

Perceived and Academic Stress Levels in First Year Undergraduates of Selected Degree
Awarding Institutions in Western province, Sri Lanka, and Exploring their Methods of Coping
with Stress

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Abstract

The aim of the study is to find out perceived and academic stress levels in first year undergraduates of selected degree awarding institutions in Western province, Sri Lanka, and exploring their methods of coping with stress. Study was done among two state universities such as; University of Kelaniya, University of Sri Jayewardenepura and two private degree awarding institutions such as; National School of Business Management, American National College. Study consisted of 230 participants in which 105 participants from selected state universities and 125 participants from selected private institutions. Study sample comprised of 116 male and 114 female participants. Study was designed as a descriptive correlational survey where samples were selected by convenience sampling method. Data was collected via self-administered questionnaires of general information sheet, Laskaev Academic Stress Response Scale (LASRS), Perceived Academic Stress Scale(PSS) and Brief COPE scale. Data was analyzed by Statistical Package for Social Science (SPSS) version 24. Results revealed that undergraduates of state universities showed a moderate score on LASRS while undergraduates of private degree awarding institutions showed a low score on LASRS. On the other hand, PSS score was low among undergraduates of state universities and was moderate among undergraduates of private degree awarding institutions. Further the study reported that self-distraction, instrumental support and emotional support were the main coping strategies used by the undergraduates. Moreover, revealed that demands of the university life, socializing with others at university, and following the degree in English medium were found to be the main source of stress.

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Acknowledgement

First and foremost I would like to thank God for giving me the strength to completed this project.

I would like to express my sincere gratitude to my supervisor Ms. Oshadee De Silva for her professional guidance, understanding and her motivation that eased my work in completing this thesis. I would also like to thank my program heads Dr.Mojgan Shadbash and Prof.Anne Manyande and my lecturers for their encouragement and support towards completing the thesis.

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Chapter 01

1.1 Introduction

Every single person in this world is affected by stress every day starting from infants to older adults. Every person is different from one another; hence their reaction towards stress is also different. Stress could either motivate them towards better performance or could negatively affect the performance. The physiological reactions begin with the 'perception of a threat or stress' that activates the sympathetic nervous system. This is a type of autonomic nervous system that helps during emotional, stressful, or emergency situation or known as 'fight or flight' reactions by Walton Cannon. There are two reactions that take place in our body that ready us for the stressful situations (Brannon & Feist, 2010).

One is a direct reaction to a stress, where the sympathetic nervous system of the autonomic nervous system stimulates the adrenal medulla to secrete epinephrine (Adrenaline) and nor epinephrine that affects the normal rates of the heart, digestive system, and respiratory system (Brannon & Feist, 2010).

Another reaction is through hypothalamic pituitary-adrenal axis that involves all those structures to help an individual survive through stressful events. The processes are as follows, the 'perception of stress' activates the hypothalamus to release corticotrophin that stimulates the release of adrenocorticotrophic hormone (ACTH). This hormone stimulates the adrenal cortex to secrete glucocorticoids and corticoids that energizes the body resources. In addition, this has anti-inflammatory effect that gives the body a natural defense against swelling from the injuries that might take place during the 'fight or flight' reactions (Brannon & Feist, 2010).

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These physiological responses are controlled or manipulated by the perception towards a stressful situation. For example, a student who has thoroughly learned the materials for the exam would not show the signs of stress unlike the student who have not learned the materials. This shows that it is not the event but the understanding of the situation which causes the individual to be stressed hence the downfall in the academic performance.

The study is been focused on academic stress level, perceived stress levels and the coping strategies of stress among the first year undergraduates of selected degree awarding institutions of Western province, Sri Lanka.

1.2 Background

“Health is defined by WHO as state of complete physical mental and social well-being and not merely the absence of disease or infirmity” (World Health Organization, 1948). There are two main theories that are brought forward in regards to stress; one is by Hans Selye and another by Richard Sheldon. While Selye proposed that stress is a physiological response to an environmental factor, Lazarus contradicted saying that stress is an interpretation that an individual has for a particular stressful event or situation (Brannon & Feist, 2010).

Further ,the transactional model of stress and coping theory is a system which proposes tests to assess harm and difficulties, which brings about the way toward adapting to stressful occasions (Lazarus & Folkman, 1984). Some level of stress is good, however, high level of stress can result in negative outcomes. Several health models assume psychosocial stressors of adverse impact to physical health as well as psychological well-being. The stress may result in failure of stress coping mechanisms, with resultant stress-induced illnesses like hypertension,

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atherosclerosis, insulin-resistance, dyslipidemia syndrome, certain disorders of immune function (Bardi, Koone, Mewaldt, & O'Connor, 2011)

Prolong exposure to stress would result in psychological disorders such as anxiety and depression. Acquaintance to traumatic stressful events would cause Acute stress disorder (ASD). It occurs within four weeks of the traumatic event and lasts less than a month. Witness of acute stress disorders would feel very detached and would be unresponsive to their surroundings (Brannon & Feist, 2010). Another form of traumatic stressful event is Post traumatic stress disorder (PTSD). It occurs within a month or could occur after a year of the traumatic event and last for life long. Witness of PTSD would have the intrusive memories of the traumatic event and would feel detached. Stress could affect one's mind, body and behavior (Brannon & Feist, 2010).

