Depression, Anxiety, and Stress among College Students in Relation to their Mindfulness

Delphi P.P, 1PhD. Research Scholar,

Department of Psychology, Periyar University, Salem, Tamilnadu

1srprimachf@gmail.com

D.V. Nithyanandan2, Assistant Professor,

Department of Psychology, Periyar University, Salem, Tamilnadu

2nittyvel@gmail.com

ABSTRACT

Background: The problems that currently affecting a large portion of college students are high levels of anxiety and stress which leads depression experienced in different situations, particularly higher during the first years of their degree and during the exam periods. Within the past few decades, there has been a surge of interest in the investigation of mindfulness as a factor in reducing the stress and anxiety level of students.

Aims: This research aims to investigate depression, anxiety, and stress among the samples of college students and analyze their relation with their level of mindfulness.

Methods: In a sample of 413 students from three colleges who provided informed consent, the Five Facet Mindfulness Questionnaire and the Depression, Anxiety and Stress Scale were administered to assess mindfulness and psycho pathology respectively. Survey method was used for collecting data.

Results: Mindfulness has significant negative relationship with depression, anxiety and stress. The investigator recommended that the application of mindfulness principles among students to cope up the psycho pathological problems that lead the college students to face their challenges in day to day life more confidently.

Keywords: Depression, Anxiety, Stress, Mindfulness, College Students

I. INTRODUCTION

The prevalence of depression, anxiety, and stress within student community due to high academic demands and learning difficulties is a current challenge in the field of mental health. Depression, anxiety, and stress are the serious threat to the physical and psychological health among adolescents and young adults; and may result in negative social and behavioral consequences, including academic failure (Quiroga et al., 2013), social disorders (Verboom et al., 2014), drug use (Curry et al., 2012), and suicide (Tuisku et al., 2014). The lifetime prevalence of depression, anxiety, and stress among adolescents and young adults around the world is currently estimated to range from 5% to 70% (Sahoo et al, 2010). Depression affects approximately 8 to 20% of adolescents before the age of 18 worldwide (Naicker et al., 2013). Globally the mean prevalence of depressive symptoms among college students is 30.6% (Ibrahim et al., 2013). Stress is one of the psycho-physiological reactions that occurs in response to felt demands. According to North and Pfefferbaum (2013), negative stress is a generator of depreciation, increasing the vulnerability of individuals in childhood and adolescence to suffering personality disorders such as anxiety disorders.
or depressive symptoms. Another psychosocial factor that alters students is anxiety. This is manifested as an exaggerated fear response towards events that are not always identifiable or may be caused by inappropriate situations. Among many triggers of these conditions the academic stress is of paramount importance (Shin & Liberzon, 2010). Saxena (2016) revealed that 2005 onwards anxiety disorders have increased by 14.90% in the general population. Hence, depression, anxiety, and stress in adolescence may have a continuous effect that causes physical and mental disorders and behavioral problems in adulthood (Dunn & Goodyer, 2006).

Mindfulness is one of the best psychological processes and coping ability to adjust maladaptive behaviors, improve awareness and reduce depression, anxiety and stress in unhealthy and healthy populations (Taren, 2013). It is a non-judgmental reaction of the consciousness based on attention and awareness (Brown & Rayan, 2003). Mindfulness helps to improve positive health outcomes (Holzel, 2011) and encounter uncomfortable emotions and feelings (Eifer & Heffiner, 2003). The majority of students enter in the college in their late teens, at a time of life in which many mental difficulties have been shown to commence (Lynch et al., 2011). It contributes instability and effect on academic achievement (Beauchemin, 2008). Past studies indicate that, yoga and mindfulness strategies have covered PTSD, depression (Cramer et al., 2018), anxiety (Duan-Porter, 2016), and stress (Pascoe, Thompson, Ski, 2017; Pascoe & Bauer, 2015). Similarly, mindfulness and meditation interventions assessed mood and general functioning of students (Driscoll, 2017), employee mental health (Janssen, 2018), stress management (Regehr & Glancy, 2013; Chiesa & Serretti, 2009), depression, stress, and wellbeing (Goyal et al., 2014), recurrent depression (Kuyken, 2016), and anxiety (Goyal et al., 2014; Chen et al., 2012). Mindfulness and mindfulness based interventions are able to provide an effective and multidimensional solutions to many of the problems that encountered by college students; simultaneously improving their wellbeing and ability to regulate attention which lead to better academic success (Hall, 1999). Therefore, learning to be mindful is a powerful skill that can help college students to face their day today life stresses more confidently and improve one’s psychological as well as physiological health. It further helps to control their restless mind and to overcome their mental tiredness in order to deal with uncomfortable emotions. The present study focuses to investigate depression, anxiety, and stress among college students and analyzes its relationship with their mindfulness level with respect to demographic factors such as age, gender, educational qualification, order of Birth, type of family, domicile, hours spending in mobile per day, and hours spending in social media

