Perceived Stress in Relation to Pedagogy, Practice Teaching, Teaching Aids and Generic Stress among Prospective Teachers

Vandana Punia¹ and Pushpa Devi²

¹Human Resource Development Centre, Guru Jambheshwar University of S &T, Hisar, Haryana, India
²Department of Education, Chaudhary Devi Lal University, Sirsa, Haryana, India

Corresponding author: vbpunia@gmail.com / pushpabishnoi99@gmail.com

ABSTRACT

This study examined the relationship between Perceived Stress and its different dimensions (pedagogy, practice teaching, teaching aids and generic stress) among prospective teachers. It is hypothesized that perspectives of perceived stress among prospective teachers are determined by stress generated teaching pedagogy, practice teaching, teaching aids and generic stress. Perceived stress and its different dimensions revealed a positive linear relationship. A quantitative approach was selected to explore this relationship. A survey was conducted with 300 prospective teachers from colleges of Education in Haryana, in order to find out the sources of stress through random sampling. Research instrument to measure perceived stress is prepared by researcher himself. By applying factor analysis on different statements related to pedagogy, practice teaching, teaching aids and generic stress, validity and reliability is determined with careful manner. Correlation and regression analyses revealed strong positive correlations between perceived stress and its predictors. Results revealed an essential significant effect of gender and marital status on perceived stress & levels of stress among prospective teachers. It is explored that female prospective teachers have reported more perceived stress and level of stress than male prospective teachers. Married prospective teachers have high perceived stress and levels of stress as compared to those from unmarried prospective teachers. Suggestions and directions for future investigation are discussed.

Keywords: Perceived Stress, practice teaching, pedagogy, teaching aids, generic stress and prospective teachers, instructional accommodations

Researches in teacher education reported that majority of prospective teacher experience stress in their teaching practicum. Ngidi & Sibaya (2003) reported that prospective teacher’s anxiety showed relationship with negative outcomes such as high level of anxiety may lead to classroom disruptions and class management related problems. Teaching Practicum is fundamental part of teacher trainee programme and skill integration endeavour where theoretical and practical concerns regarding pedagogy and other teaching skills are imbibed through sequence of teaching learning situations in Simulation and Real teaching sessions. Kiggundu & Nayimuli, (2009) identified teaching practicum as pupil teacher is given the opportunity to apply theoretical knowledge acquired in lecture rooms to classroom teaching before actually getting into the real world of teaching. Azeem, (2011) also referred Teaching Practice as professional experience or field experience in which student-teachers obtain a first-hand experience in teaching and practical use of teaching methods, teaching strategies, teaching principles, teaching techniques and practical training and practice or exercise of different activities of daily school life. Komba & Kira (2013) also contend that the overall purpose of teaching practice is to expose student-teachers to the actual teaching and learning environment. These types of skill based programme are always having complex nature. Due to the complex nature of the profession, student-teachers mostly report various factors of stress during their field experience...
in teaching. Stress may hamper the pupil teacher performance during teaching practicum and affect their perception about teaching profession.

Stress factors and Teacher Education Programme

‘Stress’ has been defined and understood in a variety of ways. It may be a threatening situation which creates negative outcomes with respect to self-doubt, anxiety, fear and even anger. In positive sense, stress may enhance motivation and effort. The present study focused on negative stress. MacDonald (1993) reported that one of the most stressful components in teacher education programme is Teaching Practice. Kiggundu & Nayimuli (2009) Quick & Sieborger (2005) Ngidi & Sibaya (2003) & Mundia (2010) recommended that little work has been done on the causes of stress in student teachers however some emerging interest in the area in some developing countries also such as South Africa, India etc. Following are the main factors of stress among prospective teachers:

- Stress generated due to pedagogy: The term ‘pedagogy’ here is the array of teaching learning strategies that support intellectual engagement, recognize individual differences, connects with real world and support classroom environment. It involves selection and effective organization of learning activities to improve learning outcomes and bring theoretical knowledge into practice.

