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Original Research Paper

The Impact of Trait Mindfulness on Perceived Stress among Adults

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ABSTRACT

Stress is a very eminent psychological issue that is enveloping earth with the fast paced life style that people are adopting. Zeidner (1992) put forth that people vary in the way they perceive and react to stressful situations. Lazarus's cognitive appraisal theory proposed that depending on the appraisal of a situation people may perceive a situation as stressful or not. In contrast, Kabat-Zinn (2014) out forth a core concept of mindfulness as paying attention in a particular way; on purpose, in the present moment and non-judgmentally. This study made the premise based on this that increased Mindfulness will lead to declined perception of stress. A correlational design was adopted. A total of 150 participants in the age group of 18-31 years from South India were selected for the study. Participants were required to fill two questionnaires Five facet Mindfulness Questionnaire and Perceived Stress Scale that measures Mindfulness and Stress respectively. Person's correlation and spearman's Correlation was used between find the nature and strength of relationship for normal and not normally distributed data respectively. Results of regression analysis yielded that there is a significant negative impact of mindfulness on perceived stress. Correlational analysis revealed a strong significant negative correlation between act with awareness and describe facets of mindfulness and perceived stress, and a significant weak negative correlation between observe, non-reactivity towards and non-judging of inner experience facets of mindfulness and perceived stress. It can be concluded that mindfulness has negative influence on perceived stress. It is suggested that mindfulness practice that help a person become more aware and confident in describing the experiences will help significantly reduce stress.

Keywords: *Mindfulness; stress; perceived stress; mindfulness-based-stress-reduction*

The world is moving in a face pace with the advent of technology. People are expected to achieve greater things at a younger age; "settled by 30". This induces a large amount of pressure in people especially during the period of their young adulthood. This stress is experienced not only at the work level, when they need to determine their career path but as early as college and school.

In addition to the various academic requirements such as assignments, attendance, workshops, tests and other submissions, students may also have to adjust to their new social

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life as well(Zeidner, 1992). Normative life events such as entering a new job that is usually experienced by young adults are considered as stressors as well. It is however quite well known that not all people react and perceive stress the same way. While some may become severely upset, affecting their work, others thrive under it (Puri, Yadav, & Shekhawat, 2016). While it is popularly known that appraisal of an event leads to the perception that it is stressful, a non-judgmental awareness that mindfulness brings about is becoming an increasingly common approach to deal with stress(Cordon, Brown, & Gibson, 2009).

Perceived Stress

Stress is normal human experience that was first defined by Hans Seyle (1936) as a 'non-specific response of the body to a demand'. The response of our body is generally non-specific in nature. It produces a general increase in bodily functions and mental abilities in response to any type of demand made(Selye, 1973).

Stress was largely believed to be the result of external environmental demands made upon a person. Extensive studies were performed to determine which kind of situations lead to increased levels of stress in individuals. However, since the advent of cognitive appraisal theory by Lazarus and Folkman (1988), there been a shift in the focus of stress, from external environment, to the internal perception of a stressful situation (Folkman & Lazarus, 1988). Individuals differ in the way they perceive stimuli as being stressful. Some may perceive stimuli as more stressful than others (Zeidner, 1992).Depending on how the same normative life event is interpreted psychologically, its affective and bodily consequences can vary. For example while one person might find driving a car as stressful and exhausting, others might find it relaxing.

With this understanding, it would be more appropriate to measure perceived stress in people rather to measure their stress. An individual's stress can be measured as how much stress he or she perceives in their experience. This can be measured through use of instruments such as the Perceived Stress Scale (Cohen, Kamarck, & Mermelstein, 1983).

Impact of stress

Short- term effects. The short term stress response is activated by the sympathetic nervous when it perceives a threatening stimulus. It releases norepinephrine, a neurotransmitter at various organ sites. This stimulates the adrenal cortex to produce adrenaline. Adrenaline in turn increases the heart rate, respiration that results in a high state of arousal popularly known as "adrenaline rush" in the body (Kemeny, 2003). Another pathway is the Hypothalamic-Pituitary-Adrenal gland axis. The activation of this stimulates the production of the stress hormone known as Cortisol. It increases rate of metabolisation of glucose and creates more energy for the body to utilize. Moderate levels of cortisol also increase attention, memory and functioning of the immune system (Kalat, 2009).

Long- term effects. High level of catecholamine is released during stress. In chronic periods, this results in the impairment of functioning in the Prefrontal Cortex. It leads to degeneration of dendrites in the PFC at the same time strengthens connections in the amygdala and basal ganglia (Arnsten, Raskind, Taylor, & Connor, 2015). As a result, the rational part of the brain decreases in functioning while the irrational and emotional side increases its functioning. This could lead to impairment of daily functioning of the individual.

Extremely high levels of stress or low levels of chronic stress are found to impact the quality of life(Mishra & Rath, 2015). In High levels of Cortisol suppress the production of cytokines

in the immune system; these are chemical mediators that regulate other immune cell activities. As a result, the immune system significantly declines in functioning (Kemeny, 2003)

Stress has been found to play a key factor in the development of addiction and in the relapse of addiction. High levels of stress changes eating patterns and enhances consumption of highly appetizing (HP) foods (Sinha & Jastreboff, 2013).

Factors affecting Perception of Stress. Research done by Leboiset. al, in 2016 found out that individuals perceive situations to be stressful if the situation matches the parameters that he or she has categorized being stressful (Lebois, Hertzog, Slavich, Barrett, & Barsalou, 2016). They called the model as the "Situated Perception Model". The research also reported that although a few parameters could be found common, individual differences were found among the sample. They believed that this largely because of differences in the category that each individual has developed to classify a situation as being stressful.

Lazarus's cognitive appraisal theory attempts to find out the features of an emotional situation affect its consequence such as stress or emotions as well(Folkman & Lazarus, 1988). However, their approaches vary. While situated perception model focuses on the categorization of situations that underlie perceived stress, Cognitive appraisal theory focuses on how appraisal impacts the components of an emotional response such and physiology, cognition and behavior. Perception of stressors and personal state of physical health largely determine an individual's response to stress (Flier, Underhill, & McEwen, 1998).

Mindfulness

Mindfulness was conceptualized by Langer (2000) an awareness of the things around an individual with an increase or heightened state. It is essentially a method that brings out the different and unique stimuli - the type or number of stimuli does not matter; as long as it is unique. (Langer & Moldoveanu, 2000).

Mindfulness is generally defined to include focusing one's attention in a nonjudgmental or accepting manner towards the experience occurring in the present moment (Baer, Walsh, & Lykins, 2009). According to Shulman (2010) in Buddhist tradition, 'sati' is a word that approximately translates as memory. However, another meaning for sati is that of consciousness, awareness; or in the perspective of meditation, Mindfulness. It can be reduced to the 'fundamental perception' that is free from the appraisal of feelings and cognitions related to an object(Shulman, 2010).

It is a moment-to-moment awareness of one's present experience in an open and nonjudgmental way. It involves paying attention to one's thoughts and feelings without over identifying with them and without responding to them in an automatic or habitual manner(Senders, Bourdette, Hanes, Yadav, & Shinto, 2014). Mindfulness, according to Kabat-Zinn was proposed to be "Paying attention in a particular way; on purpose, in the present moment and non-judgmentally" (Kabat-Zinn, 2014).