II. METHODOLOGY

Objective: - To predict depression, anxiety, and stress among college students based on their mindfulness in the presence of demographic variables.

Methods: - In this study the investigator considered overall depression, anxiety, and stress (DAS) as dependent variable and mindfulness as an independent variable, whereas age, gender, educational qualification, order of Birth, type of family, domicile, hours spent in mobile, and social media per day were considered as demographic variables.
The investigator has chosen descriptive and quantitative research design to address the objective. The researcher approached 413 college students from Palakkad district in Kerala by using simple random sampling technique and utilized the research instruments such as Five Facets Mindfulness Questionnaire developed and standardized by Bear et al., 2006 having a reliability range of 0.72-0.92 and Depression Anxiety, and Stress Scale constructed and standardized by Henry and Crawford, 2005 having 0.90 reliability. The investigator adopted survey method to collect data and employed descriptive analysis and decision tree method to measure influence of mindfulness on depression, anxiety, and stress among college students.

III. RESULTS AND DISCUSSION

The investigator planned to propose a model to predict the overall level of dependent variables, namely, depression, anxiety, and stress among college students which was influenced by the independent variable mindfulness in the presence of demographic variables such as age, gender, educational qualification, order of Birth, type of family, domicile, and hours spent in mobile and social media per day.

Table 1: Descriptive Analysis of the Sample

<table>
<thead>
<tr>
<th>Demographic Variables</th>
<th>n</th>
<th>(%)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18-22</td>
<td>338</td>
<td>81.8</td>
</tr>
<tr>
<td>23-27</td>
<td>75</td>
<td>18.2</td>
</tr>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>226</td>
<td>54.7</td>
</tr>
<tr>
<td>Female</td>
<td>187</td>
<td>45.3</td>
</tr>
<tr>
<td><strong>Education</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>UG</td>
<td>181</td>
<td>43.8</td>
</tr>
<tr>
<td>PG</td>
<td>50</td>
<td>12.1</td>
</tr>
<tr>
<td>Diploma</td>
<td>182</td>
<td>44.1</td>
</tr>
<tr>
<td><strong>Birth Order</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1&lt;sup&gt;st&lt;/sup&gt;</td>
<td>170</td>
<td>41.2</td>
</tr>
<tr>
<td>2&lt;sup&gt;nd&lt;/sup&gt;</td>
<td>162</td>
<td>39.2</td>
</tr>
<tr>
<td>3&lt;sup&gt;rd&lt;/sup&gt;</td>
<td>38</td>
<td>9.2</td>
</tr>
<tr>
<td>4&lt;sup&gt;th&lt;/sup&gt;</td>
<td>43</td>
<td>10.4</td>
</tr>
<tr>
<td><strong>Type of Family</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Joint</td>
<td>364</td>
<td>88.1</td>
</tr>
<tr>
<td>Nuclear</td>
<td>49</td>
<td>11.9</td>
</tr>
</tbody>
</table>
The above table 1 shows number of respondents based on demographic variables, its frequency and percentage of each category.

Table 2: Levels of Mindfulness among College Students

The overall DAS variable in the form of scale data was considered as an input dependent variable and mindfulness as independent variable. Since, the investigator planned to utilize the independent variable to split the dependent data as well as to interpret it in a more meaningful manner converted the scale data of the independent variable into categorical variable such as low, moderate and high based on the mean and standard deviation value as shown in this table 2.