- Stress generated due to practice teaching: Practice Teaching is a period of practical experience of teaching. During this period, prospective teachers have to conduct classroom lessons and perform the role and responsibilities of a teacher in college (in front of peers) under simulated conditions and in school (in front of real students) under real conditions.

- Stress generated due to teaching aids: Teaching aids are objects or devices used by a teacher to enhance his classroom instruction and making his teaching more effective. Prospective teachers constantly face a lot of difficulties while preparing and dealing with teaching aids in a classroom.

- Stress generated due to generic conditions: It is a combination of anger or irritability, anxiety and depression when individual faces a changed environment or difficult situation. It is a combination of psychological conditions which have an impact on the behaviour as well as teaching of the prospective teacher.

Problem statement

This present study aims to provide insight into the factors of perceived stress among prospective teachers. High levels of teaching-related stress may cause high levels of stress among prospective teachers. Pedagogical concerns are not being included in curriculum at graduate and post graduate level. Prospective teachers are facing the challenges of teaching practicum which is new to them. The present study has emphasized to explore factors affecting pupil teacher in teaching practicum. It is crucial to study the interaction of gender and marital status because we have found very few studies with reference to Haryana. Keeping in mind the different stressors which are being perceived by pupil teacher, an idea has been conceptualized to explore different dimensions of perceived stress among Prospective Teachers of Educational Institutions in Haryana.

More specifically, the present study attempted to find answers to these research questions:

1. To what extent is stress perceived by prospective teachers evoked by practice-teaching related factors?
2. What are the significant factors of perceived stress among prospective teachers in Haryana?
3. To what extent do prospective teachers’ biographical variables such as gender and marital status interact to produce perceived stress?

Literature review

A review of related literature on Perceived Stress among Prospective Teachers yielded very few promising results are as follows:

Mapfumo, Chitsiko & Chireshes (2012) revealed that heavy workload, scarcity of instructional Aids, supervision etc. were the main sources of stress among prospective teachers on Teaching Practice from a Christian-related university and a government-owned teachers’ college in Zimbabwe.
The sample was made up of 77 participants (38 females, 39 males). The main stressors revealed were problems with difficult learners, low allowances, heavy workload, and shortage of teaching and learning aids and, to some extent, supervision-related matters and the effect of the protracted industrial action by serving teachers that overlapped with the Teaching Practice period in the study.

Manikumari (2009) conducted a study on stress of prospective teachers and revealed that average level of stress was found among prospective teachers while practical work and teaching practice reported low level of stress as compared to general stress. Further it was reported that sex and area did not affect the perceived stress of prospective teachers. Similarly, Boadu (2014) reported in their research paper that heavy workload, classroom management and supervision are the main sources of stress among Prospective Teachers. Similarly, Bodula (2011) showed that the prospective teachers experience less stress during training and more stress in the area of achievement test construction.

Capel (1997) in their research reported that major source of stress among pupil teachers is teaching practicum. During teaching practicum, pupil teachers are supervised, assessed and evaluated by their supervising teachers. Kyriacou & Stephens (1999) reported nine major factors of anxiety, in their study on prospective teacher’s worries during practice teaching. They reported that pupil teachers worried about planning, good teaching, heavy workload, little preparatory teaching practice, assessment, dealing with undisciplined students, self punctuality, teaching of sensitive issues and role clarification that not considered as a real teacher.

Suresh & Joshith (2008) conducted a study on Stress of prospective teachers in relation to their Emotional Intelligence. A stress inventory was used to measure the stress of prospective teachers. Sample of 602 prospective teachers were taken. The result showed that male and female prospective teachers differed significantly in their stress. Kwaah & Essilfie (2017) carried out a research to find out the sources of Stress and type of Coping Strategies opted by students of Distance Education studies. A sample of 332 students was selected by random sampling method and information regarding variables collected by self designed questionnaire. Findings revealed that married students experienced high stress than unmarried students. Paker (2011) explored in his investigation that prospective teachers have high level of stress during teaching practice. It is reported that female prospective teachers had high level of stress than their male counterparts during teaching practice.