Thus we can say that it separates and distinguishes an individual's emotional response and logical perception of a situation. This will help us react to stress in a more rational manner and thus diminish the adverse effect of stress.

Lack of the presence on awareness can be a survival mechanism that has been passed on to us through evolution. As humans though we may aspire to pay attention to and try to stay aware of everything around us, and inside us, at every moment of the day, we cannot possibly do so. Thus, it is our nature to pay little attention to most things around, more unconsciously that with conscious awareness (Smith, 1968)**.** Hence developing mindfulness could be a difficult task for all of us.

Types of Mindfulness Tang, Holzel, & Posner (2015), proposed two types of mindfulness- State Mindfulness and Trait Mindfulness. State Mindfulness is a temporarily induced state of awareness through various techniques like meditation that changes the corresponding pattern of activity or connectivity in the brain (Tang et al., 2015). Trait Mindfulness, on the other hand, as the name implies, is an innate and in-built level of awareness that is resent in every individual. Proper belief is that personality traits are relatively stable; recent research demonstrates that it can change over time as a result of life experiences or through mindfulness practice.

It seems clear that if we are mindful of how we feel about a given situation, the awareness could help reduce unwanted feelings and thoughts. Mindfulness is, however, present in at least small amount within all individuals. Some people develop through practice.

Conceptual Framework

Folkman and Lazarus's Theory of Cognitive Appraisal proposes that upon encountering a situation two levels of appraisal of the situation takes place. In the primary level of appraisal the individual, its personal relevance to the individual and its level of congruence to their goal. The secondary relevance is based on the individual's understanding of coping options, situational factors as well as future expectations. Accordingly, a situation is appraised as a threat or safe(Lowe & Bennett, 2003).

A core concept of Mindfulness is a receptive state of mind in which attention, informed by a sensitive awareness of what is occurring in the present, and simply observes what is taking place. This is in contrast to the conceptually driven mode of cognitive appraisals, in which events and experiences are filtered through evaluations, memories, and beliefs.

It can be concluded that increased levels of mindfulness will lead to decreased levels of appraisal of a situation as being threatful. Hence a lower level of perceived stress can be observed. Mindfulness is the awareness and acceptance of the surrounding situation as well as the self's bodily sensation. Mindfulness meditation techniques tend to shift the appraisal of a situation (i.e. stressor reactivity) such that it is no longer perceived as a threat. Mindfulness is found to have a strong correlation with low levels of stress(Baer, Carmody, & Hunsinger, 2012).

Statement of the problem

Stress is commonly experienced by college students and can negatively affect their overall health and wellbeing (Baghurst & Kelley, 2014). The transitional nature of college, the pressure to succeed academically, and the adjustment of new social settings are all sources of stress. The interaction and accumulation of these stressors can affect a student's ability to cope (Ross, Niebling, & Heckret, 1999). Due to the increase in demands and expectations, immense pressure is experienced by young adults to accomplish and achieve early in life. As a result of this stress health related issues also have begun to occur in an early age. Thus it is essential to study the levels of stress that young adults experience.

Majority of the recent research focuses on the effects of temporarily induced mindfulness or state mindfulness in individuals. There is no significant amount of literature available in the influences of trait mindfulness, especially in South India.

Rationale and Significance of the study:

The study will provide insight into the amount of stress perceived by young adults. The results of the study will also help understand the relationship between Trait Mindfulness and Perceived Stress; which aspect of mindfulness should be focused upon, in order to reduce the levels of stress which is perceived by young adults. It will add it the literature on the amount of research performed on Trait Mindfulness in South India.

Objectives and Research Questions of the current study:

The study is an attempt to find out:

1. Is there relationship between mindfulness and perceived stress among young adults?
2. Which of the dimensions of mindfulness is related most to the reduction of perceived stress levels?
3. If a relationship is present, is there an impact of Mindfulness on Perceived Stress?

REVIEW OF LITERATURE

Literature review was done on articles that were primarily obtained from search in online databases such as Google Scholar, EBSO, JSTOR, Proquest Science, Science Direct and Research Gate. The keywords used were 'Perceived stress', 'Mindfulness', 'Young Adults' and 'Well-being'. The duration between the published articles were selected ranges from 1999 to 2007. Almost 200 articles related to the keywords were found, out of which 18 are reviewed here. The review of literature focuses on the effects of perceived stress, mindfulness, the relationship between perceived stress and mindfulness in the general, clinical population as well as Young Adults.

Effects of Perceived Stress

When stress is perceived by people, it leads to the initiation of the HPA axis which results in the activation of cortisol, the stress hormone. Although the changes induced by Cortisol enhance our capabilities temporarily, chronic effects include decrease in immunity levels leading to increased susceptibility for allergies, infections and auto-immune disorders (Elenkov & Chrousos, 1999). Apart from physical damage, mental health of an individual is also affected as a result of chronic exposure to stress.

Stress also makes an individual more susceptible to other factors that harm our body. Increased levels of stress diminish the individual's ability to resist unhealthy temptations that usually require self-restraint such as smoking, over-eating, drinking and substance abuse (Kaplan, Madden, Mijanovich, & Purcaro, 2013). According to Dhanalakshmi (2015), perception of stress leads to automatic thoughts in an individual that are negative in nature. These thoughts are found to adversely affect the health of people as well (Dhanalakshmi, 2015). Stress levels were found to have the strong negative correlated with mental health. It also mediates the effects of social support upon mental health (Bovier, Chamot, & Pernegerl, 2016)

Effects of Mindfulness on other areas

Cognitive Functions. Mindfulness includes the awareness of the cognitions that occur in our mind at any given point of time. Increased level of mindfulness is shown to improve cognitive functioning according to Lenze et al. (2014). They studied Mindfulness Based

Stress Reduction (MBSR) effects of extending MBSR sessions and the influence of MBSR upon worrying and other decline in cognitive functions that are usually seen in old age in elderly population. Results indicated that it effectively reduced the worry symptoms as well (Lenze et al., 2014).

Health-related Quality of Life. Tomfohr, Pung, Mills, and Edwards (2014) studied the relationship amongst Trait mindfulness, blood pressure and interleukin-6, the two well-known health predictors. A negative correlation between Mindfulness and BP, and Mindfulness and IL-6 was observed (Tomfohr, Pung, Mills, & Edwards, 2014). Thus, when we are aware of or observe well, the physiological and environmental conditions and at the same time is non-judgemental towards it, it could lead to healthier self. His results were contradicted by de Frias and Whyne (2015), who reported that while trait mindfulness was considerably and positively associated to psychological health; it did not seem to have a significant effect upon physical health (de Frias & Whyne, 2015).

Coping with mental and physical pain. Mindfulness is effective in reducing the negative thoughts related to trauma and bringing out the positive aspects, helping for the survivors use positive coping mechanisms. It is also able to reduce their depression and anxiety by increasing their awareness of their internal state and the non-reactivity towards it (Zhang et al., 2017). Mindfulness also led to a greater decline in the levels of anxiety and depression. Mindfulness was found to help deal with not just emotional pain and trauma, but effective in dealing with physical pain as well. George, Wongmek, Kaku, Nmashie, and Robinson-Papp (2017) studied the effects of mindfulness on chronic pain in HIV patients. The results of the study showed that MBSR group had a calmer and supportive environment than the control group. Authors concluded that MBSR was more helpful in alleviating and relieving pain (George et al., 2017).