Perceived stress is the thought that an individual has about how much stress they are under at a certain consequences (Stillwell, Vermeesch, & Scott, 2017). Individuals' perception on a certain stressful situation affects the person positively or either negatively. A cross sectional study by Akgun and Ciarochi (2003), disclosed that there is a positive correlation between perceived stress and poor performance at university. Consequently, another study examined the prevalence of perceived stress among private university students in India revealed that 35% of them reported high level of perceived stress (Deb, Strodl, & Sun, 2014). Academic stress is the mental distress associated with the academic performance (Stillwell et al., 2017). A study by Zaid Bataineh (2013) revealed that academic overloads, exams, low motivation and high family expectations were some of the important drive to cause academic stress among the students.

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Coping strategies are the behavioral and cognitive changes that help an individual to overcome a challenging situation (Deniz, 2006). In a previous research it showed that students who follow an active coping method only reported lower levels of stress (Kato, 2008). However, different people tried different styles to overcome stress as the coping strategies varied among every individual's preferences (Pritchard & Wilson, 2006). Students to manage stressful situations, it is important for the individuals to develop different coping strategies (Deniz, 2006).

Due to the challenging nature of university, students can experience increasing levels of stress (Andrews & Hejdenberg, 2010). The level of enrollment in higher education institutes are increasing, hence these patterns demonstrate that pressure and psychological well-being issues are probably going to wind up plainly among university students. (Hamaideh, 2011). First year of university life is generally viewed as a stressful time period for students, as they have to adapt to new environment and new educational approaches (Dwyer&Cummings,2000). As they are transforming from the school period to a more complex educational time and this is even more difficult to learn and adapt themselves sometimes to an entirely different culture, values and beliefs (Hamaideh, 2011)

1.3 Rationale of the study

Tertiary education in Sri Lanka has become very essential. Getting selected to a state university in Sri Lanka is very competitive and limited, as there is only fifteen state universities in Sri Lanka (Gamlath, 2013). Only top students from each district get selected to the state universities. Some of the students who could not get admissions to the state universities go overseas for higher studies and some join the private universities (Gunawardena, 2003). Therefore establishment of private degree awarding institutions have begun to rise. Due to the

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increasing number of private institutions, many students obtain their tertiary education. As different sector of undergraduate will have different stressors, this study will be conducted to their stress levels.

In Sri Lanka, there are only limited studies have been conducted among undergraduates in investigation their academic or perceived stress levels (Ranasinghe, Wathurapatha, Mathangasinghe, & Ponnampereuma, 2017). Further, hardly has there been any comparison between stress levels of undergraduates from state and private institutions (Ranasinghe et al., 2017). A recent study conducted among the nursing students of a state university in Sri Lanka reported 82,6% stress among the undergraduates (Rathnayake & Ekanayake, 2016).

Suicides have been turned out to be one of the main sources of death among university students in Sri Lanka. Study plans, particularly in universities, are exceptionally demanding. Adjusting studies alongside training causes pressure (Kathriarachchi, 2009). Constrained pressure is gainful and can prompt magnificent execution. However, uncontrolled pressure can prompt fatigue, this leads many university students contemplate or commit suicide (Kathriarachchi, 2009). University students burn out has become another critical issue among the university students in Sri Lanka. Though many students commence the bachelor's degree, some students just burn out being the victim of their own stress performance mindset (McMahon & Jason, 1998). It is very shocking that university students fail to cope up with stress and college students who have their entire future ahead of them, simply giving up on their hopes due to uncontrollable stress.

In spite of the way that the stress can positively or negatively affect the university students if students are unable to adapt effectively to the challenges, only few studies are accessible in Sri

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Lanka to clarify the relationship among stressors and stress levels. As only few studies been conducted suggested a few answers for some particular angles of the first year university students' stress related problems. There is a need for a study in Sri Lanka, which manages all aspects of the university students' life by recognizing the source of issues with a specific end goal to grow new routes and in taking care of their well-being. So the present study might help to understand the psychological well-being among the university students in Sri Lanka. The study will be confirming the coping strategies to overcome stress essentially this may be helpful for many undergraduates to deal with stress. The study might also captivate academicians and policy makers to develop and implement policies and procedures on suicide prevention and students burn out among the university students.

1.4 Objectives of the study

General Objective

To find out perceived and academic stress levels in first year undergraduates of selected degree awarding institutions in Western province, Sri Lanka, and exploring their methods of coping with stress.

