



COPING STRATEGIES OF UNIVERSITY STUDENTS: A VALIDATION STUDY

SHAISTA IRSHAD, SADIA SALEEM, ZAHID MAHMOOD

Unit of Clinical Psychology GC University, Lahore

ABSTRACT

OBJECTIVE

The current study was an exploratory study aimed to develop an indigenous tool for assessing coping among university students and to identify the experience, expression and manifestation of coping.

PLACE AND DURATION OF STUDY

Study was conducted in public universities of Lahore within the duration of one year from September 2011 to August 2012.

SUBJECTS AND METHODS

This study was carried out in series of four phases. Initially, the phenomenon of coping was explored from 30 university students (15 girls and 15 boys) of BS / BA (Hons) through semi structured interviews that resulted into 72 items. After collecting, arranging and excluding the repetitions a list of 68 items was converted into self report measure and was given to 30 university students for testing the layout. After the minor linguistic modifications a list of 68 items converted into a self report measure named as Coping Scale for University Students (CSUS) and was given to 444 university students (22% Males, 78% Females) along with a demographic Performa and Brief Cope Scale (BCS) for concurrent validity.

RESULTS

The Principal Component Factor Analysis through Varimax rotation yielded a five factors solution of items namely Solution focused coping, Emotional focused coping, Avoidance coping, Seeking help coping and Spirituality coping.

CONCLUSION

The newly developed scale (CSUS) was found to have sound psychometric properties and results were also discussed in terms of cultural and intervention implications.

KEYWORDS

Coping, University, Students, Culture, Gender, Reliability, Validity

INTRODUCTION

Stress is taken into account as an unavoidable phenomenon in modern societies¹ but it is a commonly wrong perception that all the effects of stress are negative, although, many of loss events at early adulthood are painful but in long run these experiences lead towards sense of maturation and personal growth². Coping may perhaps moderate the effects of the stress and resulted in long term positive effects such as increased self knowledge, stronger social bonds, mastery, self esteem³ and as well as wisdom⁴.

Despite these positive effects, some developmental and transitional stages are very crucial in individual life such as childhood to adolescent (school period) and adolescent to adulthood (university period)^{5,6}. As university is considered to be an innovative setting that aimed to provide the students an opportunity to intellectual as well as academic growth, therefore, in this developmental transactional period the individual is expected to move towards more responsible and independent life³. The university life is intellectually and emotionally more damaging for the students as they encounter many physical and psychological difficulties⁷ and due to these changes, stress, standards, pressures and demands of this period they are considered more vulnerable to stress and mental health issues^{8,9,10}.

These all objectives or responsibilities were expected to accomplished by any young person and to deal effectively with all these issues he would employ some healthy coping strategies. The scan of literature revealed that the number of studies regarding ways of coping with stress has risen increasingly in recent years¹¹. However, once the essential source of stress and issues of mental health is identified, it is possible to develop strategies to control these or to keep sources of stress under effective control.

Folkman and Lazarus (1986) define coping as the cognitive and behavioral efforts made by individuals in order to meet the requirements and overcome the difficulties created by their internal and external worlds, to keep these under control and reduce tensions. Generally, the function of coping is to protect the individual against negative physical or psychological consequences. A series of personal characteristics, such as the individual's beliefs regarding himself and his social surroundings, his values and objectives, influence ways of coping¹². Coping with stress is classified under three general categories in the literature; problem focused coping, emotional focused coping^{12,13} and avoidance¹⁴. It is impossible to make a good or bad distinction regarding these patterns, although good or bad results emerge in association with the coping required by the situation and the suitability of the coping employed by the individual¹⁵.

As coping is an important construct therefore many different measures have been used to assess it in different populations and literature revealed following important measures named as Ways of Coping Questionnaire (WCQ)¹⁶; Coping Strategies

Inventory (CSI) ¹⁷ and The Brief Cope (BCS) ¹⁸. Therefore, some indigenous assessment tools are required to explore the experience and manifestation of any phenomenon in specific culture. Consequently, keeping in mind the necessity of a specific indigenous coping scale for the assessment of coping among university students; the current study was focused on development of an indigenous Coping scale for university students. It assessed the different ways of coping and helps to promote more healthy ways of coping to resolve the issues of university students. The main objectives of the study were (i) to explore the expression, experience and manifestation of coping among university students and (ii) to develop an indigenous scale to identify their coping styles.