Relationship between Mindfulness and Perceived Stress

Levels of mindfulness in the various facets improve with home practices of mindfulness according to Carmody, and Baer (2008). They reported that it reduced the levels of perceived stress, psychological and medical symptoms. It also seemed to positively influence the psychological well-being of the individual (Carmody & Baer, 2008).

Cordon, Brown, and Gibson (2009) reported that people with insecure attachment levels had a greater baseline of perceived stress, as expected. They also found that post intervention, both groups showed a significant reduction in the levels of perceived stress after the MBSR, especially for the insecure attachment group that showed a greater amount of change. This is indicative of the fact that Mindfulness has a significant impact in the reduction of stress, particularly for those who have an insecure attachment style(Cordon, Brown, & Gibson, 2009).

While mindfulness and perceived stress is usually measured at the end of any intervention, Baer, Carmody, and Hunsinger (2012) examined the alterations on a weekly in the mindfulness and perceived stress during the 8 week MBSR treatment provided. They reported that changes in mindfulness occurring during 2^{nd}week preceded that of perceived stress which was seen only in the 4^{th} week. The study also concluded that progress in mindfulness might mediate the impact of mindfulness skills training for psychological health (Baer, Carmody, & Hunsinger, 2012). Zainal, Booth, and Huppert (2013) did meta-analyses revealing that there was a large effect size of MBSR on stress, anxiety and depression. This

implies that MBSR is efficacious in decreasing levels of stress, anxiety and depression in individuals with breast cancer(Zainal, Booth, & Huppert, 2013).

People with high levels of trait mindfulness have better psychological factors that foster an improved health quality of life. They have better resilience, a more positive coping style, and lesser levels of stress. People with greater levels of mindfulness were less likely to using maladaptive coping strategies such as disengagement from the world, denial of the problem (Senders et al., 2014)

Haji-Misraeidi, Kazemi-Zahran, and Sadeghi (2016) conducted a study aimed at understanding the relationship amongst metacognitive beliefs, mindfulness and amount of stress perceived in patients with hypertension. The results indicated that there was a higher level of mindfulness and metacognitive beliefs in people with hypertension than the control group. Contradictory to other researched, they found no substantial variances in the scores of the perception stress between the two groups, in spite of the differences in mindfulness. This could be a result of the fact that since the control group consisted of the family members of the patients, the hypertension of the patients had affected the family members(Haji-Mirsaeidi, Kazemi-Zahrani, & Sadeghi, 2016).

Clinical population

Low levels of trait mindfulness is found in in patients with 2 probable diagnoses like PTSD and depression along with substance use disorder than those with only one or no comorbidity with substance abuse (Shorey, Brasfield, Anderson, & Stuart, 2014). The results of the study show that lower levels of trait mindfulness is seen This indicates that low levels of trait mindfulness could act as a predisposing or a maintaining factor for substance abuse disorders. Zeng Ma and Li (2017) studied the mediatory effects of stress that is perceived between mindfulness and suicidal ideation in China. The results showed that older adults with greater levels of mindfulness showed lesser levels of perceived stress and suicidal ideations. Those with greater levels of perceived stress had greater amount of suicidal ideation. Analysis also revealed that perceived stress acts as a mediator between mindfulness and suicidal ideation. This finding implies that a situation is not perceived as stressful if people are more aware and understanding of themselves and their surroundings. As a result of reduced stress, thoughts about ending one's life are also reduced(Zeng, Ma, & Li, 2017).

Mindfulness and Perceived Stress among Adults

Mindfulness programs such as Koru were administered to emerging adults with an age range of 18-31. The results of the study validated the following premise mindfulness levels negatively correlates with perceived stress, sleep problems and positively impacts self-compassion. The research concluded that high levels of mindfulness in emerging adults was an essential factor that if fostered can help promote better psychological well-being in them (Greeson, Juberg, Maytan, James, & Rogers, 2014).

The review of literature indicated that perceived stress has high levels of influence on the physical and mental health of a person. Mindfulness influences various aspects of functioning of cognitive abilities including coping mechanism, health related quality of life, attention. It has especially found to influence perceived stress. This correlation has been found in the clinical population as well. Significant literature was not found on young adults in relationship between perceived stress and mindfulness, especially in the Indian population. This gap in research is attempted to be fulfilled by the researcher.

METHODOLOGY

This chapter of the study explains the methods that were used to find out the relationship between mindfulness and perceived stress among young adults.

Research Design

A Quantitative Research Design is adopted. A correlational design was used to check if there is a relationship between mindfulness and perceived stress. The study used questionnaire method to collect data. Mindfulness and Perceived Stress is measured using the Five Facet Mindfulness Questionnaire and the Perceived Stress Scale respectively.

Sample

- Participants included Young Adults who are 18-30 years of age; Average age of 23.
- Sample size was 150 participants; 46 males and 104 females.
- Sampling method used was convenient sampling in South India. The participants were selected based on the accessibility and proximity of the researcher.
- There were no exclusion or inclusion criteria for the sample; it was selected from the general population.

Operational Definition

Mindfulnessis generally defined to include focusing one's attention in a nonjudgmental or accepting manner towards the experience occurring in the present moment (Baer et al., 2004). Perceived Stress an individual's perceived response to interaction with his or her environment (Cohen et al., 1983)

Data collection method

Data was collected through questionnaires distributed manually and through online Google forms.

Tools Used

- **Demographic Questions.** The following demographic questions were asked to the participants: Name, Age, Sex, Education, Occupation, and Current Location.
- **Perceived Stress Scale (PSS).** Sheldon Cohen (1983) designed the Perceived Stress Scale (PSS). It measures the degree to which an individual perceives a situation as bring stressful. There are 10 questions in the PSS that asks about feelings and thoughts during the last month. It takes around 2 minutes to complete the scale. It includes items like "In the last month, how often have you been able to control irritations in your life?" and "In the last month, how often have you felt that you were unable to control the important things in your life?" The scale was chosen as it is widely used to assess Perceived Stress and has been translated into many languages including Tamil, Malayalam and Urdu. It has been established with a good validity and reliability across various populations as well. Cohen, Kamarck, &Mermelstein (1983) reported Cronbach's α between .84-.86 for the PSS. Test-retest reliability for the PSS was .85. Construct Validity measure in terms of correlation of the PSS to other measures of similar symptoms ranges between .52-.76 (Cohen et al., 1983).
  For each item, Respondents are asked how often they felt a certain way. They are asked to respond on a 5 point Likert scale from 0 (Never) to 4 (Very Often). The score for 6 items are provided by reversing the answers, i.e., a score of 0 for Very Often and 4 for Never. The other 4 are scored normally. The total is then added and the Perceived Stress is obtained.

- **Five Facet Mindfulness Questionnaire (FFMQ).** The Five Facet Mindfulness Questionnaire was constructed by Baer, Smith, Hopkins, Krietemeyer, and Toney in 2006. It is used to measure the level of mindfulness in an individual. The FFMQ is a 39-item self-report measure that was developed by integrating items from the Mindful Attention Awareness Scale (MAAS), Freiburg Mindfulness Inventory (FMI), Kentucky Inventory of Mindfulness Skills (KIMS), Cognitive and Affective Mindfulness Scale (CAMS), and the Southampton Mindfulness Questionnaire (SMQ) (Christopher et. al., 2012). It consists of 5 dimensions namely Observing, Describing, Acting with Awareness, Non-judging of inner experience and Non-reactivity. This scale was chosen over the other scales as it measures Mindfulness across 5 dimensions, especially 'Non-Judging of inner experience' which is expected to have strong relationship with Perceived Stress.