Specific Objectives

1. To find out academic stress levels and perceived stress levels in first year undergraduates of the degree awarding institutions
2. To compare academic stress and perceived stress levels between the state and private degree awarding institutions.
3. To compare academic stress and perceived stress levels across different disciplines in the first year undergraduates of the degree awarding institutions
4. To explore the methods of coping with stress
5. To examine the differences in coping with stress among first year undergraduates of state and private degree awarding institutions and across different disciplines.

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6. To investigate the factors associated with academic stress and perceived stress in first year undergraduates of the degree awarding institutions.

1.5 Study Variables

The study mainly focuses on three variables. Firstly, Independent variables such as source of stress and demographic variables includes: age, gender, marital status, language spoken at home and the accommodation type as they trigger the stress level of the students. Secondly, the study emphasizes on dependent variables such as academic stress and perceived stress levels as it results from the participants' responses. Thirdly, coping strategies are considered as the confounding variable of the study since they play a role in determining the academic and perceived stress levels of the students.

Chapter 02

2.1 Study Design

The study was descriptive cross-sectional survey study where the data from a population's characteristics were described at a specific point of time. Bryman (1996) stated that survey is the best method to collect data from a large population in a short period of time at a low cost.

2.2 Participants

The sample comprised of a group of first year undergraduates from four selected state and private degree awarding institutions in Sri Lanka namely University of Kelaniya, University of Sri Jayewardenepura, National School of Business Management and American National College.

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Inclusion Criteria

- First year unmarried, male and female undergraduates of over the age of 18 years, from two state universities namely University of Kelaniya and University of Sri Jayewardenepura and private degree awarding institutions namely American National College, and National School of Business Management were selected for the study.

Exclusion Criteria

- Undergraduates who have been relegated to first year, who have a history or current episode of a stress related condition, depression, neurotic or psychotic disorder, were excluded from the study.

2.3 Sampling method

Sample size calculation was achieved using Lwanga and Lemshow formula for estimating a population proportion with absolute precision (Lwanga and Lemshow, 1991).

$$n = z^2 p (100-p)$$

$$d^2$$

n= required sample size,

p= anticipated population proportion for IPV

z = critical value of specified confidence interval

d= accepted precision

$$n = \frac{1.96^2 * 0.826 (1-0.826)}{0.05^2}$$

$$n = 220.85$$

Assuming non-respondent rate is 10%, total sample size will be 250

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Sample sizes for state and private ($N = N_S + N_P$) will thus be two hundred and fifty (250).

Once gate-keeper permissions from the Vice chancellors / Deans and Chief Executive Officers are finalized and granted, participants were recruited from the above mentioned degree awarding institutions. Sample was consisted of both male and female participants from a multi-ethnic, multi religious background.

Convenience samples were selected from all the possible disciplines of the institutions mentioned. Seventy participants from each institution were recruited to the study.

2.4 Measures and Material

Self-administered questionnaire was the tool used in collecting the data in the study. The questionnaire included four subsets: general information sheet, Lakave Academic Stress Response Scale, Perceived Stress Scale and Brief COPE

General Information sheet (Investigator designed) (Annex 1a):

This was composed of section A and section B. Section A of the questionnaire was developed using close-ended questions distributed in order to gather the participants' demographic details such as; age, gender, relationship status, accommodation type, family income and the language spoken at home. Section B collected information on perceived work load, perceived level of difficulty experienced due to bullying, level of strain in following a degree in English medium, Level of difficulty in adjusting to the university life, level of struggle in socializing with others in the educational setting. The above measures were measured via a Visual Analogue Scale. Participants specified their level of agreement by positioning their

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responses between two end-point ranging from 0-10, where 0 is minimum and 10 is maximum.

The questionnaires were translated to both Sinhala and Tamil languages.

Lakaev Academic Stress Response Scale (LASRS) (Lakaev, 2006) (Annex 2a):

Academic stress level was measured using LASRS (Lakaev, 2006). This is one of the global measures used to measure the academic stress levels among the university students. LASRS consists of 21 items including 6 physiological questions, 6 cognitive items, 7 affective items, and 2 behavioural items. Responses were rated in a 5-point likert scale from None of the time (1), A little of them (2), Some of the time (3), Most of the time (4) and All of them (5). Scores will be summed up while indicating higher the LASRS score greater the academic stress level.

LASRS was administered in all three languages; English, Sinhala and Tamil. Sinhala version of the scale has already been validated to be used in Sri Lanka and published in annual sessions of Sri Lanka Medical Council in year 2014. Reliability and validity of the Sinhala translation of the Lakaev Academic Stress Response Scale (LASRS-S) obtained at 127th International Medical Congress of the Sri Lanka Medical Congress, 2014 (De Silva, Basanayake, Edirisinghe, Ratnayake & Somasiri, 2014).