Objectives

The major objectives of this paper are:

- To explore the predictors of perceived stress among prospective teachers.
- To find out the relationship among perceived stress and its different dimensions (practice teaching, pedagogy, teaching aids and generic stress).
- To find out the effect of gender and marital status on perceived stress of prospective teachers.

Hypotheses

Following hypotheses are framed:

- Pedagogy, practice teaching, teaching aids and generic stress are significant predictors of perceived stress.
- There is no significant relationship among perceived stress and its different dimensions (pedagogy, practice teaching, teaching aids and generic stress).
- There is no significant effect of gender and marital status on perceived stress of prospective teachers in Haryana.

Research Methodology

The present study is essentially a descriptive survey study coupled with correlation approach. In the present study, descriptive survey method of research is employed to explore the perceived stress among prospective teachers. A quantitative approach was adopted to explore the relationship between perceived stress and its dimensions. A survey was conducted with 300 prospective teachers from colleges of Education in Haryana, in order to find out the sources of stress through random sampling. Research instrument to measure perceived stress is prepared by researcher himself. By applying factor analysis on different statements related to practice teaching, pedagogy, teaching...
AIDS and generic stress, validity and reliability is determined with careful manner. The method of principal component analysis with rectangular axis rotation was used. After rotation, statements are left which are directly concerned with perceived stress of prospective teachers.

Analysis and Interpretation

Q. 1: Are pedagogy, practice teaching, teaching aids and generic stress significant predictors of perceived stress?

Hypotheses:

☐ Pedagogy, practice teaching, teaching aids and generic stress are significant predictors of perceived stress.

Interpretation of results

A Pearson product-moment correlation coefficient was computed to assess the relationship between the perceived stress and its different dimensions (pedagogy, practice teaching, teaching aids and generic stress). There was found positive correlation between the perceived stress and its dimensions as generic stress $r = .683$, teaching aids $r = .616$, practice teaching $r = .806$ and pedagogy $r = .576$.

Similarly a positive relationship exists between generic stress and teaching aids $r = .385$. The researcher found a positive relation between generic stress and practice teaching $r = .504$, generic stress and pedagogy $r = .341$. Further researcher found a positive relation between teaching aids and practice teaching $r = .299$, teaching aids and pedagogy $r = .329$ as well as between practice teaching and pedagogy $r = .429$

Result revealed that 85 per cent variation of independent variables is explained that affects perceived stress among prospective teachers. The overall model explained 85 per cent of variance in productivity which was revealed to be statistically significant.

Table 3 is an ANOVA table, indicates the statistical significance of the regression model that was run. Here, $F = 421.5$, $p = .000$ which is highly significant and indicates that, overall, the regression model statistically significantly predicts the outcome variable (i.e., it is a good fit for the data).

An inspection of individual predictor revealed that pedagogy (Beta=$.159$, $p<.01$), practice teaching (Beta=$.501$, $p<.01$), teaching aids (Beta=$.314$, $p<.01$) and generic stress (Beta=$.253$, $p<.01$) are significant predictors to higher extent of perceived stress.

