

Prospective Teachers 'Coping Strategies with reference to Academic Streams and Learning Styles

Dr. Pushpa Devi

Assistant Professor, School of Education, Sharda University, Greater Noida, U.P. India

E-Mail: pushpa.devi1@sharda.ac.in & pushpabishnoi99@gmail.com

ABSTRACT

The present study attempts to explore how academic streams and learning styles play role in the preferences of coping strategies among prospective teachers. A quantitative approach was selected to explore the relationship. A survey was conducted with 300 prospective teachers (150 of science stream and 150 of humanities stream). A multi-stage random sampling technique was used to collect relevant information. Research instrument to measure coping strategies was developed by the researcher himself and Learning Style Inventory (LSI) by Ritu Dangwal & Sugata Mitra, 1997 was used to measure learning styles of prospective teachers. Statistical techniques i.e. mean, S.D., multivariate ANOVA were applied. Results revealed an essential significant effect of academic streams and learning styles on preference of coping strategies among prospective teachers. It is recommended that teacher training institutions should establish guidance or counseling centers to provide counseling to prospective teachers regarding coping skills and learning styles.

Keywords

Coping strategies, learning styles, academic streams and prospective teachers

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Introduction

A number of researches have been conducted related to coping behaviour and majority of them reported that coping techniques functions in two ways, either deals actively with problem in order to remove the root cause of the problems or deals emotionally with the problem which cause stress (Folkman & Lazarus (1980, 1986); Lazarus and Folkman (1984). Emotion oriented coping strategies target to lessen and control the negative emotions which aroused owing to problematic situations. This type of coping behaviour aids us in feeling better but they don't solve the problematic situations. Shaheen & Alam (2010) pointed out that Problem Focused Coping Strategies pessimistically or contrarily related to mental suffering and avoidance coping absolutely optimistically related to mental suffering. Besides, it was presumed that students of science stream had upper edge in scores on composite negative and its double measurements i.e. stable-temperamental and worldwide particular negative. Further, it was presumed that students of science stream utilized more problem focused coping strategies in contrast with the students belonging to arts streams who utilized more avoidance coping mechanisms. The outcome additionally revealed that arts students encounter more mental pain/suffering in contrast with the science students. Coping strategies are the mechanisms

which any person employs to control, to tolerate or to diminish the situations that generate stress. These mechanisms are both psychological as well as behavioural. Generally people either make active efforts to face stressful situation or they try emotional efforts to face stressful event. Researches divulge that both the stratagems are used to come to terms with stress. Holahan and Moos (1987) recommended that extra distinction that is frequently featured in the adapting writing is betwixt dynamic/active adapting methodologies and avoidant/adapting techniques. Dynamic coping techniques are either behavioural or mental reactions. Another new style of coping namely perception focused strategy is proposed by Thoits (1986). In a positive coping style, the individual tries to remove the stress causing factor through directs action while in emotion focused style, individual reacts emotionally with stress causing factor and they try to alter the situation according to their emotions. Both these systems are utilized together or independently by individuals to manage pressure. In perception centered coping psychological undertakings are turned out to modify the importance of the situation with the objective so it shows up as less alarming. In psychoanalytical theory; Sigmond Freud proposed various feeling or emotion centered coping techniques such as denial, repression, rationalization, projection, reaction formation,

displacement, regression, identification, compensation (substitution), and sublimation etc.

Keeping in mind, the different coping strategies which are being preferred and utilized by any individual, an idea has been conceptualized to explore the effect of different factors such as academic streams and learning styles on preferred coping strategies among Prospective Teachers of Educational Institutions in India.

Rationale

The present paper intends to provide insight into the factors such as academic streams and learning styles that affect the preferences or selection of coping strategies among prospective teachers. Academic streams (science stream and humanities stream) presumed to affect coping behaviour of an organism and similarly learning styles are the patterns through which an individual perceives and process the information may cause change in coping behaviour. Prospective teachers are facing the challenges of teacher training course which is new to them. The present study has emphasized to explore factors affecting coping behaviour of prospective teachers during training period. It is crucial to study the interaction of academic streams and learning styles because we have found very few studies with reference to India.

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

- Do academic streams have any effect on various dimensions of Coping Strategies of Prospective Teachers?
- Do Learning Styles have any effect on various dimensions of Coping Strategies of Prospective Teachers?

Literature review

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

MacDonald (1993) explored stress causing factors and coping mechanisms adopted by prospective teachers. Findings revealed that prospective teachers preferred relaxation, communication, goal setting, and conformity and initiative techniques as coping mechanism. Price (1998) undertook a study to find out the difference in learning styles, anxiety level and coping strategies

among traditional and nontraditional community college students. The data was collected by using general anxiety scale, coping techniques questionnaire and group assessment of logical thinking scales. Findings indicated that concrete learning style was dominated among traditional and nontraditional community students. It was reported that among traditional students and concrete learning styles and negative coping are significantly correlated.

