A Study On The Assessment Of Perceived Stress, Self-Efficacy And Associated Socio-Demographic Factors Among Undergraduates In A Higher Educational Institution In Sri Lanka

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Abstract: Nearly 80% of students in higher education worldwide experience psychological stress during their university life due to imbalances in social, emotional, and physical conditions. Stress can lead to poor academic performance and underachievement among students. The present study assessed the levels of perceived stress, general self-efficacy and their association with socio-demographic factors among a selected group of undergraduates at a higher educational institute. A descriptive cross-sectional study was performed using stratified random sampling among 393 undergraduates. The data were collected through the Perceived Stress Scale (PSS-10), the General Self-Efficacy Scale (GSES) and a questionnaire to collect the socio-demographic data. The data were analyzed using SPSS version 23. The mean age of the sample (n=393) was 22.36±2.33 years. The results showed a mean perceived stress score of 20.72±4.96 (moderate perceived stress). The majority of the participants (79.4%) had moderate perceived stress, followed by high stress (12.7%) and low stress (7.4%). There was no significant difference between the stress levels of male and female students (p=0.766). No significant association was observed between perceived stress and socio-demographic factors assessed (age, gender, residence status, financial status, the program of study, employment prospects) using the chi-squared test. Spearman correlation showed a significant negative association between perceived stress levels and general self-efficacy (p<0.001). Intervention strategies to develop and improve self-efficacy among undergraduates should be implemented as it affects their perceived stress levels and academic achievements which will impact their life goals. Further studies are needed to understand the stressors contributing to stress among undergraduate students.

Keywords: Perceived stress, General self-efficacy, Higher education

Introduction:

Hans Hugo Bruno Selye, "Father of stress," defined stress as "the non-specific response of the body to any demand for change" (Fink, 2016). World Health Organization introduced the stress as the "Health Epidemic of the 21st century" since stress has become a part of routine life. The most common health complications of stress include; depression, hypertension, headaches, back pain, skin disorders, irritable bowel syndrome, ulcers, panic disorder, general adaptation syndrome, phobia, and post-traumatic stress disorder (PTSD) (Badur-un-Nisa, Kashif and Khan, 2016). Mood disorders and suicides are other critical stages of severe stress among various populations (Ang and Huan, 2006).

Worldwide, deaths due to suicide account for nearly 800,000 people every year. Suicide is considered the second leading cause of death among 15-29-year-olds globally (WHO, 2019). Sri Lanka is the 29th country on the suicide list, with 14.6 suicides per 100 000 in 2020 (World Population Review, 2020). A recent study revealed 20 – 30 years as the second leading age group that has become the prey for suicides (Senavirathna and Sanjeewani, 2019). At this particular age, most of the young population engage in higher education. Worldwide, around 80% of students following higher education

experience stress during their life (Scott, 2009), and in Sri Lanka, psychological distress is more significant among university students than the general population (Kuruppuarachchi et al., 2002). Research evidence reports that learning efficiency is affected due to social, emotional, and physical conditions. The studies done previously summarizes the critical reasons for high-stress levels as socio-demographic factors, gender, financial constraints, marital status, and accommodation (Rathnayake and Ekanayaka, 2016).

In Sri Lanka, most of the universities have counseling systems to support students emotionally and motivate them. However, due to the negative aura among the community, most of the students suppress their problems. Since university students endure a critical transitory period in which they advance from adolescence to adulthood, it can be stressful in their lives. Therefore, the present study assessed the levels of perceived stress (PS), general self-efficacy, and their association with

socio-demographic factors among a selected group of undergraduates. This study will eventually contribute towards increasing the quality of life among undergraduate students and to seal the gaps in knowledge that will support the society to discover and understand the factors and outcomes associated with undergraduate stress levels.

Methodology

A descriptive cross-sectional study was conducted at KIU, Sri Lanka, among a selected group of undergraduates following various study programmes. The samples were randomly stratified according to the program of study. The sample size was obtained using the following equation; $n = N/ 1+N*e^2$ (Yamane, 1967). A total of 393 undergraduates of KIU (301 females and 92 males) in the age group of 19 – 40 years were randomly recruited into the sample, and participants with previously diagnosed psychiatric disorders, chronic illness, and pregnancy were excluded. Data were collected using a pre-tested self-administered questionnaire of socio-demographic details, standard questionnaires of perceived stress scale (PSS-10)) (Cohen, 1994) and general self-efficacy scale (GSES) (Schwarzer and Jerusalem, 1995).Statistical analysis SPSS version 23 software was used for all data processing and analysis. Data were assessed by the chi-square test and Spearman correlation analysis. The level of significance was set at two-tailed with $p>0.05$.