<p>| Table 1: Showing correlations between Perceived Stress and its different dimensions |
|----------------------------------------|--------|--------|--------|--------|--------|</p>
<table>
<thead>
<tr>
<th>Variables</th>
<th>Perceived Stress</th>
<th>Pedagogy</th>
<th>Practice Teaching</th>
<th>Teaching Aids</th>
<th>Generic Stress</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perceived Stress</td>
<td>Correlation</td>
<td>1</td>
<td>.576***</td>
<td>.806***</td>
<td>.616***</td>
</tr>
<tr>
<td>N</td>
<td>300</td>
<td>300</td>
<td>300</td>
<td>300</td>
<td>300</td>
</tr>
<tr>
<td>Pedagogy</td>
<td>Correlation</td>
<td>.576***</td>
<td>1</td>
<td>.429***</td>
<td>.329***</td>
</tr>
<tr>
<td>N</td>
<td>300</td>
<td>300</td>
<td>300</td>
<td>300</td>
<td>300</td>
</tr>
<tr>
<td>Practice Teaching</td>
<td>Correlation</td>
<td>.806***</td>
<td>.429***</td>
<td>1</td>
<td>.299***</td>
</tr>
<tr>
<td>N</td>
<td>300</td>
<td>300</td>
<td>300</td>
<td>300</td>
<td>300</td>
</tr>
<tr>
<td>Teaching Aids</td>
<td>Correlation</td>
<td>.616***</td>
<td>.329***</td>
<td>.299***</td>
<td>1</td>
</tr>
<tr>
<td>N</td>
<td>300</td>
<td>300</td>
<td>300</td>
<td>300</td>
<td>300</td>
</tr>
<tr>
<td>Generic Stress</td>
<td>Correlation</td>
<td>.683***</td>
<td>.341***</td>
<td>.504***</td>
<td>.385***</td>
</tr>
<tr>
<td>N</td>
<td>300</td>
<td>300</td>
<td>300</td>
<td>300</td>
<td>300</td>
</tr>
</tbody>
</table>

**Correlation is significant at the 0.01 level (2-tailed)**

Table 2: Showing Regression Model Summary between Perceived Stress and its different dimensions (or predictors)

<table>
<thead>
<tr>
<th>Model Summary</th>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.932</td>
<td>.851</td>
<td>.849</td>
<td>.907</td>
<td></td>
</tr>
</tbody>
</table>

*Predictors Pedagogy, Practice Teaching, Teaching Aids and Generic Stress.*
Report of Results: A Pearson product-moment correlation coefficient was computed to assess the relationship between the perceived stress and its different dimensions (pedagogy, practice teaching, teaching aids and generic stress). There was found positive correlation between the perceived stress and its dimensions as generic stress \( r = .683 \), teaching aids \( r = .616 \), practice teaching \( r = .806 \), and pedagogy \( r = .576 \) which is statistically very significant and positive. These dimensions were used in standard regression analysis to predict perceived stress of prospective teachers. An inspection of individual predictor revealed that pedagogy (Beta = .159, \( p < .01 \)), practice teaching (Beta = .501, \( p < .01 \)), teaching aids (Beta = .314, \( p < .01 \)) and generic stress (Beta = .253, \( p < .01 \)) are significant predictors to higher extent of perceived stress. The overall model explained 85 percent of variance in productivity which was revealed to be statistically significant and \( F = 421.5, p = .000 \) which is highly significant. From this it can be concluded that, the regression model statistically significantly predicts the outcome variable.

Major Findings: The results exhibited that Perceived Stress has a significant positive relation with pedagogy, practice teaching, teaching aids and generic stress. Further results revealed that pedagogy, practice teaching, teaching aids and generic stress are significant predictors to higher extent of Perceived Stress.

Q. 2: Does gender and marital status effect significantly on perceived stress of prospective teachers in Haryana?

Hypothesis: 3 there is no significant effect of gender and marital status on perceived stress of prospective teachers in Haryana.

Descriptive statistics for effect of gender and marital status on Perceived Stress and Levels of Stress among Prospective Teachers is shown in the table 5.
Table 5 indicates that mean score of Perceived Stress for Male Prospective Teacher is 78 (SD=12) and Female Prospective Teachers is 80 (SD=9). Mean score of Perceived Stress for total Married Prospective Teacher is 79 (SD=10) while mean score of Perceived Stress for total Unmarried Prospective Teachers is 78 (SD=10). Further this table indicates that mean score of Perceived Stress for Married Male Prospective Teacher is 78 (SD=13), mean score of Perceived Stress for Unmarried Male Prospective Teachers is 77 (SD=09). Mean score of Perceived Stress for Married Female Prospective Teacher is 82 (SD=07) and mean score of Perceived Stress for Unmarried Female Prospective Teachers is 79 (SD=10). Level of Stress shown in this table as Mean score of Levels of Stress for total Male Prospective Teachers is 2.36 (SD=.77) while mean score of Levels of Stress for total Female Prospective Teachers is 2.28 (SD=.88). Mean score of Levels of Stress for total Married Prospective Teachers is 2.36 (SD=.77) while mean score of Levels of Stress for total Unmarried Prospective Teachers is 2.20 (SD=.89). Further this table indicates that mean score of Levels of Stress for Married Male Prospective Teacher is 2.35 (SD=.79), mean score of Levels of Stress for Unmarried Male Prospective Teachers is 2.07 (SD=.80) while mean score of Levels of Stress for Married Female Prospective Teacher is 2.40 (SD=.69) and mean score of Perceived Stress for Unmarried Female Prospective Teachers is 2.25 (SD=.91).

