Investigating the Levels of Stress and Coping Strategies Among Arts Stream, Male and Female University Students of Peradeniya, Sri Lanka

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Abstract: Individuals will experience stress in accordance with their subjective appraisals of the stressor. University students often complain about the stress they experience and endure during their academic life. The purpose of the present study was to investigate the nature and intensity of the events which created stress, and levels of stress experienced by the male and female arts stream students in the University of Peradeniya. Participants were 162 (97 female and 65 male) undergraduate students in the Faculty of Arts. Levels of stress were measured by administering the Impact of Event Scale (IES), which measures subjective distress related to stressful life events. For the study Sinhalese version of the original IES developed by Mardi Horowitz (Horowitz, 1979), was used.

The independent sample t-tests were conducted to compare the type of the stressful events listed (Related to studies Vs not), and the ecological/ social support of the stressful events were not significant for females and males. However, females (M = 41.04, S.D = 13.04) reported more stress in comparison to males [M = 34.37, S.D = 11.09); t (160) = -3.39, p <.05]. Analysis of regression revealed that gender and natures of stress influence the total level of stress experienced by the participants (Adjusted R square = 0.070; F5, 156 = 3.44, p<.05)

Key Words: Stress, Coping, Sri Lanka, University Students.

INTRODUCTION:

According to Lazarus (1966), stress is not a variable but a rubric consisting of many variables and processes. Stress has been classified as a host of potentially unpleasant or dangerous events that include unavoidable pain, University students often complain about the stress they experience and endure during their academic life. During these formative years, university students engage in challenging academic work, explore career options and make decisions that can have a profound impact on their future.

In turn, the stress that the university students experience may have a detrimental effect on their academic performance (Sloboda, 1990) and has been related to counseling concerns such as anxiety. Also, higher stress levels have been associated with greater symptomatology, depression, lower well-being (Frazier & Schauben, 1994; McClain & Abramson, 1995) and test anxiety (Abouserie, 1994; Gadzella, Masten, & Stacks, 1998; Sloboda, 1990).

Stress often results from stressful life events that students may encounter in their day to day lives. Stressful life events can be considered as the relationship between the occurrence of events and subsequent psychological and/or physiological disorder (Johnson, 1982; Rutter, 1981). Such events may also result in changes in the lives of individuals that may require varying degrees of coping and adaptation to the situation. These stress evoking demands may come from external sources in the form of varied environmental stimuli or internal factors related to physiological and development (Johnson, 1982) changes.

However, every life events cannot be considered stressful. On the other hand all stress cannot also be considered as the result of specific events. The intersect of the two concepts results in the domain of stressful life events. Also, not all stressful life events result in dysfunction or disorder. Whether a stressful event is related to positive growth or dysfunction may be due to other mediating factors, including the meaning an event holds for an individual, his/ her resources for coping with the event, and efforts made to cope with the event. Finally, literature concerning stressful life events has been based implicitly on a linear model in which events are implicated as causal factors in the etiology of some types of distress (Compass, 1987)

Coping is a stabilizing factor that helps maintain psychological adjustment during stressful periods, which could be most helpful when there are high level of stressors (Moos & Holahan, 2003). Coping can also be defined as the changing of thoughts and actions to manage the external factors. In classic stress and coping theory, coping strategies play a critical role in the stress–adjustment relation. Coping also includes cognitive or behavioral efforts to manage situations appraised as taxing or exceeding a person's resources (Lazarus & Folkman, 1984). Thus, coping can also be described as a regulatory process that can reduce the negative feelings resulting from stressful events.

METHOD:

The purpose of the present study was to investigate the nature and intensity of the events which created stress, levels of stress experienced by the university students, and the coping strategies employed by the University students of Peradeniya to address the stress.

Participants were 162 (97 female and 65 male) undergraduate students in the University of Peradeniya. Students participated voluntarily. Survey completion took approximately forty-five minutes. The mean age of the participants was approximately 22 years (M = 21.54). Hundred and fifty eight participants were Buddhist, 3 were Christians, and 1 followed Islam. Hundred fifty nine participants were Sinhales, 1 was Tamil and 1 was Muslims while one participant opted not to list her ethnic group. In the sample, one hundred fifty four students were not married, 7 were married and again one participant opted not to list her civil status.

Measures – Levels of stress were measured by administering the Impact of Event Scale (IES), which measures subjective distress related to stressful life events. For the study Sinhalese version of the original IES developed by Mardi Horowitz (Horowitz, 1979), was used. Participants were asked to rate on a 4-point Likert Scale (0 = not at all; 1 = rarely; 3 = sometimes; 5 = often) how distressing a life event that they named have been in the past seven days. List of coping strategies were compiled by the author after a focus group discussion with the second year psychology students of the University of Peradeniya. The coping strategies mentioned by the focus group was listed and the most frequent coping strategies were presented to the participants of the study. They were requested to list the coping that they used in times of stress. Out of the coping strategies provided the participants were also requested to give their most preferred coping style.