Chan (2002) carried out a study to assess the prospective teachers stress and stress management techniques. A sample of 83 prospective teachers was selected as a sample of study. Findings revealed that prospective teacher's experiences higher level of stress and stress related problems. Further, it was reported that these teachers preferred social support as a stress management technique.

Walton (2002) conducted a study to determine the difference in the coping mechanisms of junior and senior students in nursing and social work programs. The data from nursing and social work students was collected by adopting Cohen's Perceived Stress Scale, Moos Coping Responses Inventory and self designed demographic tool by the investigator. Result indicates that students belonging to nursing stream showed more preference towards approach coping mechanisms whereas, student of social work stream showed more preference towards avoidance coping mechanisms.

Ramya, & Parthasarathy (2009) pointed out in their study that irrespective of academic streams and gender, students used combination of emotion oriented coping strategies and problem centered coping strategies.

Punia & Bhardwaj (2009) undertook a study to explore the learning style preferences among prospective teachers with respect to their academic streams. A sample of 500 prospective teachers ((n=250) and humanities stream (n=250)) was selected randomly for the study. The data was collected by using Learning Style Inventory (LSI) developed by Dangwal and Mitra. This inventory describes four types of learners: imaginative, analytical, precision and dynamic. Findings of the study revealed that imaginative learning style dominates over analytical, precision and dynamic. Dynamic learners were least in number. Further it

was indicated that prospective teachers of science and humanities streams differed significantly with respect to their learning styles.

Vaughn, Hensley, Baker, & Dearman (2010) conducted a study to find out the relationship of learning styles with stress and coping behaviour of college women. A sample of 246 female college students was taken for the study. Participants in the study were assessed on the three variables by completing several self-report instruments measuring learning styles, life stress level, and coping skills. The result showed that there were significant relationships between specific learning styles and stress level and between specific learning styles and coping skills.

Sajan (2015) carried out a study to compare the coping strategies among student teachers with respect to their specialization area i. e. arts and science. Sample of the study included 558 student teachers. Findings revealed that specialization area had significant effect on coping strategies of student teachers.

Amponsah et.al (2020) explored in their research paper that students mainly preferred to use adaptive coping mechanisms than avoidance coping mechanisms. Further it was revealed that learners utilized various methodologies, for example, supplicating or pondering, and self-redirecting activities as adapting techniques.

Schäfer, Pels, & Kleinert (2020) conducted their research to find out the effect of various coping mechanisms on stress level (both psychological as well as physiological stress). Results indicated that positives and dynamic coping prompted a lower mental pressure response contrasted with shifty coping. Further it was uncovered that there was no critical contrast between the coping conditions to respect to the physiological pressure response.

Objectives

The major objectives of this paper are:

- To find out the effect of academic streams on Coping Strategies of Prospective Teachers.
- To find out the effect of Learning Styles on Coping Strategies of Prospective Teachers.

Hypotheses

Following hypotheses are framed:

- There is no significant effect of academic streams on various dimensions of Coping Strategies of Prospective Teachers.
- There is no significant effect of Learning Styles on various dimensions of Coping Strategies of Prospective Teachers.

Research Methodology

In this study, descriptive survey method of research was employed to explore various coping strategies and learning styles among prospective teachers. A quantitative approach was adopted to explore the relationship between various dimensions of coping strategies, learning styles and academic streams.

Sample and sampling techniques

A survey was conducted with 300 prospective teachers (150 prospective teachers of science stream and 150 of humanities stream) from Colleges of Education in India. A multi-stage random sampling technique was used to collect relevant information.

Research instrument

To measure coping strategies was developed by the researcher himself and Learning Style Inventory (LSI) by Ritu Dangwal & Sugata Mitra, 1997 (adaptation of Kolb's LSI, 1976) was used to measure learning styles of prospective teachers. Validity and reliability of coping strategies scale is determined with careful manner by applying factor analysis on different statements related to problem focused coping strategies and emotion focused coping strategies. The method of principal component analysis with rectangular axis rotation was used. After rotation, statements are left which are directly concerned with both the dimensions of coping strategies.

Analysis and interpretation of results

Research Question 1: Do academic streams have any effect on various dimensions of coping strategies of prospective teachers?

Research question 1 examined the effect of academic streams on various dimensions of coping strategies (of prospective teachers. In order to test the effects and relate the survey responses, multivariate technique has been chosen. Multivariate analysis is a statistical process which is used to analyze simultaneously multiple

independent variables (also known as predictors) with multiple dependent variables also known as outcome or criterion.