**Table 6:** Showing Levene's Test of Equality of Error Variances for effect of gender and marital status on Perceived Stress of Prospective Teachers

<table>
<thead>
<tr>
<th>var</th>
<th>F</th>
<th>df 1</th>
<th>df 2</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perceived Stress</td>
<td>8.903</td>
<td>3</td>
<td>296</td>
<td>.000</td>
</tr>
<tr>
<td>Levels of Stress</td>
<td>7.091</td>
<td>3</td>
<td>296</td>
<td>.000</td>
</tr>
</tbody>
</table>

**Table 7:** Showing Analysis of Variance for effect of gender and marital status on Perceived Stress & Levels of Stress among Prospective Teachers

<table>
<thead>
<tr>
<th>Source</th>
<th>Dependent Variable</th>
<th>Type III Sum of Squares</th>
<th>Df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corrected Model</td>
<td>Perceived Stress</td>
<td>635.171(a)</td>
<td>3</td>
<td>211.724</td>
<td>1.759</td>
<td>.155</td>
</tr>
<tr>
<td></td>
<td>Levels of Stress</td>
<td>3.119(b)</td>
<td>3</td>
<td>1.040</td>
<td>1.462</td>
<td>.225</td>
</tr>
<tr>
<td>Intercept</td>
<td>Perceived Stress</td>
<td>1313601.281</td>
<td>1</td>
<td>1313601.281</td>
<td>10913.461</td>
<td>.000</td>
</tr>
<tr>
<td></td>
<td>Levels of Stress</td>
<td>11071.584</td>
<td>1</td>
<td>11071.584</td>
<td>1507.069</td>
<td>.000</td>
</tr>
<tr>
<td>Gender</td>
<td>Perceived Stress</td>
<td>1451.846</td>
<td>1</td>
<td>1451.846</td>
<td>3.273</td>
<td>.004</td>
</tr>
<tr>
<td></td>
<td>Levels of Stress</td>
<td>2415.751</td>
<td>1</td>
<td>2415.751</td>
<td>3.057</td>
<td>.003</td>
</tr>
<tr>
<td>Marital</td>
<td>Perceived Stress</td>
<td>238.461</td>
<td>1</td>
<td>238.461</td>
<td>1.981</td>
<td>.160</td>
</tr>
<tr>
<td></td>
<td>Levels of Stress</td>
<td>2322.530</td>
<td>1</td>
<td>2322.530</td>
<td>3.225</td>
<td>.000</td>
</tr>
<tr>
<td>gender *</td>
<td>Perceived Stress</td>
<td>57.247</td>
<td>1</td>
<td>57.247</td>
<td>2.347</td>
<td>.491</td>
</tr>
<tr>
<td>marital</td>
<td>Levels of Stress</td>
<td>345.221</td>
<td>1</td>
<td>345.221</td>
<td>3.231</td>
<td>.003</td>
</tr>
<tr>
<td>Error</td>
<td>Perceived Stress</td>
<td>35628.109</td>
<td>296</td>
<td>120.365</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Levels of Stress</td>
<td>210.467</td>
<td>296</td>
<td>.711</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>Perceived Stress</td>
<td>1923762.000</td>
<td>300</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corrected Total</td>
<td>Levels of Stress</td>
<td>1764.000</td>
<td>300</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stress</td>
<td>36263.280</td>
<td>299</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. R Squared = .018 (Adjusted R Squared = .008); b. R Squared = .015 (Adjusted R Squared = .005)
Tests the null hypothesis that the error variance of the dependent variable is equal across groups; a Design: Intercept+gender+marital+gender * marital

Table 6 tests the error variance of the dependent variables (Perceived Stress & Levels of Stress) and these are not equal across groups as $F=8.903, p<.01$ and $F=7.091, p<.01$ that is the value of Levene's test statistics is more than critical value.