Written permission has already granted by Ms MKOK De Silva, who is also the supervisor of proposed study to utilize the Sinhala version of the scale in the study. Furthermore, LASRS was translated and validated in Tamil with respect to the guidelines specified by World Health Organization on translation of health instrument. Scale was translated to Tamil and sent for consensual validation by three personnel in the field who are fluent in Tamil.

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Original version (English) of the scale was forward translated to the target language (Tamil) by myself and by Dushika Sunderarajan after obtaining the written consent (Annex). Then back-translation (Tamil to English) is done by Kosalina Vignarajah (Annex). Finally, the translation process were reviewed by Dr.V.Uthistan,MO (Psychiatry) (Annex).

Perceived Stress Scale (Cohen, Kamarck, & Mermelstein, 1983) (Annex 3a) :

Perceived stress level was evaluated by Shedon Cohen's Perceived Stress Scale (PSS) (Cohen, Kamarck, & Mermelstein, 1983). It is a standardized and most widely used scale in measuring the perceived stress level. PSS consists of 10 items. Responses are rated across a likert scale from Never (0), Almost never (1), Sometimes (2), Fairly often (3), and Very often (4). PSS scores are obtained adhering to the scoring instructions specified by the original scale. Higher scores reflect greater perceived stress levels. PSS was administered in all three languages; English, Sinhala and Tamil. Scale has already been translated to Sinhala by Prof.Somasiri, Faculty of Medicine- University of Ruhuna, and to Tamil language by Santhalingam Sathees, University of Jaffna. Translated version of the scales used upon the approval of the authors.

Brief COPE (Carver, 1997) (Annex 4a):

Brief COPE is abbreviated version of the COPE Inventory (Carver, 1997). This scale consists of 28 items and the scales are computed as self-distraction -items 1 and 19, active coping ,items- 2 and 7 , denial-items 3 and 8 ,use of emotional support-items 5 and 15 ,use of instrumental support- items 10 and 23 ,behavioral disengagement-items 6 and 16 , venting- items 9 and 21 ,positive reframing-items 12 and 17 ,planning- items 14 and 25 ,humor- items 18 and 28 ,acceptance- items 20 and 24 ,religion- items 22 and 27 , self-blame- items 13 and 26. Responses are rated by a four-point likert ranging from "I haven't been doing this at all" (1) to

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“I’ve been doing this a lot” (4). Validity and reliability of Sinhala translation of the brief COPE is obtained at the Annual Research Symposium, Faculty of Graduate Studies, University of Kelaniya, Sri Lanka in 2014 (Godamunne, Pathmeswaran, Samankula & Samarasinghe, 2014). Furthermore, Brief COPE was translated into Tamil with respect to the guidelines specified by World Health Organization on translation of health instrument. Scale was translated to Tamil and sent for consensual validation by three personnel in the field who are fluent in Tamil.

Original version (English) of the scale was forward translated to the target language (Tamil) by myself and by Dushika Sunderarajan after obtaining the written consent (Annex). Then back-translation (Tamil to English) is done by Kosalina Vignarajah (Annex). Finally, the translation process were reviewed by Dr.V.Uthistan,MO (Psychiatry) (Annex).

2.4.1 Reliability of the questionnaires

Table 1

Main study: Questionnaire variables reliability among the study sample

Questionnaire parts	Cronbach’s α	N of items
General information sheet- Demographic data+ questions on current university life	0.59	12
Lakaev Academic Stress Reaction Scale (LASRS)	0.68	21
Perceived Stress Scale (PSS)	0.74	10
Brief COPE	0.67	28
N=230		

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Table 1 shows that except the general information questionnaire, Cronbach's Alpha coefficient was above 0.6 in LASRS, PSS, and in Brief COPE. This indicates that the main scales of this study were reasonably reliable.

2.5 Procedure

An advertisement specifying the inclusion and exclusion criteria (Annex 8) on the proposed study was put up in the notice boards of the four study settings following the ethical clearance and permissions from the institutional heads. Time and a venue were specified in the advertisement. Time was chosen without hindering the academic schedules of prospective participants. Students who met the inclusion criteria, were briefed about the study and their right to withdraw their participation at any point during the study was given a participant information sheet (Annex 5a) and a consent form (Annex 6a). Written consent was obtained from all the students who agree to take part in the study. The survey was carried out without causing any disturbances to the academic schedules of the institutions.

Firstly, participants were provided with the general questionnaire, Lakaev Academic Stress Response Scale, Perceived Academic Stress Scale and Brief COPE. Questionnaires were distributed in the preferred language of the participant.

The survey took approximately 25 minutes. Participants were debriefed (Annex 7a) about the study at the end of the data collection. The survey was conducted adhering to the ethical and professional guidelines specified by British Psychological Association (BPS) and the Ethics Committee, Faculty of Psychology, University of West London, UK.

