Psychological Well-being of Senior Secondary School Students in Relation to Gender and Academic Achievement: An Empirical Study

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Abstract
India, one of the fast growing and developing nations of the world, is doing well in growth, but it is not up to the mark in some fields. In science and technology, it is doing at par with other developed nations, and remarkable achievements are being touched. But in health or human growth, most of the population is not clear about the importance of health and human potentials. Many portions of the population are not aware of the positive aspects of human beings that can help them to flourish. The study has been done to find the psychological well-being of academic achievement and gender. For the study, a sample of 319 senior secondary school students from different senior secondary schools of Kulgam and Anantnag districts of Kashmir valley were selected. The sample was drawn by using a multi-stage stratified sampling technique. The tools of data collection were Psychological Well-Being Scale (PWBS) developed by Dr. Devendra Singh Sisodia and Ms. Pooja Choudhary (2012) and academic achievement as the marks obtained by senior secondary school students in the board examination conducted by JKBOSE. The data obtained from these students were then analyzed using appropriate statistical techniques with the help of SPSS version 22. The paper also makes some suggestions, keeping the findings of the study in mind to enhance the psychological well-being of our budding human resource.

Keywords: Psychological well-being, Academic achievement, Gender, Senior secondary students

Introduction
The Medical Model of Mental Health got shift decades ago from treatment approach to prevention and maintenance approach; gave importance to positive aspects of the human beings. The mental health sector was so strongly dominated by negative aspects of diseases that the promotion of positive aspects of functioning was nearly neglected in the process of treatment (Maddux, 2002). In the year 2000, Seligman & Csikszentmihaly advised against the risk of the existing medical model; reducing people to their problems and disabilities as a consequence of the illness focused approach. In this regard, they highlighted the basic necessity for a paradigm shift in the field of psychology. This shift resulted in a more holistic framework of mental health, in which the promotion of mental health and positive functioning is an important aspect of the model. In this way, it becomes obvious that the definition of mental health as the absence of illness is too narrow and needs to be broadened (Seligmann & Csikszenmtihaly, 2000). Besides, the World Health Organization renewed its definition of mental health in 2005: Mental health is “A state of well-being in which the individual realizes his or her abilities, can cope with the normal stresses of life, can work productively and fruitfully and can contribute to his or her community.” (WHO, 2005).
As a reaction to the above-mentioned paradigm shift that emphasizes the role of strengths and positive functioning, the field of positive psychology, as a science of Well-being and positive emotions, has emerged (Seligman and Csikszentmihaly, 2000). The concept of well-being is a core element of positive psychology. This makes it important to investigate the role of well-being in mental health promotion.

Well-being as a Multidimensional Concept

As the above-mentioned definition of mental health given by the WHO (2005) has already indicated, well-being is a multidimensional construct consisting of psychological, emotional and social aspects. In the following paragraph, the psychological dimension is outlined in detail as the study focuses on the psychological dimension only.

Psychological well-being

According to carol Ryff, Psychological well-being is made up of several components at 6 dimensions: A person with a high level of psychological well-being struggles for an aim in life (purpose in life), experiences and feels continuously personal development (personal growth) and get the impression of being able to influence his environment (environmental mastery) (Ryff & Singer, 2006). Furthermore, people with high scores on psychological well-being have a positive developmental view against oneself (self-acceptance), experience and feel independence and self-determination regarding their thoughts and actions (autonomy) and have intimate relationships with others, based on mutual trust (positive interpersonal relationships). Ryff & Singer (2008) revealed that psychological well-being is systematically related to a higher social, economic status (SES) in terms of educational attainment.

Positive Psychology at School

Pels (2011) highlights individual personal development as an important function of the school. Students in these schools should develop abilities and competencies in terms of academic performance. On other hand, development of strengths & development of abilities regarding determining the own life, construction of positive relationships with others & coping with misfortune are just as important.

The focus on well-being and personal strengths highlighted positive psychology is in line with the aims of education formulated by Delors (1996): Learning to know, learning to do, learning to be and learning to live together. Research has already found that the opportunities for the promotion of well-being and resilience can heighten satisfaction with overall life and can support creative thinking as well as better learning (Seligman, et al., 2009).