Results and Discussion:

A total of 393 undergraduates were included in the analysis. Among them, 301 (76.6%) were females, and 92 (23.4%) were males. The undergraduates were in the age group of 19 – 40 years. Table 1 summarizes the socio-demographic profile of the participants including the association of PS and socio-demographic factors.

Note. Significant at p-value of <0.05.

The mean perceived stress (PS) score of the sample population in the present study was 20.72, with a standard deviation (SD) of 4.96. It was higher than the value reported in a similar study done in the University of Colombo by Ranasinghe et al., where a mean score of 19.9 ± 5.1 was reported among 2nd-year medical students (Ranasinghe et al., 2017). On the contrary, the finding of the present study the PS score was lower than a research done in India, which showed a mean score of 25.53 ± 5.55. Several studies done around the world reported different PS scores. An approximate score of 18 among a group of students in North of England (Shaw, Peart and Fairhead, 2017), 16 from a group of undergraduates of business students in the US (Smith, Rosenberg and Haight, 2014) and 19 from a group of students in a Turkish University (Örücü and Demir, 2009) are some of the findings around the world.

Table 1- Socio-demographic profile and association of Perceived stress level between socio-demographic data among participants (n=393)

Socio-demographic factors		Participants frequency	Mean Perceived stress level	Chi-square value
Age	18 – 20 years	34 (8.7%)	20.00 ± 6.23	0.072
	>21 years	359 (91.3%)	20.79 ± 4.82	
Gender	Female	301 (76.6%)	20.86 ± 4.97	0.409
	Male	92 (23.4%)	20.27 ± 4.92	
Civil status	Unmarried	383 (97.5%)	20.75 ± 4.96	0.741
	Currently married	10 (2.5%)	19.70 ± 4.83	
Residence	Living with parents	227 (57.8%)	20.92 ± 5.06	0.927
	Boarding place	130 (33.1%)	20.43 ± 4.99	
	University hostel	18 (4.6%)	20.72 ± 4.59	
	Nursing Quarters	9 (2.3%)	20.22 ± 3.19	
	Other	8 (2.0%)	20.38 ± 4.75	
Study program	Biomedical Science	174 (44.3%)	20.45 ± 5.16	0.150
	Management	117 (29.8%)	21.26 ± 4.37	
	Psychology	71 (18.1%)	20.58 ± 5.65	
	Nursing	16 (4.1%)	19.94 ± 2.44	
	Acupuncture	12 (3.1%)	22.75 ± 4.79	
	Kaatsu	3 (0.8%)	14.67 ± 2.52	
Current year of study	First	179 (45.5%)	19.96 ± 4.95	0.888
	Second	178 (45.3%)	21.36 ± 4.95	
	Third	34 (8.7%)	21.26 ± 4.73	
	Fourth	1 (0.3%)	23.00	
Financial method for studies	Parents' support	106 (27%)	22.51 ± 5.18	0.389
	Student Loan	260 (66.2%)	20.10 ± 4.81	
	Occupation during semester	21 (5.3%)	19.38 ± 3.68	
	Occupation during breaks	4 (1%)	18.50 ± 1.00	
	Scholarships	1 (0.3%)	25.00	
	Other	1 (0.3%)	26.00	
Employment status	Full time	49 (12.5%)	21.10 ± 4.19	0.527
	Part-time	41 (10.4%)	21.24 ± 5.91	
	Contract based	2 (0.5%)	22.50 ± 4.95	
	Training/Internship	9 (2.3%)	24.11 ± 4.01	
	Unemployed	282 (71.8%)	20.46 ± 4.99	
	Other	3 (0.8%)	22.33 ± 5.13	

However, when comparing our results to those of the other studies, it must be pointed out that the current study had a collection of students following multiple study programs, and the mean age group of the sample in the present study was different from the other studies. This suggests that the changes in the PS score might be due to the differences in age, educational background, culture, and social status. Our results demonstrated that all the undergraduates had a certain level of stress; the perceived stress scale showed that 312 students had moderate perceived stress among the study group (236 females and 76 males). Of the sample, 50 students had high perceived stress (42 females and 8 males), while 31 students had low perceived stress levels (23 females and 8 males), as shown in Figure 1.

