceived stress, in other words, individuals who are more mindful appear to be less likely to appraise a situation as stressful.These results replicate some findings from previous studies of dispositional mindfulness (Bränström, Duncan, & Moskowitz, 2011; Epel et al., 2009).

Further, our findings showed that, there was a significant gender differences on coping strategies, and no significant gender differences found on mindfulness, congruent with our hypotheses (V & VI),same results had been reported in researches (MacKillop& Anderson, 2007; Weinstein et. al., 2009).

The following plausible reasons can be given for the lack of gender differences on mindfulness: The root problem preventing mental peace is ignorance of the momentary construction of the sense of self and ownership in the mind, and the associated craving and aversion in both males and females. Possibly, male and female adolescents of the current study have not reached the stage of differentiation with respect to the essential features of mindfulness. This is evident from the low mean scores of males and females on mindfulness (Mean: males vs females; 3.75 vs 3.78). Moreover, as suggested in the introduction, such studies related to attachment security may help in more proper understanding of gender differences on mindfulness.

Furthermore, it can be seen from the regression coefficients that self-esteem and perceived stress have emerged to be the most potent predictors for males and females, respectively.Finally, multiple stepwise regression results showed that self-esteem (RSES), perceived stress (PSS) and disengagement coping strategies are highly predicted by Mindfulness (MAAS) almost 87%, 82% and 80% respectively.

To summarize, the present study substantially provides insight into interplay among mindfulness, self-esteem, perceived stress, and coping strategies. These findings high- lighted previously unidentified mechanism to explain the relationship between mindfulness, and other mentioned psychological correlates in college students. Gathering data from a sample of Indian participants provides meaningful evidence for external validity of mindfulness as the predictor of self-esteem, perceived stress and coping strategies. The cultivation of mindfulness can function to help individuals enhance their well-being in the future. It can also work by helping them enhance their appraisals of their own worthiness, effectiveness, and other capabilities such as coping strategies. Findings from this study thus show promise for

mindfulness as a psychological construct for students in nonmedical disciplines who also experience stress, anxiety, and depression at the transitional phase of university, and also are suggestivethat mindfulness is a positive personal resource to cope with difficult life circumstances during adolescence.

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