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2.6 Statistical Analysis

Scores on LASRS, PSS and Brief COPE were evaluated by the scoring instructions provided along with the scales. Data was analyzed using Statistical Package for Social Science (SPSS) version 24. Once the data is entered to SPSS, data cleaning and screening was carried out. Both descriptive as well as inferential statistics was performed on the data. Demographic data was analyzed by descriptive statistics via SPSS. Preliminary analyses was carried to ensure that statistical test assumptions as well as normality

1. To identify the demographic, socioeconomic and factors related to the university life – frequency, percentages, mean, standard deviation, spearman correlation, descriptive statistics (bar charts, histograms, scatter plots)

2. To identify the association among perceived stress, academic stress and coping methods - Mann-Whitney U test was carried out to find the statistical significant differences between and among the groups

2.7 Ethical Issues

Consent: Students who met the inclusion criteria, was briefed about the study and their right to withdraw their participation from the study at any point during the study and two weeks after the completion of data collection was explained to them. They were given a participant information sheet (Annex 5a) which contained the information of the study. Then they were given the opportunity to ask questions if they have any and their queries, and was answered to the best of ability. Once participant expressed their willingness to participate in the study, a consent form in duplicate was provided along with the information sheet. Participants were asked to write their names and sign in the consent forms. Primary investigator was also wrote the name and sign in

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the consent form. One copy of the consent form was retained with the primary investigator while other was given to the participant. Data was collected only after the written consent is obtained from the participants.

Confidentiality: Only the researcher and study supervisor had the access to the raw data. The participants were only be identified on the score sheet by the participant code number. The researcher was retained the raw data from the project until the completion of the dissertation process. Data then will be completely destroyed. Even though perceived stress and academic stress are considered non-clinical measurements, in the case a given participant has shown higher levels of perceived and/or academic stress levels, there stands a responsibility of the researcher to keep the participant informed of his/her higher levels of stress, for they predict negative mental health outcomes in the future and/or suggest a possible ongoing psychological condition. Therefore, to fulfill this ethical liability, names and/or contact information of the participants were collected. A password protected file was created in primary investigator's personal computer linking names and contact information with the participant codes and will be kept confidential will only be available to the primary investigator.

Rights of the participants: Participation in the study was entirely voluntary. If the participants change their mind about taking part in the study they may withdraw at any point during the study. Participants may request a withdrawal of their data even after the completion of the study within two weeks after the data collection. Participants can withdraw their participation by contacting the researcher on email or phone and providing the participant codes that were assigned to them. Necessary contact information and procedure for withdrawing consent were given in the participant information sheet. If given participant decided to withdraw his/her participation from the study, all their data will be destroyed and will not be used in the study.

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Fair participant selection: Upon the approval from the mentioned institutions, convenient samples were selected from all the possible disciplines of the institutions. Both males and females with a multi-ethnic, multi religious background who fulfil specified inclusion criteria were recruited to the study.

Assessment of Risk/ Benefits: There were no risks associated with this study. However, if the participants feel disturbed while filling the questionnaires they were given chance to stop answering them at any point and discontinue their participation. On the other hand, this study will help to build insight on perceived and academic stress levels of the participants. Further, in case of high levels of stress, primary investigator will inform the participants about their stress scores and guide them to appropriate services.

Responsibilities of the researcher: If the researcher observes any participant with very high stress scores, they will immediately be notified, and assistance will be provided with their consent. If something goes wrong and the study will have to be terminated, the researcher will contact the participants as soon as possible using the method indicated on the consent forms and the data will be destroyed immediately.

Vulnerable population: This study did not involve any vulnerable population.

Chapter 03

3.1 Results and Analysis

This study's results section includes the analysis of the demographic variables, preliminary analysis of the sample and the analysis of the objectives where the specific objectives of the study will be analyzed individually.

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3.1.1 Demographic Variables

The survey was conducted among 230 participants. As it is been illustrated by Table 2, 105 students of State degree awarding institutes and 125 students of private degree awarding institutes were returned with the response to the questionnaire. 116 male participants (50.4%) and 114 female participants (49.6%) took part in the study from both degree awarding institutes. The study consisted of 53 male and 52 female participants (M= 1.50, SD= 0.50) from the state universities while having 63 male and 62 female participants (M=1.50, SD=0.50) from the private degree awarding institutes.

Table 2

Analysis of gender by the type of degree awarding institutes

	Gender	Frequency	M	SD
STATE	male	53	1.50	0.50
	female	52		
	total	105		
PRIVATE	Male	63	1.50	0.50
	Female	62		
	Total	125		

3.1.2 Preliminary analysis of the study sample

Test of normality revealed that variables ; academic workload (W=0.81, P<0.05), bullying (W=0.67, P<0.05), difficulty in English (W=0.75, P<0.05), demands of the university (W=0.85, P<0.05), Socializing in university (W=0.81, P<0.05)Total PSS(W=0.98, P<0.05), Total LASRS

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($W=0.94$, $P<0.05$), and Total Brief COPE ($W=0.97$, $P<0.05$) were not normally distributed.