METHOD

The process of scale development for determining coping consisted of four phases: (i) Exploring phenomenology of coping (ii) Adaptation of Brief Cope Scale (BCS) (iii) Tryout phase (iv) Main study or establishing the psychometric properties of CSUS. The detailed explanation of each phase is following:

Phase I: Exploring Phenomenology of Coping

In order to explore the expression and manifestation of coping among university students, phenomenological approach was used. For this purpose, an operational definition of Folkman et al. (1986) was used in Urdu to initiate the semi structured interview for exploring phenomenology of coping in Pakistani context. In this way initially, 30 randomly selected university students (15 boys and 15 girls) of class BS from government university of Lahore were directly interviewed to find out the expression and manifestation of coping. It took maximum 20-30 minutes to every student for interview. It was observed that students were responding well and they explain every aspect in detail by giving examples in the form of different contexts.

After completing the interview Firstly, separate lists of both boys and girls were made but slight or no gender difference was observed in their expression and manifestation of coping. So, the lists of both boys and girls statement was merged to make a combine list which was comprised of 72 items. After that some repetitive and ambiguous items were excluded from the list and 68 items were retained for tryout phase. At the end of this phase, all retained items were converted into self report measure that having 4-point rating (0-3) and it was named as Coping Scale for University Students (CSUS).

Phase II: Adaptation of Brief Cope Scale (BCP)

An adopted version of Brief Cope Scale (BCP) 18 was used to establish the concurrent validity of CSUS. The scale was available in two versions, 60 items scale and 28 items scale. But in this research, 28 items scale was translated into Urdu because it was having sound psychometric properties and it was also used in most of the researches.

Brief Cope Scale (BCP) 18 was adapted into national language of Urdu. It consists of 28 items, each rated on a 4-point rating scale (1-4) where all the values represent the followings Not at all=1, Little bit=2, Medium amount=3, A lot=4.

A standard procedure of translation and adaptation was used in the study. For this purpose, firstly three linguistic experts were asked to

translate BCS into Urdu. During translation it was attempted to keep the language simple, so it could be easily understandable by the university students. After that four experienced clinical psychologists were asked to evaluate the translation while keeping in mind the linguistic equivalence, cultural appropriateness and original connotation of items. After getting back translated scale from all the experts, required corrections and modifications were done in the light of the suggestions given by them.

Phase III: Tryout Phase

The objective of the third phase was to determine the user friendliness and understanding of the comprehension of the items of the scale. So in tryout, both Coping Scale for University Students (CSUS) and translated version of Brief Cope Scale (BCS) were given to 30 1st year BS university students (15 boys and 15 girls) of Government university of Lahore. All those adolescents who were participating in exploring phenomenology were not being included in the sample of this phase. After completion, participants were asked to report each and every ambiguity and difficulty in understanding and comprehension of instructions as well as items of both scales. On the basis of responses and comments of the adolescents some minor linguistic changes were done. So at the end of this stage (CSUS) and translated version of Brief Cope Scale (BCS) that was comprised of 68 and 28 items respectively were ready to use in the main study.

Phase IV: Main Study or Establishing the Psychometric Properties of Coping Scale for University Students (CSUS)

The main objective of this phase was to determine the psychometric properties (factorial structure, reliability and validity) of Coping Scale for University Students (CSUS). All the participants of main study were selected through stratified random sampling from 3 Government universities of Lahore including 10 different departments. The overall sample of the main study consisted of 444 adolescents (22% boys and 78% girls). The final protocol of the study consisted of Demographic Performa, Coping Scale for University Students (CSUS) and Brief Cope Scale (BCS).

Demographic Performa was constructed for obtaining basic demographic information such as age, gender, class and family system. Coping Scale for University Students (CSUS) was an indigenously developed self report measure that consisted of total 68 items and it helped in assessing the coping ways of university students. The scale was based on the experience and expression of coping as reported by the university students. All item carry five point rating scale as followed not at all (0), rarely (1), somehow (2), often (3) and always (4).