  Observing. It refers to the ability of an individual to be aware of his or her inner thoughts feelings and perceptions as well as the environment. It is measured using questions like "I notice visual elements in art or nature, such as colors, shapes, textures, or patterns of light and shadow".
  Describing. It refers to the capacity of a person to recognize the feelings and thoughts they have, as well as label them. Questions like "When I have a sensation in my body, it's difficult for me to describe it because I can't find the right words" is used to measure it.
  Acting with awareness. It is the individual's ability to stay in the present and be aware. It includes the tendency to ignore or overcome any possible distractions. It is measured through questions like "I get so focused on the goal I want to achieve that I lose touch with what I am doing right now to get there"
  Non-reactivity to inner experiences. It is a person's ability to stay calm and remain objective when they face situations or thoughts they might disturb their emotional stability.Statements like "When I have distressing thoughts or images, I 'step back' and am aware of the thought or image without getting taken over by it"is used to measure this dimension.
  Non-judging of experience. It is the final facet, involves the capacity to view thoughts feelings and respond in a neutral way without giving them a negative or positive value. It is measured through sentences like "I think some of my emotions are bad or inappropriate and I shouldn't feel them"

  The five factors displayed adequate to good internal consistency, with alpha values ranging from 0.75 (Nonreactivity) to 0.91 (Describing). Validity measured in terms of construct was established in a study done by Aguado et al., in 2015. A negative relationship between *acting with awareness* and general distress was reported.
  The participants are expected to respond to the questions on a 5 point Likert scale ranging from Never to Very Often. The scoring assigned is 1 for Never, 2 for Rarely, 3 for Sometimes, 4 for Often and 5 for Very Often. The opposite is true for the reverse items. The score for each subscale is calculated by adding the individual scores obtained in each of the items under the subscale. The total score is obtained by computing the sum of the subscales or all 39 items.

Process

The study was conducted during June 2017- February 2018 in India. The research can be divided into 2 phases.

Phase 1. The nature and purpose of the study was explained to the participants and their consent verbally and written was obtained.
Phase 2. Participants were asked to fill out their demographic details, following which the FFMQ and then the PSS was given to them to be filled. After data has been collected, the participants will be thanked for their participation.
The information that has been collected was stored in a password protected laptop for further analysis.

Data Analysis
Shapiro-Wilk Test of Normalitywas performed to check normality of data.
Pearson's Correlation of Coefficient was used to check the correlation between the variables, if data is normally distributed. Spearman's Coefficient of Correlation was used if data is not normally distributed. Regression Analysis was then performed to check the predictive ability of the Independent variable (Mindfulness) on the Dependent variable (Perceived Stress). The following hypotheses were tested:

H_1: There is a significant negative correlation between Mindfulness and Perceived Stress
H_2: There is a significant negative correlation between 'Observing' dimension of Mindfulness and Perceived Stress
H_3: There is a significant negative correlation between 'Describing' dimension of Mindfulness and Perceived Stress
H_4: There is a significant negative correlation between 'Acting with Awareness' dimension of Mindfulness and Perceived Stress
H_5: There is a significant negative correlation between 'Non-judging of inner experience' dimension of Mindfulness and Perceived Stress
H_6: There is a significant negative correlation between 'Non-reactivity' dimension of Mindfulness and Perceived Stress
H_7: There is a significant impact of 'Mindfulness' on 'Perceived Stress'

Ethical considerations
Ethical Procedure. The study followed the APA format of ethical consideration.
Risks Involved. The participants were informed of the possible risk of emotional disturbances during or post the participation in the study.
Consent form. The participants were given a consent form which will include the details about the study and the author's contact information before participating in the research. A copy of the consent form was sent to the participants via e-mail.
Sharing of results. The results of the study will be shared with the participants upon request.
Harming. No participant or animal were harmed during this study.

RESULTS AND DISCUSSION

This chapter contains the important tables and significant results that were obtained after the analysis of the data. Following this, there is a discussion that attempts to explain and justify the results that have been obtained.

Table 1 Descriptive Statistics of Dependent Variable (PSS) and Independent Variables

	Mean	SD	Minimum	Maximum
Perceived Stress Scale (PSS)	29.99	5.726	16	48
Five Facet Mindfulness Questionnaire (FFMQ)	124.93	18.909	68	171

	Mean	SD	Minimum	Maximum
Observe	26.71	5.816	10	40
Describe	26.46	6.429	10	40
Acting with Awareness (AWA)	26.34	6.744	9	40
Non-reactivity to inner experiences (NR)	23.75	7.713	8	40
Non-judging of experience (NJ)	21.67	4.728	11	35

In table 1, the descriptive statistics of the variables that were analyzed. The mean of Perceived Stress Scale is 29.99 out of the maximum possible score of 50. This indicates that the sample population chosen had a moderately high level of perceived stress on an average. The mean score of Mindfulness is also above average in the population with the score of 124.93 out of a maximum of 195. Among the dimensions, the observe dimension has the highest mean of 26.71, and Non Judging of inner experience has the least mean of 21.67.

Table 2 Normality test of the variables that were correlated

	Shapiro-Wilk		
	Statistic	Df	Sig.
FFMQ	.985	150	.100*
Observe	.983	150	.069*
Describe	.980	150	.030
AWA	.985	150	.114*
NJ	.983	150	.058*
NR	.985	150	.108*
PSS	.992	150	.530*

**p>0.05*

From table 2 the normal distributions of the variables can be seen. The test used was Shapiro-Wilk test of normality. The Perceived Stress has a W of 0.992 and p>0.05 which implies that perceives stress in normally distributed. The total mindfulness has W of 0.985 and p>0.05 which indicates a normal distribution. Thus Pearson's coefficient of correlation was used to analyze the relationship between perceived stress and mindfulness.

Table 3 Descriptive Statistics and Pearson coefficient of Correlation between Perceived Stress and Mindfulness

	Mean	SD	*W*	r
PSS	29.99	5.726	.992	-.572**
FFMQ	124.93	18.909	.985	

***. Correlation is significant at the 0.01 level (1-tailed).*

From table 3, it is evident that there is a negative correlation of .572 between Mindfulness and Perceived stress, which is a strong relationship. The correlation was also significant at confidence level of 99%. Hence the one tailed alternate hypothesis (H_1) that "There is a significant negative relationship between *Mindfulness* and *Perceived Stress"* is accepted.

From table two it can be seen that the observe dimension of mindfulness was normally distributed (W=0.983 and p>0.05). As result of that, Pearson's coefficient of correlation was used to calculate the relationship between perceived stress and observe dimension of mindfulness.

Table 4 Descriptive Statistics and Pearson coefficient of Correlation between Perceived Stress and Observe dimension of Mindfulness

	Mean	**SD**	***W***	**r**
PSS	29.99	5.726	.992	-.197**
Observe	26.71	5.816	.983	

***. Correlation is significant at the 0.01 level (1-tailed).*

The results of table 4 show an r value of -0.197. Although this indicates a very weak negative correlation, the correlation is significant at p=0.01 level. Therefore the one tailed alternate hypothesis (H_2) that "There is a significant negative relationship between *'Observing'* dimension of Mindfulness and *Perceived Stress*" is accepted.