Therefore the data will be further analyzed using nonparametric tests.

The survey questionnaires were distributed to students of University of Kelaniya, University of Sri Jayewardenepura, American National College and National School of Business Management. The final response rate was 82.14%, 280 participants were distributed with questionnaires and 230 were returned with response. Below Table 3 shows the distribution of the sample.

Table 3

Analysis of gender by the type of degree awarding institutes

	Gender	Frequency	M	SD
STATE	male	53		
	female	52		
	total	105	1.50	0.50
PRIVATE	Male	63		
	Female	62		
	Total	125	1.50	0.50

Figure 1

Analysis of age by the type of degree awarding institutes

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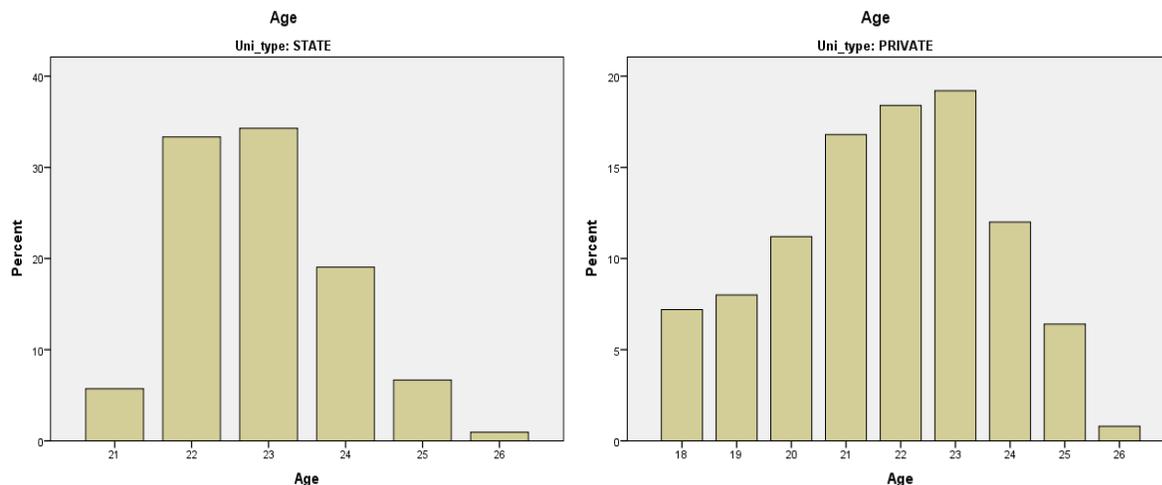
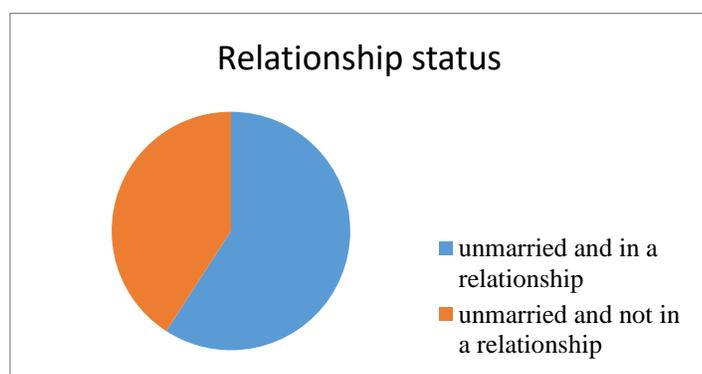


Figure 1 illustrates the distribution of the age between both state and private participants. In the state universities participants age ranged from 21- 26 years where as in private degree awarding Intuitions participants age ranged from 18-26 years. However, in both type of institutions (state: 22years- 35 participants, 23 years- 36 participants; private: 22 years-23 participants, 23 years- 24 participants) majority of the participants fell under 22-23 years of age.

Figure 2

Analysis of relationship status by the type of degree awarding institutes



As it is illustrated by the figure 2, 136 participants were unmarried and were in relationship (state-59, private- 77). On the other hand 94 participants were unmarried and were not in a relationship (state- 46, private-48).