RESULTS:

Table 01: Type of the stressful events listed – Related to Studies Vs not

	Related to Studies		**Not Related to Studies**		**Opted Not to List**	
	f	**%**	***f***	**%**	***f***	**%**
Females (n = 97)	08	***4.9***	71	***4.9***	18	**11.1**
Males (n = 65)	03	***1.6***	54	**33.4**	08	**4.9**
	11	***6.8***	125	**77.2**	26	**16.**

N = 162

The life events experienced by the university students were categorized into events related to studies and events which were not related to studies. Surprisingly, table 01 conveys that significant percentage of life events listed by the university students were not related to their studies. The events related to studies were exam stress, caught while copying and problems encountered with studying such as inability to concentrate.

The independent sample t-test conducted to compare the type of the stressful events listed (Related to studies Vs not) were not significant for females (M = 1.55, S.D = 0.79) and males (M = 1.71, S.D = 0.68); t (160) = -1.35, p = n.s.

Table 02: Stressful event listed according to the ecological/ social support systems

	Not listed (0)		**Personal (01)**		**Family (02)**		**Friends (03)**		**Love (04)**		**University (05)**		**Other (06)**		**Study issues (07)**	
	f	**%**	***f***	**%**	***f***	**%**	***f***	**%**	***f***	**%**	***f***	**%**	***f***	**%**	***f***	**%**

F	17	**10.49**	16	**9.9**	10	**6.2**	23	**14.2**	09	**5.6**	05	**3.1**	14	**8.6**	03	**1.9**
M	08	**4.92**	09	**5.6**	04	**2.5**	12	**7.4**	12	**7.4**	02	**1.2**	17	**10.5**	01	**0.6**
T	25	**15.4**	25	**15.4**	14	**8.6**	35	**21.6**	21	**13**	07	**4.3**	31	**19.1**	04	**2.5**

N = 162; Note: F = Females, M = Males

Since, majority of the stressful events listed by the participants were not related to academic matters, they were categorized according to the ecological/ social support systems that the students were embedded in. Hence, the table 02 indicates that a large number of stressful events are centered on issues related to friends. The nature of these events varies from serious conflict with close friends, with significant number of students mentioning, fall out with the best friend as well as minor disputes/ conflicts with other friends. Next in line are the 'other' events, listed in the column 6 of the table. They comprise of varied negative life events ranging from nuisance phone calls to experiencing natural disasters, war/ violence and even being chased by an elephant. Issues related to personal matters (15.43%) and intimate partner related events (12.96%) come next, followed by family (8.64%), university (4.32%) and issues related to studies (2.47%) which did not fit with any other category.

The independent sample t-test conducted to compare the ecological/ social support of the stressful events were not significant for females (M = 2.79, S.D = 2.11) and males (M = 3.39, S.D = 2.13); t (160) = -1.74, p = n.s.

Table 03: Stressful events listed according to the severity

	Not Listed		**Severe**		**Moderate**		**Minor**	
	f	**%**	***f***	**%**	***f***	**%**	***f***	**%**
Females	17	**10.5**	22	**13.6**	51	**31.5**	07	4.3
Males	08	**4.9**	13	**8.**	41	**25.3**	03	1.6
	25	**15.4**	35	**21.6**	92	**56.8**	10	6.2

N = 162

Table 04 conveys the stressful events experienced by the participants according to the severity of the event. The severity of the events listed by the participants were put into three categories based on Thomas Holmes and Richard Rahe's stress scale of life events (Holmes & Rahe, 1967), its modified version for non adults and Adolescent Life-change Event Scale (Yearworth, McNamee, & Pozehl, 1992). When examining the table 03, it could be said that majority of the events fall in the moderate category (56.8%), followed by the severe events (21.6%). The minor events (6.2%) come last.

The independent sample t-test conducted to compare the severity of the stressful events were not significant for females (M = 1.5, S.D = 0.07) and males (M = 1.6, S.D = 0.77); t (160) = -0.792, p = n.s.

Table 04: Levels of Stress Experienced by the Participants

Level of Stress	**No Meaningful Impact (0-08)**		**Impact Event. (9 -25)**		**Powerful Impact Event (26 – 43)**		**Severe Impact Event (44 – 75)**	
	f	**%**	***f***	**%**	***f***	**%**	***f***	**%**
No of Participants	0		23	**14.2**	84	**51.8**	55	**34**

N = 162

Using the criteria provided by Horowitz (1979), the total number of stress experienced by each undergraduate was calculated. In this study, the range of total stress was between and 9 and 73, with a mean of 38.36 (M= 38.36) and a standard deviation of 12.67 (S.D. = 12.67). The mean and the maximum scores seem to be extremely high, considering the fact that the maximum value for this scale is 75 and a score above 26 is estimated to have a powerful impact. The table 04 also indicates that significant percentage of undergraduates experienced a powerful impact (51.8%) or a severe impact (34%) conveying that they may have psychological issues related to the stress generated events.