From table 2 it is noted that Describe facet of mindfulness with a W of 0.980 is not normally distributed as p<0.05. Therefore Spearman's coefficient of correlation has been used to determine the nature and strength of the relationship between Perceived stress and Describe facet.

Table 5 Descriptive Statistics and Spearman coefficient of Correlation between Perceived Stress and Describe dimension of Mindfulness

	Mean	**SD**	***W***	**ρ**
PSS	29.99	5.726	.992	-.438**
Describe	26.46	6.429	.980	

***. Correlation is significant at the 0.01 level (1-tailed).*

With a ρ value of -0.438, the Spearman's coefficient of correlation indicated that there is a significant correlation between Describe facet and Perceived stress which moderately strong is in nature. Thus the one tailed alternate hypothesis (H_3) that **"**There is a significant negative relationship between *'Describing'* dimension of Mindfulness and *Perceived Stress*" is accepted.

The W value of Act with Awareness 0.985 can be seen from the table 2. Since the p value is greater than 0.05, the variable is implied to be normally distributed. Pearson's coefficient of correlation was used to infer the relationship between Act with awareness facet of mindfulness and Perceived stress in the sample population.

Table 6 Descriptive Statistics and Pearson coefficient of Correlation between Perceived Stress and Act with awareness dimension of Mindfulness

	Mean	**SD**	***W***	**R**
PSS	29.99	5.726	.992	-.527**
AWA	26.34	6.744	.985	

**. Correlation is significant at the 0.01 level (1-tailed).

As can be seen in table 6, the correlation coefficient of Pearson, (r=0.527) indicates a moderately strong correlation between the two variable, which is also significant at p=0.05

level. Hence the one tailed alternate hypothesis (H_4) that "There is a significant negative relationship between *'Acting with Awareness'* dimension of Mindfulness and *Perceived Stress*" is accepted.

Table 2 shows the normality of variables, from which we can see the Non-reacting to inner experience facet is normally distributed with a W value of .983 and p>0.05. Owing to this, Pearson's coefficient of correlation was calculated for this variable and Perceived stress as well.

Table 7 Descriptive Statistics and Pearson coefficient of Correlation between Perceived Stress and Non r of inner experience dimension of Mindfulness

	Mean	**SD**	***W***	**R**
PSS	29.99	5.726	.992	-.205**
NR	23.75	7.713	.983	

***. Correlation is significant at the 0.01 level (1-tailed).*

From table 7, we can understand that the relationship (r= -0.205) between Non-reactivity to inner experience and perceived Stress is weak as well as negative in nature. The relationship however is found to be significant at a confidence interval of 99%. Hence the one tailed alternate hypothesis (H_6) that **"**There is a significant negative relationship between *'Non-reactivity'* dimension of Mindfulness and *Perceived Stress*" is accepted.

Findings in table two imply that the Non-judging of inner experience facet of mindfulness is normally distributed as W=.985 and p>0.05. Therefore Pearson's coefficient of correlation was used to understand the relationship between this facet and Perceived Stress.

Table 8 Descriptive Statistics and Pearson coefficient of Correlation between Perceived Stress and Non-judging of inner experience dimension of Mindfulness

	Mean	**SD**	***W***	**R**
PSS	29.99	5.726	.992	-.280**
NJ	4.728	21.67	.985	

***. Correlation is significant at the 0.01 level (1-tailed).*

Table 8 shows that there exists a significant correlation between Non-judging of inner experience facet of mindfulness and perceived stress. The relationship is negative but weak. Thus we can conclude that the one tailed alternate hypothesis (H_5) stating "There is a significant negative relationship between *'Non-judging of inner experience'* dimension of Mindfulness and *Perceived Stress*" is accepted.

The correlation coefficient values of all the variables together have been compiled in the table below for comparison of the values. It is to be noted that the correlations of Describe facet of mindfulness are Spearman's coefficient, as the variable was not normally distributed while the rest of the correlations are Pearson's coefficient values.

Table 9 Coefficient of correlations between all dependent and independent variables

	Observe(r)	AWA(r)	NJ(r)	NR(r)	Describe(ρ)	PSS(r)
FFMQ	.528**	.782**	.566**	.370**	.694**	-.572**
Observe		.164*	-.155*	.394**	.370**	-.197**
AWA			.505**	.071	.458**	-.527**
NJ				-.110	.156	-.280**
NR					.114	-.205**
Describe						-.438**

**. Correlation is significant at the 0.01 level (1-tailed).
*. Correlation is significant at the 0.05 level (1-tailed).

As can be seen from table 9, the correlation between Mindfulness and Perceived Stress has the highest value of correlation(r=.572). The strength of this relationship is just above the moderate level of correlation. The scatter plot in Figure 1 between mindfulness and perceived stress showed a linear regression and a few of outliers in the distribution. 2 outliers were identified through box plots and removed. Residual plot (figure 2) indicated homogeneity of variance as well. Regression Analyses was then performed using the enter method.

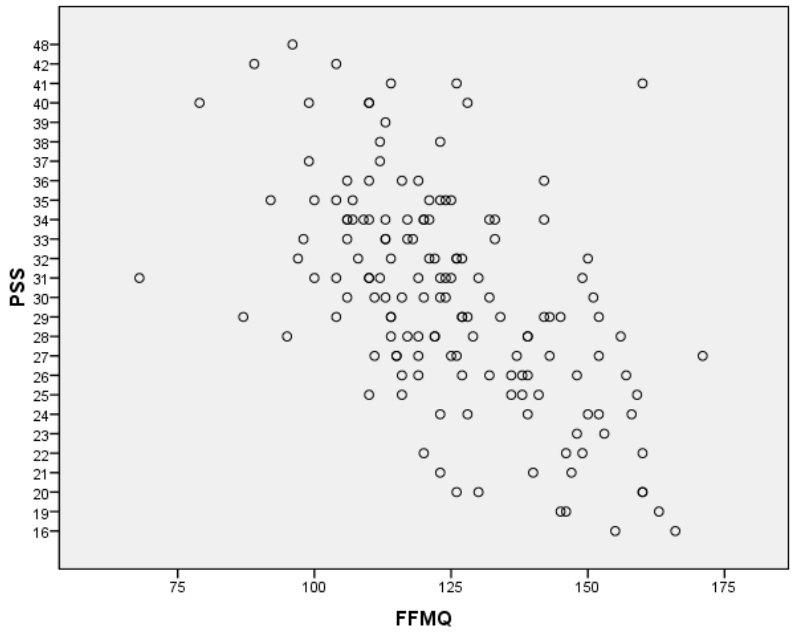

Figure 1.The Scatter plot for Perceived Stress and Mindfulness.