Procedure

Firstly, 6 Government universities including 14 different departments were visited for data collection from which 3 universities and 10 departments gave permission for collecting data of the current research. All selected departments were personally visited and a brief overview about the aims and objectives of the research was given to them. The department authorities were assured about the confidentiality of the collected data and also gave assurance about the avoidance of any psychological or emotional harm to the participants. After obtaining permission from department

authorities, the researcher introduced herself to the class BS (Hons) and told them the main purpose of the study. They were ensured that the information taken from them will be kept confidential. The consent of the students was also taken verbally and the students, who were not willing to take part in the study, were given the right to withdraw but almost all the students were willing to co-operate.

Then the students were given a final protocol of testing including Demographic Performance, Coping Scale of University Students (CSUS) and Brief Cope Scale (BCS). The students were given the verbal and written instructions and they were asked to raise their hands if they do not understand anything or in the case of any ambiguity. The testing time was noted that varied from class level but the average of 25-30 minutes to complete the protocol. At the end of testing it was ensured that every student filled the complete Performance and did not leave any item/scale blank. After completing the testing the researcher was asked to the participant regarding feedback or any suggestion about the protocol. All the questions were answered regarding the study. The participants, class teachers and department authorities were thanked for their co-operation and precious time. The data collected from the participants was arranged and coded for statistical analysis and that the confidentiality of the participants will be maintained. After that the whole data was entered in the SPSS 16.0 for analysis. Due to missing or incomplete information four forms were discarded. For establishing Concurrent validity and test retest reliability of newly developed scale, (n=80) university students were approached and administered new indigenous Coping Scale for University Students (CSUS) as well as adopted version of Brief Cope Scale (BCS).

Data Analysis

The data of the study was analyzed to find out the factor composition as well as reliability and validity of the Coping Scale of University Students (CSUS). Descriptive statistics were used to demonstrate the frequency and percentages of the demographic characteristics of the sample such as gender, class/grade, family system and age (Table 2). T-test and Analysis of Variance (ANOVA) were used for analysis of categorical variables (such as gender, class/grade, family system and age). The internal consistency was calculated by using Cronbach's Alpha for total scores and item total correlation of the items. Test retest reliability (one week) and split half reliability was estimated in university students and no specific difference was noted in the scores of both trails of students. Concurrent validity of the scale was assessed by correlating the CSUS with Brief Cope Scale 18. The Principal Component Factor Analysis through Varimax rotation was used to find out the factorial structure of the CSUS. It revealed that five factors solution was the most appropriate because it had the fewest dubious items.

RESULTS

The results of the study depicted a detailed explanation about the demographic characteristics of the sample as well as psychometric properties of newly developed Coping Scale for University Students (CSUS). Mean (SD) in terms of the age of the sample was 19.80(1.17). It indicates that the most participants of the study were 19-21 years old. We first explained the psychometric characteristics of CSUS such as inter factor correlation, factor structure, reliability and validity.

Inter Factor correlation of Coping Scale of University Students (CSUS)

Table 1

Inter factor correlation of Coping Scale of University Students (CSUS) of total sample (N=444) of girls and boys on five factors and Brief Cope Scale of total sample (N=76) on two factors.

Factors	F1 Solution Focused	F2 Emotional Focused	F3 Avoidance	F4 Seeking Help	F5 Spirituality	Total CSUS	F1 Active Coping	F2 Passive Coping
F1 Solution Focused Coping	---	.06	-.11	.32***	.38***	.56** *	.51***	-.002
F2 Emotional Focused Coping	---	---	.16	.03	.09	.62***	.11	.41***
F3 Avoidance Coping	---	---	---	.05	.21**	.49***	-.25**	.30***
F4 Seeking Help Coping	---	---	---	---	.10	.47***	.27***	.13
F5 Spirituality Coping	---	---	---	---	---	.58***	.41***	.29***
Total	---	---	---	---	---	---	---	---
M	40.39	34.09	23.75	16.25	31.60	146.0	23.81	13.51
SD	8.19	10.86	8.40	6.08	5.91	4 21.77	6.83	6.96

df= 443; **p<0.01; ***p<0.001.