Table 05: Levels of Stress Experienced and the Gender

	Females (n = 97; 60%)		**Males (n = 65; 40%)**		**Sub Totals**	
	f	**%**	***f***	**%**	***f***	**%**
No Meaningful Impact (0-08)	0		0		0	
Impact Event. (9 -25)	12	**7.4**	11	**6.8**	23	14.2
Powerful Impact Event (26 – 43)	43	**26.5**	41	**25.3**	84	51.6
Severe Impact Event (44 – 75)	42	**25.9**	13	**8.0**	55	33.9

N = 162

Table 05, depicts the levels of stress experienced by the gender of the participant. When examining the table it could be seen that there is no significant difference between the males and females in the categories of impact event and powerful impact event. However, in the sever impact level; the difference is 7.9%, indicating that the females in the sample seem to have experienced more severe impact events, with stress level of 40 or more or have been affected by the events more than the male participants.

The independent sample t-test conducted to compare the levels of stress was significant. Females (M = 41.04, S.D = 13.04) reported more stress in comparison to males [M = 34.37, S.D = 11.09); t (160) = -3.39, p <.05]

Analysis of regression revealed that gender and natures of stress influence the total level of stress experience by the participants (Adjusted R square = 0.070; F5, 156 = 3.44, p<.05)

Table 06: Coping strategies used by the participants

N.	Coping Strategy			O. Of Pre'	Standard Coefficient/ **Total. Stress**	P (2 tail) **Total. Stress**
		f	**%**			
1	Going to the place of worship	42	**25.9**	04	0.130	0.099**
2	Tell someone - problem	**83**	**51.2**	01	0.099	0.214
3	Watching film/ television	21	**13**	06	0.017	0.840
4	Listening to music	**53**	**32.7**	03	0.158	0.054**
5	Writing a poem/ painting/ drawing	16	**10**	09	0.056	0.482
6	Thinking about the problem	**57**	**35.2**	02	0.058	0.463
7	Emotion based religious rituals (tying a "padura", lighting a candle…)	04	**2.3**	11	-0.212	0.012*
8	Activity based religious Rituals	09	**5.6**	10	0.042	0.619
9	Going for a walk	18	**11.1**	07	-0.182	0.028*
10	Reading a book	17	**10.5**	08	-0.079	0.345
11	Thinking about the incident and crying	24	**14.8**	05	0.066	0.414

Adjusted R square = 0.074; F11, 150 = 2.164, p<.05

As depicted in the table 06, the most preferred coping strategies listed by the students were to tell someone the problem, when experiencing a stressful event (51.24%), followed by thinking about the problem (35.19%), and listening to music (32.72%). The least preferred strategies were emotion based religious rituals (2.47%), activity based religious rituals (5.56%) and leisure based activities such as writing a poem or painting a picture (9.88%).

In order to assess the effect of coping strategies on the total amount of stress, a regression analysis was carried out. Results conveyed that only 7.4% of the model accounted for the variance in the outcome variable (total stress). Significant predictor variables were emotion based rituals (p <.05) and going for a walk (p <.05). However, going to the places of worship (p < .1) and listening to music (p < .1) also emerged as having an impact on the outcome variable.

DISCUSSION:

The purpose of the present study was to investigate the nature and intensity of the events which created stress, levels of stress experienced, and the coping strategies employed by the University students of Peradeniya to address them. The study came out with several important outcomes. First, it revealed that the majority of the events which the students listed as having caused stress were not related the academic matters such as exam anxiety, assignment incompletion or exam stress. Out of the total sample, less than one tenth of the students have mentioned that they were stressed by the academic events. Second it revealed that the large number of stress causing events were in the ecological/ social support context such as family and friends. Also, large number of stress causing event could also be categorized under multitude of different negative outcomes such as natural disasters, war/ violence. Third, the results conveyed that the events listed by the undergraduates could be listed under the categories of severe and moderate categories when taken in the context of the international stress scales (Holmes & Rahe, 1967; Compas, Davis, Forsythe, Wagner, 1987). Moreover, female undergraduates seemed to have listed significant number severe events compared to male undergraduates.

Next, analysis of the levels of stress experienced by the students revealed that they may find the events have created a powerful impact or a severe impact in their lives. According to the interpretation of scores the stress related issues may require immediate psychosocial interventions. The work carried out on the IES indicates total scores of between about 26 and about 44+ are fairly typical for PTSD sufferers (Corneil, Beaton, Murphy, & Johnson, 1999), while work on intrusive images in depression has typical scores of 43 with higher scores for more expectedly traumatic experiences such as childhood abuse.