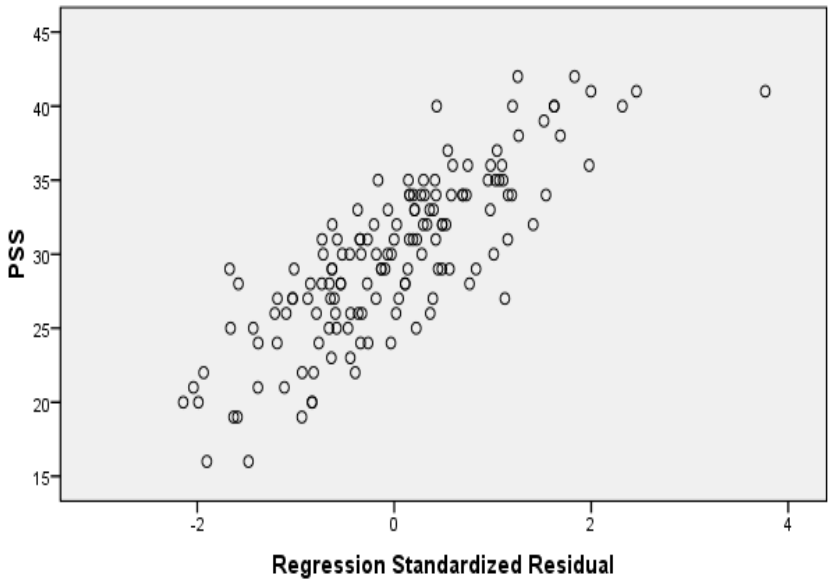

Figure 2.The Residual Plot of Perceived Stress.

Table 10 Results of Regression Analysis and ANOVA test of fit between Mindfulness and Perceived Stress

R	R Square	Adjusted R Square	Std. Error of the Estimate	F value	Significance
.577	.333	.328	4.564	72.777	.000*

**p<0.05*

Table 10 shows that there is a moderately high correlation between Mindfulness and Perceived Stress (r=0.577). The R Square value of .333 indicates that 33.3% of the variation in Perceived Stress could be explained by Mindfulness. The significance of F value indicates that the model is a good fit to the data that is available, and hence is predictive in nature. Therefore the hypothesis (H_7) that "Mindfulness has a negative impact on Perceived Stress" is accepted.

DISCUSSION

This study attempted to find out if Trait mindfulness in a person has a significant impact on the stress they perceive in the environment. The 150 participants were administered questionnaires that measured trait mindfulness and perceived. These were then correlated and regressed. The major findings of the study are that there is a significant impact of Mindfulness on perceived stress in a person.

The means of the different dimensions of mindfulness indicate that people vary in the capacity of various facets of mindfulness. On an average it is seen that Observe has the highest mean suggesting that most people are able to be aware of the various feelings, thoughts and sensations that they experience. The lowest mean is in the non-judging of inner experience facet of mindfulness. This suggests that while people have no difficulty in observing their experience, they have difficulty in not judging it. It is important to note that though Non reactivity to inner experience criteria has one item lesser than the other dimensions, its mean remains higher than non-judging dimension. Therefore we can say people find it relatively easy to not react to their experience than not judge them.

There is a significant negative correlation of moderately high strength between mindfulness and perceived stress. The regression analysis also showed significant results that mindfulness has a predictive value over the decrease of perceived stress. These findings are as expected from and consistent with the review of literature (Brown, & Gibson, 2009; Baer, Carmody, & Hunsinger, 2012; Zainal, Booth, & Huppert, 2013; Senders, Bourdette, Hanes, Yadav, & Shinto, 2014; Bennett & Dorjee, 2015; Cordon, George, Wongmek, Kaku, Nmashie, & Robinson-Papp, 2017; Zeng, Ma, & Li, 2017; Zhang et al., 2017). The table 9 shows that the Mindfulness as whole as a greater influence over the individual effects of each dimension suggesting an overall synergic effect of the five facets combined.

A weak significant negative correlation between Observe dimension and Perceived Stress is seen. This is indicative of that while a person may be able to observe everything around them, it might not help them reduce their perception of stress. On the contrary, observation may lead to excess awareness or hyper vigilance that may force them to become even more stressful. One of the studies by Dandeneau (2007) on social anxieties indicated that increased vigilance for threats lead to an increase in cortisol level, which is the biological marker of stress. Therefore hyper vigilance could lead to a greater perception of threat and stress (Dandeneau, Baldwin, Baccus, Sakellaropoulo, & Pruessner, 2007). Further, anxiety which is positively related to stress, has also been found to positively correlate with observing dimension of mindfulness (Bergin & Pakenham, 2016). The psychological distress is found to reduce with increase in observe dimension only in experienced meditators (Baer et al., 2008). Another reason could that the items that were used to measure observe facet did not focus on the emotional symptoms as in the case of Mindfulness Attention Awareness Scale. Since emotions play as important role with psychological symptoms like worry and stress, the low level of correlation was obtained (Rudkin, Medvedev, & Siegert, 2017).

A moderately significant negative correlation exists between describe aspect of Mindfulness and perceived stress. The result suggests that being able to label identify one's feelings and emotions may make them more confident as they are able to understand their emotions. In other words, emotional intelligence could be higher and may feel more equipped to deal with stressful situations that may bring down their levels of perceived stress. Supporting evidence comes from the study by Bao et al (2015), were emotional intelligence was found to mediate the effect of mindfulness on perceived stress. They reported that people with higher trait mindfulness have better abilities of controlling or regulating their emotions that in turn lead to faster and efficient recovery from psychological distress and consequently lower perceived stress (Bao, Xue, & Kong, 2015).

The relationship between Act with awareness facet of mindfulness has a moderately strong relationship. The facet measures the ability to stay in the present and not get distracted; the ability to stay focused overcome obstacles. This ability will help the individual to stay on the possible threats and easily appraise situations and be ready to face problem without any perception stress. This is seen in the Folkman and Lazarus theory of cognitive appraisal, which puts forth being able to identify the ways to properly look at the threatening stimuli, and awareness of the ability to cope with it will leads to lesser of stress in the person (Folkman & Lazarus, 1988).

There is a weak negative relationship of the Non-reactivity towards inner experience with perceived stress. The final facet non-judging of inner experience also has a weak negative correlation with perceived stress. Both of these results are consistent with the study by Bergin

and Parkenham (2016) which also compared the various facets of mindfulness with perceived stress(Bergin & Pakenham, 2016). Most studies that use FFMQ expect a high correlation between PSS and these two dimensions, but the two have been weakly correlated with perceived stress(Baer et al., 2008; Christopher et al., 2015;Rudkin et al., 2017). The Non-reactivity facet is measured through items like "When I have distressing thoughts or images, I "step back" and am aware of the thought or image without getting taken over by it." and "I watch my feelings without getting lost in them." which could be misunderstood by participants as avoidance. Since avoidance is a maladaptive coping strategy, the perception of stress doesn't necessarily reduce with it. This warrants a test of convergent validity of non-reactivity of FFMQ with avoidance coping with has not been performed in literature explicitly.

The overall descriptive statistics suggest that people find it easier to not react than be non-judging towards their inner experiences, which is contradictory to popular belief that the both are related. Bivariate correlation and regression analyses suggest that mindfulness has a significant negative relationship and impact on the perceived stress of individuals. The results suggest that focus should be providing on making an individual act with awareness and stay focused on the present without distractions. Therefore exercise related to increasing one's focused attention and concentration will be useful. The importance of understanding and labeling a person's emotion is implied through the describe domain. Which can be increased through Psychoeducation to people about the various range of emotions and their expression and as well how to identify and control them will be helpful. The bivariate correlation also revealed a weak correlation of mindfulness with observing, non-reactivity and non-judging of inner experience and a moderately strong correlation with the describing and act with awareness facets, all of the relationship being of negative nature. Acceptance and commitment therapy will help client to be more non-judging of their feelings and learn to be non-reactive as well. This in turn will lead to lower levels of perceived stress in people. These results are consistent with the previous literature that was available and could be explained or justified through them.