Seligman, et al., (2009), claim that well-being as an important concept in positive psychology, also needs to be seen as a core element (agenda) of education. Several studies have illustrated that positive interventions at school are effective at different dimensions. With this in mind, the present study was conducted with the following objectives:

Objectives

• To study the difference in the psychological well-being of senior secondary students based on the academic achievement levels (groups) in science.
• To study the difference in the psychological well-being of senior secondary students based on gender.
• To study the interaction effect between the academic achievement levels (groups) in science and gender in terms of the psychological well-being of senior secondary students.

Null- Hypotheses

• There is no significant difference in the psychological well-being of senior secondary students based on the academic achievement levels in science.
• There is no significant difference in senior secondary students’ psychological well-being based on gender.
• There is no significant interaction effect between the academic achievement levels (groups) in science and gender in terms of the psychological well-being of senior secondary students.

Methodology

The survey type of study, which falls under the broad descriptive method, was used to get the required analysis data.
Population
All the senior secondary school students of Kashmir valley affiliated to the Jammu and Kashmir Board of School Education (JKBOSE) was the population of the study.

Sample
For the present study, 519 senior secondary school students were selected from the Kulgam and Anantnag districts of Kashmir valley, affiliated to the Jammu and Kashmir Board of School Education (JKBOSE). The sampling technique selected was the Multistage stratified random sampling technique. The criterion of stratification was gender. The different stages for sample selection were selecting districts, educational zones, schools and finally, the students who were stratified based on the nature of gender.

Tools for Data Collection
The tools of data collection were Psychological Well-Being Scale (PWBS) developed by Dr. Devendra Singh Sisodia and Ms. Pooja Choudhary (2012) and academic achievement as the marks obtained by senior secondary school students in the board examination conducted by JKBOSE.

Analysis and Interpretation
1) To Study the Difference in the Psychological well-being of Senior Secondary Students based on the Academic Achievement Levels (groups) in Science
In order to study the difference in the psychological well-being of senior secondary students based on the academic achievement levels in science, the following null hypothesis was formulated:

Null Hypothesis: There is no significant difference in the psychological well-being of senior secondary students based on the academic achievement levels (groups) in science.

Now to test the Null hypothesis 1, One-Way ANOVA was used for the purpose. The description of the results is shown in table 1.

Table 1: Results of One-Way ANOVA for different Academic Achievement levels in science on the Psychological Well-Being of the students

<table>
<thead>
<tr>
<th>Source of variation</th>
<th>Sum of Squares (SS)</th>
<th>df</th>
<th>Mean Square (MS)</th>
<th>F-ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between groups</td>
<td>12872.756</td>
<td>2</td>
<td>6436.378</td>
<td>17.232*</td>
</tr>
<tr>
<td>Within groups</td>
<td>192738.353</td>
<td>516</td>
<td>373.524</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>205611.110</td>
<td>518</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Significant at 0.01 level, P < 0.01

One-Way ANOVA reveals that the psychological well-being of three achievement groups differs significantly (F(2,516)=17.232; p<0.01) from one another, clearly indicating a significant effect of academic achievement levels in science on the psychological well-being of senior secondary school students. Therefore, the null hypothesis 1; which states that there is no significant difference in the psychological well-being of senior secondary students based on the academic achievement (groups) in science, stands rejected. Hence, the investigator can say that there is a significant difference among the three achievement groups concerning the psychological well-being of the students. To examine the specific significant differences among the three groups, Tukey’s Post Hoc test was used to give the results as presented in Table 2.

Table 2: Results of Tukey HSD test for Different Academic Achievement Levels in Science on the Psychological well-being of Senior Secondary Students

<table>
<thead>
<tr>
<th>Group (I)</th>
<th>Group (J)</th>
<th>Mean Difference (I-J)</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>Average</td>
<td>8.491*</td>
<td>.000*</td>
</tr>
<tr>
<td>Low</td>
<td>Low</td>
<td>11.728*</td>
<td>.000*</td>
</tr>
<tr>
<td>Average</td>
<td>Low</td>
<td>3.238</td>
<td>.276</td>
</tr>
</tbody>
</table>

*Significant at 0.01 level, P < 0.01

The results of the Post Hoc test indicates that the achievement in science exhibited a direct and significant (p<0.01) relationship with the psychological well-being of senior secondary school students. The psychological well-being of students with high achievement in science differs significantly from the Psychological well-being of students with...
average achievement in science (=8.491, p<0.01) and also the psychological well-being of students with high achievement in science from the Psychological well-being of students with low achievement in science (=11.728, p<0.01). However, no significant difference was found between the Psychological well-being of students with average achievement in science and the psychological well-being of students with low achievement in science (=3.238, p>0.01).