The IES is two-factor structure is stable over different types of events, and can discriminate between stress reactions at different times after the event (Sundin & Horowitz, 2002). The IES also has a convergent validity with observer-diagnosed post-traumatic stress disorder and the use of IES in many psychopharmacological trials and outcome studies and is supportive of the measure's clinical relevance (Sundin & Horowitz, 2003; Sundin & Horowitz, 2002). It is also found to be a useful measure of stress reactions after a range of traumatic events are found to be valuable for detecting individuals who require treatment (Sundin et al, 2002). Analysis of studies carried on this scale also reveal that gender and cultural difference were relatively insignificant, when measuring the type of event induced different levels of stress with the IES (Sundin et al, 2003).

Hence, considering the wide use/ fairness across gender, times (Sundin & Horowitz, 2003; Sundin & Horowitz, 2002) and cultures (Dawson, Ariadurai, Fernando, & Refuge, 2007) of this scale, the outcome of the study, using IES as a measuring instrument cannot be completely ignored.

Another outcome of this study was the information conveyed about the gender differences in life events and levels of stress. Independent t-tests depicts that, male and female undergraduates did not differ significantly in the context of type (studies Vs not), nature or the severity of the stressful event experienced. However, their levels of stress scores differed significantly, conveying that more females than males experienced higher levels of stress when experiencing a stressful event. Future stress management programs conducted for undergraduates also need to consider this information.

Finding of the study also convey that a significant number of students have experienced a life event which had created a profound impact in their lives. Due to this experience, they may be severely affected; which may have altered their ability to function effectively. Therefore future, investigations in this area need to be carried out with increased methodological rigor, using empirical measures to test the prospective associations of stressful events and symptomatology to untangle the paths of association between events and distress within university students. The development of a comprehensive, culturally sensitive, reliable, and valid measure of stress during young adulthood is also promising for future research.

Moreover, when Sundin and Horowitz (2003) conducted a meta-analysis of data from 66 studies that used Horowitz's IES; they found that the type of event (episodes of illness and injury, natural and technological disaster, bereavement and loss, violence, sexual abuse, and war exposure) is a strong predictor of levels of intrusive and avoidant symptoms after a traumatic event. Therefore, in the light of these findings the stressful

events experienced by the undergraduates need further investigation in order develop suitable prevention/ intervention strategies.

The study also explored the coping strategies employed by the undergraduates to address the stress. Results convey that the students preferred to use leisure based coping strategies in comparison to the religion based coping strategies. However, the coping strategies that most of the participants use may not effectively buffer the severity of the impact experienced. Evidence for this comes from the regression analysis which conveyed that only 7.4% of the model accounted for the variance in the outcome variable (total stress). Contrary to the frequencies, the significant predictor variables which seem to buffer the total stress were emotion based rituals ($p < .05$), going for a walk ($p < .05$), going to the places of worship ($p < .1$) and listening to music ($p < .1$). These findings should also be carefully considered when developing suitable prevention/ intervention programs for students of University of Peradeniya as well as other young adults in Sri Lanka.

Hence, this study stresses the importance of identifying and also teaching students to use forms of effective coping when confronted with high levels of stress. Such interventions could enhance the psychological adjustment and retention within the students, creating long-term benefits for their academic achievement and psychological well-being.

Finally, there are several limitations in this study. First, given the nature of exclusively self-reported measures, results of this study have to be cautiously interpreted. However, research has shown that self-reported data collected by researchers is generally truthful, reliable and valid of in this kind of population, provided that confidentiality is ensured using anonymous reports and that no sanctions are connected to the answers. Second, the study would also have benefited from a cross-sectional design. A longitudinal approach would be another way to collect more extensive information regarding stressful life events, perceived stress and effects of coping efforts amongst university students in Peradeniya. Third, a comparison group and random sampling could also strengthen future research in this area.

CONCLUSION:

Findings of the study indicate that university students experience varied life events that may contribute to the high levels of stress, majority of which are unrelated to their studies. Moreover, male and female undergraduates do not differ significantly in the context of type (studies Vs not), nature or the severity of the stressful event experienced. However, their levels of stress scores differed significantly, conveying that more females than males experienced higher levels of stress when experiencing a stressful event. Also, significant number of students has experienced a life event which had created a profound impact in their lives. Findings also convey that the students preferred to use leisure based coping strategies in comparison to the religion based coping strategies. However, the coping strategies that most of the participants use may not effectively buffer the severity of the impact experienced.

The study also provides suggestions and recommendation to futue research. However, this study is preliminary in nature and has opened up many important questions, yet to be addressed, requiring extensive research on this topic.

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