SUMMARY AND CONCLUSION

Summary

The world is moving at a fast pace and people, especially young adults are experiencing increased levels of stress. Since stress has a negative effect on the physical and emotional health of a person in the long term, the effects of mindfulness has been explored to see if it could help in stress reduction. The purpose of the study was to find out if there was an impact of Mindfulness on Perceived Stress in young adults and if any facet of mindfulness had greater influence. 150 participants (M=46, F=104) were chosen through convenient sampling. The independent variable is Mindfulness and its facets while the dependent variable is Perceived Stress. A correlational research design was adopted to study and predict their relationship. The participants distributed questionnaires manually or through Google forms. After obtaining their consent, participants' demographic details were collected and they were asked to fill out 2 questionnaires- Five Facet Mindfulness Questionnaire and the Perceived Stress Scale. Both scales had Likert scale and the participants had to mark the option that seemed most favorable to them. The scores of the five separate facets of mindfulness, total score of mindfulness and perceived stress were calculated by adding all the items after reversing the scores of appropriate items. The scores that were obtained from the questionnaires were then correlated and regressed if a moderate- high correlation was obtained.

Conclusion

The results of the study are that there is not only a significant negative correlation of mindfulness upon stress but also a significant impact of Mindfulness on Perceived Stress. The act with awareness facet in particular has the strongest negative and significant relationship closely followed by the describing facet. Another important finding of the present study is that there is a negative correlation of the 3 other facets of mindfulness- Observe, Non reactivity towards inner experience and Non-judging of inner experience. The relationship between the three variables is weak, but significant.

Limitation

The limitations of the present study include a skewed population of more females than males. This could have influence the various correlation coefficients. Although the age range taken was 18-30, the average age was 23. This could have significantly influenced the results that were obtained in the study. Another limitation could be that the research design is correlational rather than causal. Therefore, mediating variables could be present that were not controlled or accounted for in the study. There was a limited amount of literature that looks into and compares the dimensional effects of the five facets of mindfulness on perceived stress. Owing to this, the validity of the research could not be satisfactorily substantiated based on previous literature.

Implication and Scope for Future Research

This research can be used as a preliminary data for further research in South India for studying the effects of mindfulness on perceived stress, especially the influence of the five facets individually. This could help in addressing the facets that are lacking or weak in an individual in order to develop mindfulness instead of teaching the entire concept. Future research could also concentrate on having a more diverse population in terms of age. The gender differences in mindfulness can also be taken into account. The research design used can be causative using a baseline, an intervention and post hoc analysis.

REFERENCE

Arnsten, A. F. T., Raskind, M. A., Taylor, F. B., & Connor, D. F. (2015). The effects of stress exposure on prefrontal cortex: Translating basic research into successful treatments for post-traumatic stress disorder. *Neurobiology of Stress, 1*(1), 89–99. Retrieved from https://doi.org/10.1016/j.ynstr.2014.10.002

Baer, R. A., Carmody, J., & Hunsinger, M. (2012). Weekly Change in Mindfulness and Perceived Stress in a Mindfulness-Based Stress Reduction Program. *Journal of Clinical Psychology, 68(*7), 755–765. https://doi.org/10.1002/jclp.21865

Baer, R. A., Smith, G. T., Lykins, E., Button, D., Sauer, S., Duggan, D., & Williams, J. M. G. (2008). Construct Validity of the Five Facet Mindfulness Questionnaire in Meditating and Nonmeditating Samples. *Assessment, 15*(3), 329–342. Retrieved from https://doi.org/10.1177/1073191107313003

Baer, R. A., Walsh, E., & Lykins, E. L. B. (2009). *Assessment of mindfulness.* Clinical Handbook of Mindfulness, 153–168. https://doi.org/10.1007/978-0-387-09593-6_10

Baghurst, T., & Kelley, B. C. (2014). An Examination of Stress in College Students Over the Course of a Semester. *Health Promotion Practice, 15*(3), 438–447. Retrieved from https://doi.org/10.1177/1524839913510316

Bao, X., Xue, S., & Kong, F. (2015). Dispositional mindfulness and perceived stress : The role of emotional intelligence. *Personality And Individual Differences, 78*(2015), 48–52. Retrieved from https://doi.org/10.1016/j.paid.2015.01.007

Bennett, K., & Dorjee, D. (2015). The Impact of a Mindfulness-Based Stress Reduction Course (MBSR) on Well-Being and Academic Attainment of Sixth-form Students. Mindfulness, July. Retrieved from https://doi.org/10.1007/s12671-015-0430-7

Bergin, A. J., & Pakenham, K. I. (2016). The Stress-Buffering Role of Mindfulness in the Relationship Between Perceived Stress and Psychological Adjustment. *Mindfulness, 7*(4), 928–939. Retrieved from https://doi.org/10.1007/s12671-016-0532-x

Bovier, P. A., Chamot, E., & Pernegerl, T. V. (2016). Perceived Stress , Internal Resources , and Social Support as Determinants of Mental Health among Young Adults Author (s): Patrick A . Bovier , Eric Chamot and Thomas V . Perneger Published by : Springer Stable URL : http://www.jstor.org/stable/4038149, 13(1), 161–170. Retrieved from https://doi.org/10.1007/sl0654-006-9082-l

Carmody, J., & Baer, R. A. (2008). Relationships between mindfulness practice and levels of mindfulness, medical and psychological symptoms and well-being in a mindfulness-based stress reduction program. *Journal of Behavioral Medicine, 31*(1), 23–33. Retrieved from https://doi.org/10.1007/s10865-007-9130-7

Christopher, M. S., Rogers, B., Hunsinger, M., Colgan, D., Reiss, A. L., & Farwood, H. B. (2015). Distinguishing Mindful Process from Outcome in the Prediction of Global Health and Perceived Stress in a Mindfulness-Based Stress Reduction Program. *Mindfulness, 6*(4), 693–699. https://doi.org/10.1007/s12671-014-0305-3

Cohen, S., Kamarck, T., & Mermelstein, R. (1983). A Global Measure of Perceived Stress. *Journal of Health and Social Behavior*. https://doi.org/10.2307/2136404

Cordon, S. L., Brown, K. W., & Gibson, P. R. (2009). The Role of Mindfulness-Based Stress Reduction on Perceived Stress: Preliminary Evidence for the Moderating Role of Attachment Style. *Journal of Cognitive Psychotherapy, 23*(3), 258–269. Retrieved from https://doi.org/10.1891/0889-8391.23.3.258

Dandeneau, S. D., Baldwin, M. W., Baccus, J. R., Sakellaropoulo, M., & Pruessner, J. C. (2007). Cutting Stress Off at the Pass: Reducing Vigilance and Responsiveness to Social Threat by Manipulating Attention. *Journal of Personality and Social Psychology, 93*(4), 651–666. https://doi.org/10.1037/0022-3514.93.4.651

de Frias, C. M., & Whyne, E. (2015). Stress on health-related quality of life in older adults: the protective nature of mindfulness. *Aging & Mental Health, 19*(3), 201–206. Retrieved from https://doi.org/10.1080/13607863.2014.924090

Dhanalakshmi, D. (2015). Perceived stress, cognitive distortion, sense of coherence and health among college students. *Indian Journal of Health and Wellbeing, 6*(3), 287–291. Retrieved from http://search.proquest.com/docview/1679425383?accountid=44394