Hypothesis 1:

- There is no significant effect of academic streams on various dimensions of coping strategies of Prospective Teachers.

Table 1 Descriptive statistic showing effect of academic streams on various dimensions of coping strategies of prospective teachers

Descriptive Statistic

	Academic steams	Mean	SD	N
Problem focused coping strategies	Science	94	11.3	150
	Humanities	89	11.0	150
	Total	92	11.3	300
Emotion focused coping strategies	Science	100	10.6	150
	Humanities	100	9.2	150
	Total	100	9.9	300

Descriptive statistics for effect of academic streams on various dimensions of coping strategies among prospective teachers is shown in the table 1.1. This table indicates that mean score of problem focused coping strategies among prospective teachers of science stream is 94 (SD=11.3) and mean score of problem focused coping strategies for prospective teachers of humanities stream is 89 (SD=11.0). Further this table indicates that mean score of emotion focused coping strategies among prospective teachers of science stream is 100 (SD=10.6) and mean score for same dimension of prospective teachers belonging to humanities stream is 100 (SD=9.2).

Research Question 2: Do learning styles have any effect on various dimensions of coping strategies of prospective teachers?

Research question 2 examined the effect of learning styles on various dimensions of coping strategies of prospective teachers. In order to test the effects and relate the survey responses, multivariate technique has been chosen. Multivariate analysis is a statistical process which is used to analyze simultaneously multiple independent variables (also known as predictors) with multiple dependent variables also known as outcome or criterion.

Hypothesis 2:

- There is no significant effect of learning styles on various dimensions of coping strategies of prospective teachers

Table 2 Descriptive statistic showing effect of learning styles on various dimensions of coping strategies of prospective teachers.

Descriptive Statistic

	Learning styles	Mean	SD	N
Problem focused coping strategies	Imaginative	90	11.0	129
	Analytical	93	11.4	114
	Precision	97	10.4	30
	Dynamic	88	11.6	27
Emotion focused coping strategies	Total	92	11.3	300
	Imaginative	100	10.2	129
	Analytical	100	9.6	114
	Precision	101	11.1	30
	Dynamic	101	8.4	27
	Total	100	9.9	300

Descriptive statistics for effect of learning styles on various dimensions of coping strategies among prospective teachers is shown in the table 1.2. As there are four types of learners found. According to their specific way of perception and processing of information learners are categorized as imaginative learners, analytical learners, precision learners and dynamic learners.

The above table indicates that mean score of problem focused coping strategies among imaginative prospective teachers is 90 (SD=11.0), mean score of problem focused coping strategies for analytical prospective teachers is 93 (SD=11.4), for precision prospective teachers is 97 (SD=10.4) and for dynamic prospective teachers is 88 (SD=11.6)

Further, This table indicates that mean score of emotion focused coping strategies among imaginative prospective teachers is 100 (SD=10.2), mean score of emotion focused coping strategies for analytical prospective teachers is 100 (SD=9.6), mean score of emotion focused coping strategies for precision prospective teachers is 101 (SD=11.1) and mean score of problem focused coping strategies for dynamic prospective teachers is 101 (SD=8.4).

coping strategies				
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Tests the null hypothesis that the error variance of the dependent variable is equal across groups

a) Design: Intercept+starems+learners+starems * learners

The table 1.3 tests the error variance of the dependent variable (problem focused coping strategies) and it is not equal across groups as $F=3.743$, $p<.01$ that is the value of Levene's test statistics is more than critical value. The F value for emotion focused coping strategies is 4.146 respectively.

Table 3 Showing Levene's Test of Equality of Error Variances (a) for effect of academic streams and learning styles on various dimensions of coping strategies of prospective teachers

Levene's Test of Equality of Error Variances (a)

	F	df 1	df 2	Sig.
Problem focused coping strategies	3.743	17	282	.000
Emotion focused	4.146	17	282	.000

Table 4 Showing Analysis of Variance for effect of academic streams and learning styles on various dimensions of coping strategies of Prospective Teachers

Tests of Between-Subjects Effects

Source	Dependent Variable	Type III Sum of Squares	Df	Mean Square	F	Sig.
Corrected Model	PFCS	7778.441(a)	17	457.555	4.165	.000
	EFCS	2856.273(b)	17	168.016	1.776	.031
Intercept	PFCS	811934.453	1	811934.453	7390.245	.000
	EFCS	985622.694	1	985622.694	10421.166	.000
Academic Streams	PFCS	1334.955	1	1334.955	12.151	.001
	EFCS	146.283	1	146.283	1.547	.215
Learning styles	PFCS	2897.348	3	965.783	8.791	.000
	EFCS	54.856	3	18.285	.193	.901
Academic Streams	PFCS	975.538	3	325.179	2.960	.003
	EFCS	58.629	3	19.543	.207	.892
Error	PFCS	30982.129	282	109.866		
	EFCS	26671.257	282	94.579		
Total	PFCS	2582931.000	300			
	EFCS	3055383.000	300			
Corrected Total	PFCS	38760.570	299			
	EFCS	29527.530	299			

a) R Squared = .201 (Adjusted R Squared = .152)

b) R Squared = .097 (Adjusted R Squared = .042)