This table explained the correlation of five factors of CSUS with each other and Brief Cope Scale and its mean and standard deviations. The above tables showed that there is significant inter factor correlation among all the factors of CSUS. The table also shows the mean and standard deviation of all the five factors and total of the scale, along with COPE scale's mean and standard deviation.

Reliability And Validity

Internal consistency.

Cronbach's alpha for the all five factors was range from .71 to .85 but for full scale was 0.84.

Test retest reliability.

In order to establish the test retest reliability of CSUS, 20% (n=71) of the participant of the study were retested on CSUS. One week test retest reliability on 20% (n=71) participant showing $r=0.86$ ($p<0.001$). The correlation showed that CSUS indicating very highly significant test retest reliability.

Concurrent validity.

Concurrent validity of CSUS were established, 81 students out of 444 main study students were tested. It was 15% of the main data. An already well established scale name Brief Cope Scale 18 were adapted in to the local language, the process of adaptation was given earlier in the method chapter. This showed the validity of Coping styles $r=0.51$ ($p<0.001$) showing significant concurrent validity.

FACTOR ANALYSIS

After collecting data the principle component Factor analysis with Varimax rotation was performed on 68 items to explore the factors namely Solution focused coping, Emotional focused coping, Avoidance coping, Seeking help coping and Spirituality coping. The factor analysis used when data contains many variables, so to reduce the number of variables. The reduced factors can also be used for further analysis. Varimax rotation is one of the methods that used with the assumption that it maximizes the interpretability, simplification and variance of factors¹⁹. The factors obtained through Varimax rotation were independent of another. The scree plot was used to identify the initial factor structure of the scale in the form of graphical representation of Eigen values²⁰. The Eigen values of all these five factors were respectively 5.98, 5.84, 4.08, 3.83 and 3.57. The detail of the factors was given below.

Factor 1: Solution Focused coping.

The first factor consisted of 14 items indicate different ways of coping towards finding solution of problems, to think through logically, rationally and also tried to find the solution to the problem. The items also denote to plan and logically rational thinking until the solution to the problem is found. The example included "tried to find out the solution through different ways", "think deeply regarding the solution", "think positively regarding the solution", "think critically regarding the issue", "to face the problem", "learn from the situation for future".

Factor 2: Emotion Focused coping.

The factor consisted of 14 items indicating the emotional ways of coping regarding any problem or issue, getting emotionally upset or preoccupied about the problem. The example included "getting upset and annoyed to others", "indulging day dreaming", "avoid meeting peoples in problem", "to make themselves responsible of the issue", "to become emotional in tough situations", "day dreaming

regarding the problem".

Factor 3: Avoidance.

The factor consisted of 13 items that comprised of coping way regarding to avoid the problem, distracting self from the problem and hoping that it solves itself. The examples included "engage one in different activities", "ignore the situation through watching TV, study or music", "go for sleep to avoid the situation", "ignore the problem", and "don't take the problem seriously".

Factor 4: Seeking Help.

The factor consisted of 8 items that denoted the way of coping regarding to seek help, advice from friends and family members. The examples included "discuss about the problem with concern person", "tell others regarding the thoughts and feelings", "to act upon others suggestions", "discuss with others regarding the solution".

Factor 5: Spirituality.

The factor consisted of 10 items that comprised of acceptance, indulge and take refuge in religion, patience and prayer as a way of coping. The example included "to tolerate in the problem", "suppress the anger in the problem", "accept the problem due to Allah's decision", "say prayer for the solution of the issue", "try to accept the mistake",

Table 2

Frequencies of the Demographic Characteristics of the Participants (N=444)

Variables	Boys	Girls	Total
Gender	<i>f (%)</i> 97 (22)	<i>f (%)</i> 347(78)	<i>f (%)</i> 444(100)
Class			
1 st year	59 (12)	22(6)	81(18)
2 nd year	5(5.15)	104(29)	109(24)
3 rd year	28(28)	99(28)	127(28)
4 th year	5(5)	122(35)	127(28)

Table 2 showed descriptive analysis of the sample indicates that there were more female in the sample than male. The girls (78.2%) proportion is greater than the boys (21.8). The almost equal sample proportion of all years sample of BS hones classes. The 3rd and 4th years laid the equal and greater sample that is 28.60%, the least sample of 1st year that is 18.20.