Elenkov, I. J., & Chrousos, G. P. (1999). Pro / Anti-inflammatory Cytokines and Susceptibility to Disease. *Trends in Endocrinology and Metabolism, 10*(9), 359–368. https://doi.org/10.1016/S1043-2760(99)00188-5

Folkman, S., & Lazarus, R. S. (1988). The relationship between coping and emotion: Implications for theory and research. *Social Science and Medicine, 26*(3), 309–317. Retrieved from https://doi.org/10.1016/0277-9536(88)90395-4

George, M. C., Wongmek, A., Kaku, M., Nmashie, A., & Robinson-Papp, J. (2017). A Mixed-Methods Pilot Study of Mindfulness-Based Stress Reduction for HIV-Associated Chronic Pain. *Behavioral Medicine, 43*(2), 108–119. Retrieved from https://doi.org/10.1080/08964289.2015.1107525

Greeson, J. M., Juberg, M. K., Maytan, M., James, K., & Rogers, H. (2014). A Randomized Controlled Trial of Koru: A Mindfulness Program for College Students and Other Emerging Adults. *Journal of American College Health, 62*(4), 222–233. Retrieved from https://doi.org/10.1080/07448481.2014.887571

Haji-Mirsaeidi, Z., Kazemi-Zahrani, H., & Sadeghi, M. (2016). Comparison of the Mindfulness Skills, Metacognitive Beliefs and Perceived Stress in Hypertension Patients and Control Group. Global *Journal Of Health Science, 9*(1), 58040. Retrieved from https://doi.org/10.5539/gjhs.v9n1p138

Kaplan, S. A., Madden, V. P., Mijanovich, T., & Purcaro, E. (2013). The perception of stress and its impact on health in poor communities. *Journal of Community Health, 38*(1), 142–149. Retrieved from https://doi.org/10.1007/s10900-012-9593-5

Kemeny, M. E. (2003). The Psychobiology of Stress Exposure to Stressful. *Association for Psychological Science* (Vol. 12).

Langer, E. J., & Moldoveanu, M. (2000). The Construct of Mindfulness. *Journal of Social Issues, 56*(1), 1–9.

Lebois, L. A. M., Hertzog, C., Slavich, G. M., Barrett, L. F., & Barsalou, L. W. (2016). Establishing the situated features associated with perceived stress. *Acta Psychologica, 169*, 119–132. Retrieved from https://doi.org/10.1016/j.actpsy.2016.05.012

Lenze, E. J., Hickman, S., Hershey, T., Wendleton, L., Ly, K., Dixon, D., … Wetherell, J. L. (2014). Mindfulness-based stress reduction for older adults with worry symptoms and co-occurring cognitive dysfunction. *International Journal of Geriatric Psychiatry, 29*(10), 991–1000. Retrieved from https://doi.org/10.1002/gps.4086

Lowe, R., & Bennett, P. (2003). Exploring coping reactions to work-stress: Application of an appraisal theory. *Journal of Occupational Health Psychology, 76*(3), 393–400. Retrieved from https://doi.org/10.1348/096317903769647247

Mishra, N., & Rath, P. K. (2015). Impact of intervention on perceived stress of college students. *Indian Journal of Health and Wellbeing*, *6*(9), 859–864.

Puri, P., Yadav, K., & Shekhawat, L. (2016). Stress and life satisfaction among college students. Indian Journal of Positive Psychology, 7(3), 353–355.

Ross, S. E., Niebling, B. C., & Heckret, T. M. (1999). Sources Of Stress Among College Students. *College Student Journal, 33*(2). Retrieved from http://www.freepatentsonline.com/article/College-Student-Journal/62839434.html

Rudkin, E., Medvedev, O. N., & Siegert, R. J. (2017). The Five-Facet Mindfulness Questionnaire : Why the Observing Subscale Does Not Predict Psychological Symptoms. *Mindfulness, 9*(1), 230–242. https://doi.org/10.1007/s12671-017-0766-2

Selye, H. (1973). The Evolution Concept of the Stress. *American Scientist, 61*(6), 692–699. Retrieved from http://www.jstor.org/stable/27844072 .

Senders, A., Bourdette, D., Hanes, D., Yadav, V., & Shinto, L. (2014). Perceived Stress in Multiple Sclerosis. *Journal of Evidence-Based Complementary & Alternative Medicine, 19*(2), 104–111. https://doi.org/10.1177/2156587214523291

Shorey, R. C., Brasfield, H., Anderson, S., & Stuart, G. L. (2014). Differences in Trait Mindfulness Across Mental Health Symptoms Among Adults in Substance Use Treatment. *Substance Use & Misuse, 49*(5), 595–600. Retrieved from https://doi.org/10.3109/10826084.2014.850310

Shulman, E. (2010). Mindful Wisdom : The Sati-paṭṭhāna-sutta on Mindfulness , Memory , and Liberation Author (s): Eviatar Shulman Source : History of Religions , Vol . 49 , No . 4 (May 2010), pp . 393-420 Published by : The University of Chicago Press Stable. *History of Religions, 49*(4), 393–420. Retrieved from http://www.jstor.org/stable/10.1086/649856

Sinha, R., & Jastreboff, A. M. (2013). Stress as a common risk factor for obesity and addiction. *Biological Psychiatry, 73*(9), 827–835. Retrieved from https://doi.org/10.1016/j.biopsych.2013.01.032

Smith, A. R. (1968). Mindfulness And Marital Satisfaction: Direct And Indirect Effects. Colorado State University.

Tang, Y.-Y., Holzel, B. K., & Posner, M. I. (2015). Traits and states in mindfulness meditation. *Nature Reviews Neuroscience, 17*(1), 59–59. Retrieved from https://doi.org/10.1038/nrn.2015.7

Tomfohr, L. M., Pung, M. A., Mills, P. J., & Edwards, K. (2014). Trait mindfulness is associated with blood pressure and interleukin-6: exploring interactions among subscales of the Five Facet Mindfulness Questionnaire to better understand relationships between mindfulness and health. *Journal of Behavioral Medicine, 38*(1), 28–38. https://doi.org/10.1007/s10865-014-9575-4

Zainal, N. Z., Booth, S., & Huppert, F. A. (2013). The efficacy of mindfulness-based stress reduction on mental health of breast cancer patients: A meta-analysis. *Psycho-Oncology, 22*(7), 1457–1465. https://doi.org/10.1002/pon.3171

Zeidner, M. (1992). Sources of Academic Stress : The Case of First Year Jewish and Arab College Students in Israel. *Springer, 24*(1), 25–40. Retrieved from http://www.jstor.org/stable/3447615

Zeng, W., Ma, Z., & Li, H. (2017). Mindfulness and suicidal ideation in Chinese older adults: Perceived stress as mediator. *Social Behavior and Personality: An International Journal, 45*(5), 733–740. https://doi.org/10.2224/sbp.5807

Zhang, J.-Y., Zhou, Y.-Q., Feng, Z.-W., Fan, Y.-N., Zeng, G.-C., & Wei, L.-. (2017). Randomized controlled trial of mindfulness-based stress reduction (MBSR) on posttraumatic growth of Chinese breast cancer survivors. Psychology, Health and Medicine, 8506(May), 0. https://doi.org/10.1080/13548506.2016.1146405

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Conflict of Interest

The authors clearly declared this paper to bear no conflict of interests

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