- PFCS- Problem Focused Coping Strategies
- EFCS- Emotion Focused Coping Strategies

Analyses of variance (ANOVA) were conducted to evaluate the effect of academic streams and learning styles on various dimensions of coping strategies 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 academic streams on problem

focused coping strategies and emotion focused coping strategies among prospective teachers as $F=12.151$, $p=.001$ for PFCS and $F=1.547$, $p=.215$ for EFCS. Here F-ratio for effect of academic streams on problem focused dimension of coping strategies is highly significant. Therefore, the null hypothesis that 'There is no significant effect of academic streams on various dimensions of

coping strategies among prospective teachers' is rejected.

Further, there is highly significant effect learning styles on various dimensions of coping strategies of prospective teachers, $F = 8.791$, $p = .000$ for PFCS and $F = .193$, $p = .901$ for EFCS. Here F-ratio for learning styles on problem focused coping strategies is highly significant. Hence, the null hypothesis that 'There is no significant effect of learning styles on various dimensions of coping strategies among prospective teachers' is rejected.

Major findings

This finding is pertaining to the research question no. 1 & 2 as here the researcher intended to know the effect of academic streams and learning styles on various dimensions of coping strategies among prospective teachers.

Results revealed an essential significant effect of academic streams and learning styles on coping strategies of prospective teachers.

The findings of the study point out that academic stream have significant effect on problem focused coping strategies of prospective teachers among prospective teachers. Prospective teachers of science stream preferred more problems focused coping than prospective teachers of humanities streams. It is a common observation that the students belonging to science stream take advice of teachers and make proper schedule for each task in order to manage difficult situations. By making proper schedule and seeking advice from teachers they try to remove problematic or stressful situation itself rather than to deal emotionally with the impact of stressors. Further it is reported that academic streams have no significant effect on emotion focused dimension of coping strategies. With regard to emotion focused dimension, prospective teachers of both streams showed similarity in dealing with stressor.

Similarly, results indicated that learning styles also has highly significant effect on problem focused coping strategies dimension. Among four types of learners, precision and analytical learners preferred highly problem focused coping than imaginative and dynamic learners. Precision learners are known by their active experimentation and their most noteworthy strength lies in the practical use of thoughts. Subsequently they can focus in on explicit issues.

Additionally, insightful learning style is qualities of essential sciences and arithmetic's and their strength occurs in inductive reasoning. They can construct good theoretical models based on inductive reasoning. Therefore, precision and analytical prospective teachers preferred problem focused coping strategies than imaginative and dynamic learners.

Results with discussion

Findings of present research revealed that academic streams and learning styles have diverse effects on both the dimensions of coping strategies. The obtained result of the present study shows consistency as well as contradictions with the findings of previous studies in literature. For example, Sreeramareddy, Shankar, Binu, Mukhopadhyay, Ray, & Menezes (2007) pointed out that stream affects significantly on coping strategies preferences. They reported that medical students (students having science streams) preferred active coping i.e. problem focused coping such as planning, positive reframing and distraction etc.

Similarly, PM & Sajan (2015) revealed that specialization area or academic streams had significant effect on coping strategies of student teachers. Ramya, & Parthasarathy (2009) pointed out in their study that irrespective of academic streams and gender, students used combination of coping skills. Further, Kumar & Bhukar (2013) reported that academic streams has major role in coping mechanism preferences. Garity, (1997); Price (1998) indicated that there was a significant correlation between learning style and coping techniques. Similarly, Vaughn, Hensley, Baker, & Dearman (2010) contend that there were significant relationships between specific between specific learning styles and coping skills.

Conclusion

The study was intended to explore that how academic streams and learning styles play role in the preferences of coping strategies among prospective teachers. In terms of theoretical relevance, discoveries of this investigation contribute a lot to existing group of information and practically it will be fruitful to education policy makers, educational administrator, counselors and teachers of teacher-training institutions. It can be recommended that teacher

training institutions should establish guidance or counseling centers to provide counseling to prospective teachers regarding coping skills and learning styles. Knowledge of association of coping strategies, academic streams and learning styles will be useful for teacher-educators and guidance personnel's as they can incorporate proper insights for stress free and conducive environment.

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