Analyses of Variance (ANOVA) was conducted to evaluate the effect of gender and marital status on Perceived Stress & Levels of Stress among Prospective Teachers. Multivariate analysis is a statistical process which is used to analyze simultaneously- multiple independent variables with multiple dependent variables. The above table indicates that there is significant effect of gender on Perceived Stress and Levels of Stress as $F=3.273, p=.004$ and $F=3.057, p=.003$. So the null hypothesis that ‘There is no significant effect of gender on perceived stress of prospective teachers’ is rejected. Further there is significant effect of marital status on level of stress among prospective teachers as $F=2.347, p=.000$. So the null hypothesis that ‘There is no significant effect of marital status on perceived stress of prospective teachers’ is rejected. Similarly this table indicates that there is significant effect of gender & marital status on Levels of Stress as $F=3.231, p=.003$. Hence, the null hypothesis that ‘There is no significant effect of gender and marital status on perceived stress of prospective teachers’ is rejected.

**Major Findings:** This finding is pertaining as here the researcher intended to know the effect of gender and marital status on perceived stress & levels of stress among prospective teachers as these are major personal variables. Results revealed an essential significant effect of gender and marital status on perceived stress & levels of stress among prospective teachers. It is explored that female prospective teachers have reported more perceived stress and level of stress than male prospective teachers. Female prospective teachers reported that they are bounded in their domestic duties as well as in traditional roles. In other words, they must perform their household responsibilities and also work hard for higher studies. Married prospective teachers have high perceived stress and levels of stress as compared to those from unmarried prospective teachers. As after marriage female prospective teachers perceive high level of stress than married male prospective teachers. As after marriage female has to perform many roles and responsibilities they feel more anxiety at academic place. Although married male also have to perform many roles, they don’t find it much difficult because they get help from family members as well from life partner to accomplish academic work timely. Further married male prospective teachers confessed that they have fewer responsibilities at home as compared to married female prospective teachers.

**RESULTS WITH DISCUSSION**

Result revealed that there is significant positive relationship between perceived stress and pedagogy, practice teaching, teaching aids and generic stress. This finding is consistent with other findings in literature. For example, Miller & Fraser (2000) found in their study that student teachers experience stresses from various sources in College. Montgomery, Cameron, MacFarlane, Lester and David (2012) & Gardner (2010) also supported these findings.

Further findings revealed that there is significant effect of gender and marital status on Perceived Stress & Levels of Stress among Prospective Teachers. The finding is consistent with other findings in literature as Suresh & Joshith: 2008, Paker: 2011, Kwaah & Essilfie: 2017 reported in their study that marital status also plays significant role. Married students reported more stress than unmarried students. Hence, there is significant effect of marital status on Stress of students.

**CONCLUSION**

The purpose of the study was to explore perceived stress and its predictors among prospective teachers along with effect of gender and marital status on perceived stress. In terms of theoretical relevance, findings of this study contribute a lot to existing body of knowledge and practically it will be fruitful to education policy makers, educational
administrator, counsellors and teachers of teacher-training institutions to introduce some counselling techniques and instructional accommodations for married females. Knowledge of predictors of stress will be useful for teacher-educators and guidance personnel’s as they can incorporate proper insights for stress free and conducive environment.

REFERENCES


Kwaah, C.Y. and Essilfie, G. 2017. Stress and Coping Strategies among Distance Education Students at the University of Cape Coast, Ghana. *Turkish Online Journal of Distance Education*, 18(3): 120-134.