Overall the findings of the present study are more or less comparable to the results reported by Ranasinghe. P et al., who conducted his study among medical undergraduates in the 2nd year, 4th year, and 5th year have an average perceived stress score level (Ranasinghe et al., 2017). These results are in line with other studies where they reported having a higher number of students in the moderate stress category (Sabih, Siddiqui and Baber, 2013; Kashif et al., 2016).

Previous studies have concluded that higher stress levels observed among undergraduates were mainly due to factors such as financial issues, relationship issues, academic pressure, and family problems (Sherina, Rampal and Kaneson, 2004; Yakushko, Watson and Thompson, 2008; Scott, 2009). There was no significant difference between mean PS score of male and female students as determined by Independent T-test (p=0.766). Contrary to the findings of previous studies, we didn't find any association between perceived stress and socio-demographic factors like age, gender, civil status, residence status, financial status, the program of study, year of education, and employment status. The commonest reasons for higher stress identified in other studies were the

increasing load of academic work, career development, and family problems (Acharya, 2003; Pau et al., 2007; Raushanova et al., 2015).

In the present study, 203 undergraduates out of 393 had high self-efficacy (51.7%) according to the findings, while 190 students had low self-efficacy (48.3%). Since the higher number of students is in high general self-efficacy, it sheds light on the reason for the low count for high perceived stress. The results also showed that general self-efficacy of the students was significantly associated with civil status (p=0.014) and residence (p=0.036).

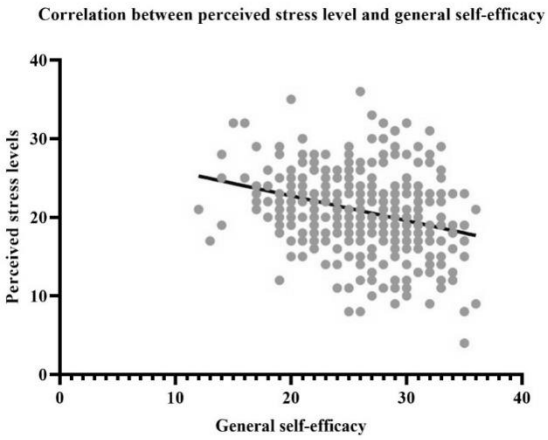

Figure 1: Prevalence of perceived stress among the participants

One of the critical findings of the present study was that it showed a significant association between perceived stress level and general self-efficacy (p=0.003) among the participants of the study. The Shapiro Wilk test showed that the data were not normally distributed (p<0.05).

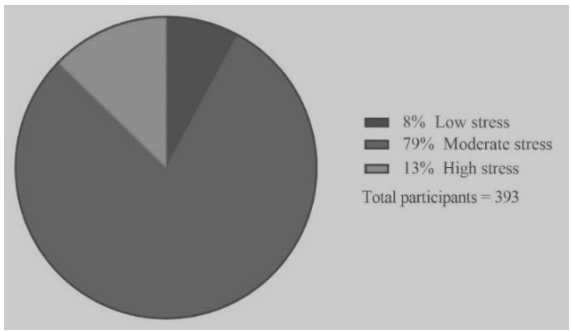

Figure 2: Correlation between perceived stress level and general self-efficacy among participants. P<0.001, r= -0.293

Through the Spearman correlation test, the results showed a statistically weak negative correlation between perceived stress levels and general self-efficacy (p<0.001, r=-0.293) (See Figure 2). These results are in line with the study done by Kumar et al. where the lower general self-efficacy was found to be significantly associated with psychological distress (Kumar, Talwar and Raut, 2014).

An apparent limitation of the study includes the under-reporting and over-reporting of their perception of stress and self-efficacy, as they may have felt expressing their thoughts and feelings in a university background might be unsettling and the stress handled by students differ from each other. However, the difference in these perceptions can be ruled out since there was a large sample size of more than 300. Although the effects of these factors are negligible, future studies need to focus on the statistical power of calculating the samples.

Conclusion

Perceived stress has been distressing undergraduate students across the globe, in all genders, and among all cultures, and the present study bought into light that stress is a part of all students in varying amounts. The moderate stress level encountered was prevalent among the majority of undergraduates irrespective of their gender and other socio-demographic data. The students possessed a lower general self-efficacy with higher perceived stress. Moderate stress can escalate into a higher stress level if not adequate measures are not taken. Higher education providers should have stress assessing methods and intervention strategies to reduce perceived stress and increase self-efficacy of the students, where the quality of their lives will be enhanced. Further studies are needed to determine the contributing factors to stress among undergraduate students.

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