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Figure 3

Analysis of language spoken at home by the type of degree awarding institutes

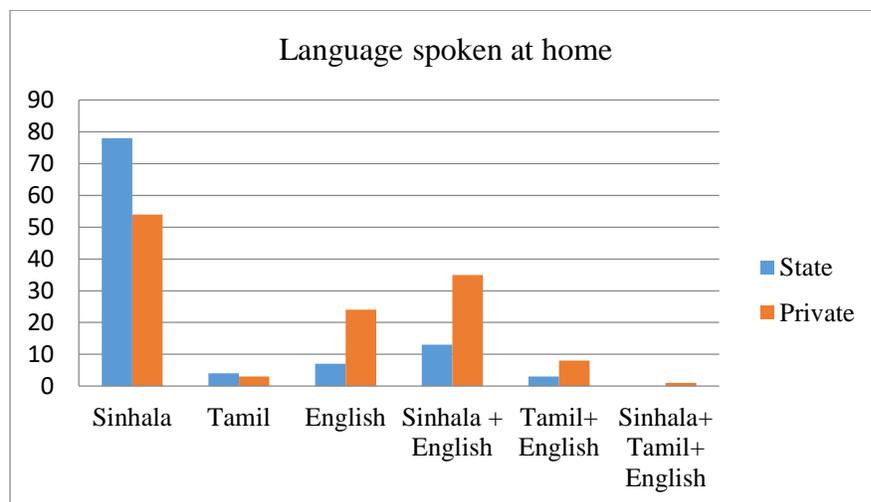


Figure 3, demonstrates that highest number of participants were spoken Sinhala at home (state- 78, private-54). Sinhala and English language combination was reported the second highest number of cases (state- 13, private- 35) and the third highest was English language at home (state-7, private- 24). Tamil and English combination (state- 3, private-8) took place the fourth highest rank while Tamil language at home reported to be the fifth highest rank (state- 4, private- 3). Sinhala+ Tamil+ English language combination reported only at the private degree awarding institute with 1 participant.

Table 4

Analysis of accommodation type and occupancy by the type of degree awarding institutes

Accommodation type	State	Private
Home	23	65
University hostel	57	32

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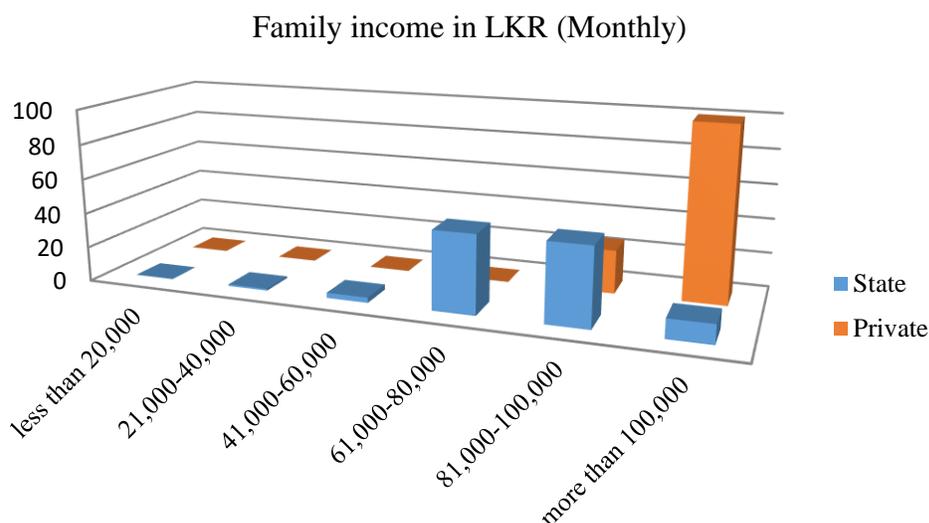
Private	25	28
Total	105	125
Accommodation Occupancy	State	Private
Individual	2	11
Shared	80	59
Total	82	70

Table 4, show cases that 89 participants (state- 57, private- 32) were accommodated in the university hostel, while 88 participants were attending university from their home (state- 23, private- 65). 43 participants were from private accommodations (state- 25, private- 28). State degree awarding students who were from the university hostel and private accommodation, reported 80 cases on shared occupancies and only 2 cases of individual occupancies. On the other hand, private degree awarding institutions' students reported 59 participants from shared occupancy and 11 participants from individual occupancy.

Figure 4

Analysis of monthly family income by the type of degree awarding institutes

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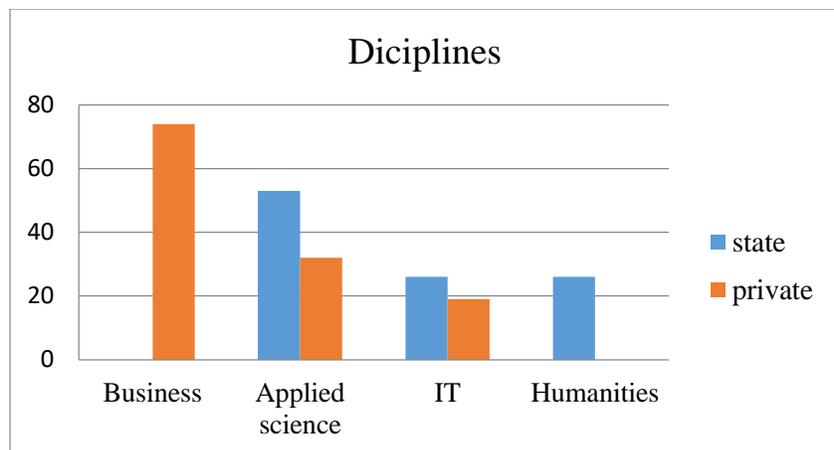