A comparative account of the psychological well-being of the three groups is presented in Figure 1. (as shown below). From the account of mean values and a graphical representation, it can be said that the psychological well-being of students increases with the increase in academic achievement in science. It is also clear that high achievers have higher psychological well-being than average achievers and low achievers.

Figure 1: Comparison of Psychological Well-Being of Senior Secondary School Students of Different Groups based on the Achievement Levels in Science

2) To study the difference in the psychological well-being of senior secondary students based on gender

3) To study the interaction effect between the academic achievement levels (groups) in science and gender in terms of the psychological well-being of senior secondary students

To study the above-mentioned objectives, the following Null hypotheses were formulated for their empirical testing:

**Null Hypothesis:** There is no significant difference in senior secondary students’ psychological well-being based on gender.

**Null Hypothesis:** There is no significant interaction effect between the academic achievement levels (groups) in science and gender in terms of the psychological well-being of senior secondary students.

To test the Null hypotheses 2 and 3, a two-way analysis of variance was used, as there are two independent variables, namely; the academic achievement in science with three achievement levels (High, Average and Low) and the gender with two levels (male and female) and the dependent variable psychological well-being; therefore 3×2 factorial ANOVA was used and the results are shown in Table 3. Here, the effect of academic achievement levels has not been interpreted as its effect has already been interpreted in objective 1. But for the interaction effect, it has been taken with gender as well.

Table 3: Summary of 2×3 (ANOVA) Factorial Design for the Scores of Psychological Well-being According to Levels of Achievement in Science and Gender

<table>
<thead>
<tr>
<th>Source</th>
<th>N</th>
<th>Mean</th>
<th>Sum of squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Boys</td>
<td>284</td>
<td>195.33</td>
<td>749.495</td>
<td>1</td>
<td>749.495</td>
<td>2.027</td>
<td>.155</td>
</tr>
<tr>
<td>Girls</td>
<td>235</td>
<td>193.06</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Achievement Levels</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>High</td>
<td>183</td>
<td>200.81</td>
<td>13208.345</td>
<td>2</td>
<td>6604.172</td>
<td>17.861</td>
<td>.000*</td>
</tr>
<tr>
<td>Average</td>
<td>173</td>
<td>192.32</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low</td>
<td>163</td>
<td>189.09</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gender × Achievement levels</td>
<td></td>
<td></td>
<td>2392.101</td>
<td>2</td>
<td>1196.051</td>
<td>3.235</td>
<td>.040**</td>
</tr>
<tr>
<td>Error</td>
<td></td>
<td></td>
<td>189686.999</td>
<td>513</td>
<td>369.760</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td>19799270.000</td>
<td>519</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

** Significant at 0.05 level * Significant at 0.01 level

From table 3, it is clear that the F value for gender (F=2.027, P>0.01) is insignificant at 0.01 level, which confirms that the difference between boys and girls in terms of psychological well-being is due to the sampling errors and not the real one. Hence, Null hypothesis 2 stands accepted. From the perusal of Table 3, the interaction F value (F=3.235, P<0.05) among the levels of achievement and
gender is significant at 0.05 level. Therefore, it can be concluded that achievement levels and gender significantly interact with each other to affect the psychological well-being of students. The plot (Figure 2 shown below) shows that it is an interaction model as the lines are not parallel with each other. With the increase of achievement in science, the psychological well-being of females increases with it. However, in males, it decreases up to the average level then increases. So, the psychological well-being changes with gender depend on the level of achievement in science and vice versa. The effect of gender on the psychological well-being depends on the level of achievement in science: at high achievement level, the very small difference in psychological well-being is seen between the males and females; at average achievement level, there is also a very small difference between male and females with female higher in scores. However, at low achievement levels; males have higher psychological well-being scores than females. Therefore, Null Hypothesis 3, which states that there is no significant interaction effect between the academic achievement levels in science and gender in terms of the psychological well-being of senior secondary students, stands rejected.

![Figure 2: Interactional Effect of Gender and Achievement levels in Science on the Psychological Well-Being of students](image)

Findings of the Study

Through this study following main findings has been found:

The variable of Psychological Well-being discriminated between High achievers and Average achievers in science; and high achievers and low achievers in science. However, there was no discrimination found between Average achievers and Low achievers in science on an above variable. An insignificant difference was found in the psychological well-being of male and female senior secondary school students.

A significant interactional effect was found between gender and academic achievement levels in science on the Psychological well-being of senior secondary school students.

References


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