DISCUSSION

The students come in the university they have face lot of load, pressure and stress from family and teachers to work properly and regularly, to maintain their quality work, complete the work on time without falling any mistakes. Due to the tough and strict routine the students face many challenges, problems and mental health issues seem very common in the university students. University students are considered to be the most fortune population but the fact that cannot be ignored that they are the ones who go through the constant stress of transition and survival during this period of their life. These stressors may place university students at greater risk for

developing some problems¹. The factors like intensity, frequency and duration of the stress determine its effect on the individual and their ability to cope and deal with those problems.

To face all of the issues the number of coping ways was used by the students so to handle and deal with the situations and resolve the issues. To ascertain the coping ways of the university students an indigenous tool was developed so that the cultural manifestation of coping would be explored by the students and also identified which are the coping ways that most probably were used by the students when they faced the stress like situations. The method used in the study was the standardization of indigenous coping scale for the population of university and then psychometric properties were established according to the culture. The Coping scale for university students (CSUS) is developed and factor analysis revealed five factors solution include Solution Focused Coping, Emotion Focused Coping, Avoidance coping, Seeking Help coping and Spirituality coping. These factors were explored in the context of student's population and each factor showed to have higher reliability above .70 (**p<.001) which shows that scale has the ability to yields consistent findings. The factors description is discussed in detail:

The one of the important factor that actively and emerged as a first factor is Solution Focused Coping. Students are tending to use active and more solution oriented coping to deal with the pressures and challenges of university life. As we have mentioned earlier that university life is considered to be one of the most stressful time²¹. In order to manage all the stressors of life and achieve maximum they need to use active ways of coping to resolve the issues and get through from the stressful situations; that can be familial, educational or choice of career etc. They are in the age when they have more energy, enthusiasm, practical approach to solve the problems and lesser tendencies to procrastinate or delay the activities so they preferably adapt more active and practical solution oriented ways of coping.

The other factor that emerged as a second factor is Emotional Focused Coping²². Most of the students used the way of coping that is more toward the passive and self oriented. In this coping involves trying to lessen the emotional responses that are negative linked with stress. This type of coping was considered the only realistic way of coping at that time the stress source is out of reach from the personal control. That involves making a wish the matter resolve automatically, thinking about the situation excessively". In the time of university studies most of the time students experience the issues and strains that they use this way of coping to resolve the issues.

The third important factor is avoidance coping or escape, it's considered maladaptive coping in which a person tries to escape from the situation to deal with the problem. The students simply find ways of avoiding having to face uncomfortable situations; things or activities Avoidance may include removing oneself physically from a situation. It may also involve finding ways not to discuss or even think about the topic in question. Avoidance is a simple way of coping by not having to cope. When feelings of discomfort appear, we find ways of not experiencing them.

The one of the significant factor that actively and emerged as a fourth factor is Seeking Help Coping. Students are trying to use active way out oriented coping to deal with the strain and challenges of university life. In order to manage all the stressors of life and attain

highest they use more active oriented ways to get rid of the issues and problems and take other's suggestions and seek help to resolve the issues as shows in the verbatim that "talk to the related person regarding the issue", "taking help from other in stress".

The last factor in our factor structure is Spirituality coping that most of the students respond to use at some of the extent. As it the compulsory effort teaches by our parents to take help from God and ask to remember in the difficulty so most of us try to use this passive way of coping to get rid from the stress and strains. As we live in a Muslim society in a collectivistic culture so our believe and trust on God is much more as comparison to others. As most of the students responds in the items including "remembers Allah in trouble", "to seek prayer in problem" and most of other items that indicated spirituality coping.


Overall the results showed that Coping Scale for University Students (CSUS) had sound psychometric properties and could be used for research and clinical purposes.

IMPLICATION OF THE RESEARCH

The findings of this research have drawn attention to a number of areas for future research and exploration. Counseling strategies can be developed in reference to coping. More adaptive way of coping can be taught to the students because coping is a skill that can be learned if it identified earlier.

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