<table>
<thead>
<tr>
<th>SI.No.</th>
<th>Scores lie between (M=120.30; SD=11.04)</th>
<th>Interpretation (Depression, Anxiety, Stress)</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>40 to 109</td>
<td>Low level</td>
<td>58</td>
<td>14%</td>
</tr>
<tr>
<td>2</td>
<td>110 to 130</td>
<td>Moderate Level</td>
<td>303</td>
<td>73.4%</td>
</tr>
<tr>
<td>3</td>
<td>131 to 195</td>
<td>High Level</td>
<td>52</td>
<td>13%</td>
</tr>
</tbody>
</table>

Mean (M) ± Standard Deviation (SD) formula is used by Immanuel Thomas & Sam Sananda Raj, (1982)

Table 2 displays the levels of mindfulness classified into 3 categories, viz High, Moderate and low which are 14%, 73%, and 13% respectively.
Influence of Mindfulness on Depression, Anxiety, and Stress between respects to Categorical Variables:
Fixing minimum cases considered in Parent Node as 40 and minimum cases considered in Child Node as 20, Growing method as CHAID, Decision Tree analysis was carried out. The obtained result displayed in Figure 1, showed that the maximum depth of the tree is 2 with 6 Nodes and 4 Terminal Nodes. Mindfulness and time spent in mobile are the variables causing significant influence towards the model and it were included in the analysis and it has been shown in the figure. All other demographic variables like age, gender, educational qualification, order of birth, type of family, domicile, and hours spending in social media were excluded from tree since it didn't create any significant difference in Depression, Anxiety, and Stress Value. The present study is in line with Lykins (2009); Schmertz (2008) and Cresswell et al. (2007), that age, race, and educational levels are not significantly relate with the level of mindfulness.

Figure 1: Decision Tree Model

Considering the tree diagram, it has been inferred that Node 0 (parent node) show Predicted Mean Value of 100% (N=413) College students Depression, Anxiety, and Stress M=39.38, (SD=15.56). Predicted Mean Value is 39.38. It showed significant difference based on the mindfulness level among college students (F(2, 410)=15.4, p<0.001) and has been classified into 3 branches namely Node 1 as High, Node 2 as Moderate and Node 3 as Low respectively.
Meanwhile, Node 1 (High) demonstrates that 12.6% \( (n=52) \) college students in the highest level of mindfulness category have a Predicted Mean Value of 29.77 (SD=11.23) for Depression, Anxiety and Stress.

Likewise, Node 2 (Moderate) shown that 73.4% \( (n=303) \) College students who belongs to the Moderate category in mindfulness have a Predicted Mean Value of DAS is 39.88, (SD=15.12). It showed significant difference based on time spent by college students in mobile \( (F(1, 301)=8.42, p<0.01) \) and has been classified into 2 branches namely Node 4 as 1 hour and below 1 hour and Node 5 as Above 1 hour respectively.

Meanwhile, Node 3 (Low) demonstrates that 14% \( (n=58) \) college students in the Low level of mindfulness category have a Predicted Mean Value of 45.38 (SD=17.41) for Depression, Anxiety, and Stress.

Subsequently, Node 4 (Below 1hr; 1hr) be evidence for 26.6% \( (n=110) \) college students who had moderate mindfulness level and spend their time one hour or below in mobile have a Predicted Mean Value of M=36.58 (SD=15.01) for Depression, Anxiety and Stress.

Similarly, Node 5 (Above 1hr) 46.7% \( (n=193) \) college students who had moderate mindfulness level and spend their time above one hour in mobile have a Predicted Mean Value of M=41.76 (SD=14.90) for Depression, Anxiety and Stress.

78% correct classification takes place in this proposed tree model with 22% estimated risk. Thus it can be concluded as college students who had highest mindfulness level have been predicted to have least Depression, Anxiety, and Stress. In converse to that, college students who had least mindfulness level have predicted to have highest Depression, Anxiety and Stress. So, the present study revealed that there is an inverse correlation between depression, anxiety, stress and mindfulness in college students.

**IV. CONCLUSION**

The results obtained in this study are in line with other studies applying mindfulness based interventions on college students. According to Kang et al.’s (2009) interventional study, the experimental group showed a statistically significant decrease in the variables of stress and anxiety. Besides, another study analyzed the responses of 66 medical students, found significant decrease in anxiety and stress in the mindfulness group relative to the control group (Warnecke, Quinn, Ogden, Towle, & Nelson, 2011). These results suggest that the mindfulness training helps college students learn how to manage adverse emotional state especially depression, anxiety, and stress.

**Implications and suggestions:** - Future studies should take into consideration in recruiting a larger sample size to accurately represent the target population. In conjunction, including a more diverse sample will allow for exploring the impact of demographic characteristics on mindfulness and stress of college students.
REFERENCE