As it is shown by figure 4, 0 number of cases was reported on the monthly income less than 20,000 LKR. One participant from the state university stated monthly family income in the range of 21,000- 40,000 LKR, likewise 3 participants again from the state university reported to have 41,000-60,000 LKR as their monthly family income. 61,000-80,000 LKR family income was reported only at 45 state university students. Private university students' monthly family income stated at 81,000-100,000 LKR range with 25 reported cases, while 45 participants from the state universities also show cased the same range of family income. Private degree awarding institutions reported 100 cases on more than 100,000 monthly family income while, only 11 participants from the state universities stated to be in the same range of monthly income.

Figure 5

Analysis of disciplines by the type of degree awarding institutes

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As it is illustrated by figure 5, participants were reported to be from four different disciplines: Business (32.17%), Applied sciences (36.95%), Information technology (19.56%) and Humanities (11.30%). Within the convenience sample (N=230) undergraduates of Business (n=74) were only to be figured out in the private degree awarding institutions, similarly; undergraduates of Humanities (n=26) were only be able to found at state universities.

3.1.3 Analysis of the study objective

General objective

Study objective is to find out perceived and academic stress levels in first year undergraduates of selected degree awarding institutions in Sri Lanka, and exploring their methods of coping with stress. General objective is achieved through the analysis of the specific objectives.

Specific objective

1. To find out academic stress levels and perceived stress levels in first year undergraduates of the degree awarding institutions

Perceived stress (PS) scores for the sample (N=230) as measured by Perceived Stress Scale was (M=18.31, SD= 2.66). PS scores ranged from 11-25 . Low PS scores (0-13) were

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observed in 6 participants (2.61 %) and moderate level (14-26) of PS score was observed among 224 participants (97.4%). There was no high level (27-40) of PS score reported among the participants. Low PS scores were equally reported between both male and female undergraduates. Mann -Whitney test indicated that there is no significant difference in the PS score between male (mdn=18.0) and female (mdn=18.5) undergraduates, [U= 5969.5, $p>0.05$].

Academic stress response scores for the sample (N=230) as measured by Lakaev Academic Stress Response Scale (LASRS) (M=27.57, SD= 3.24). Academic stress response scores ranged from 21-38. Subscales of LASRS reported the following results for the sample (N=230); Physiological item (M=6.79, SD=0.77), Cognitive item (M=8.58, SD=1.52), Affective item (M=9.16, SD=1.52), and Behavioral item (M=2.61, SD=0.74). Low LASRS scores (0-34) were observed in 219 participants (95.22 %) and moderate level (35-69) of LASRS score was observed among 11 participants (4.78%). There was no high level (70-105) of LASRS score reported among the participants. Male undergraduates reported more low level of LASRS (52.1%) than the female undergraduates (47.9%). Whereas moderate level of LASRS was reported higher in the female students (81.8%) than in the male students (18.2%). Mann -Whitney test indicated that there is no significant difference in the LASRS score between male (mdn=27.0) and female (mdn=27.0) undergraduates, [U= 6191.0, $p>0.05$].

2. *To compare academic stress and perceived stress levels between the state and private degree awarding institutions.*

Undergraduates of state university sectors reported 83.3% of low PS score and 44.6% of moderate PS score. On the other hand, undergraduates of private university sectors demonstrated 16.7% of low PS score and 55.4% of moderate PS score. Undergraduates of state university sectors reported 42.9% of low LASRS score and 100% of moderate LASRS score. On the other

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hand, undergraduates of private university sectors demonstrated 57.1% of low LASRS score and no reported case on moderate level of LASRS. Mann-Whitney test revealed that LASRS score was significantly greater among state undergraduates --(mdn=29) than among the private undergraduates (mdn=26), [U=2175.0, $p<0.05$]. Further, Mann-Whitney test revealed that PS score was significantly greater among private undergraduates --(mdn=19) than among the state undergraduates (mdn=17), [U=4411.5, $p<0.05$]. Spearman correlation analysis revealed that total score on perceived stress had a weak positive correlation with the total score of academic stress $r_s = 0.008$, $p>0.05$.

3. To compare academic stress and perceived stress levels across different disciplines in the first year undergraduates of the degree awarding institutions

PS score varied across different disciplines. Highest number of moderate level of PS score was reported among Applied Science undergraduates (n=82), followed by Business students (n=73), then the undergraduates of Information technology (n=44), finally the students of Humanities (n=25). Similarly, academic stress score varied across different disciplines. Highest number of low level of LASRS score was reported among Applied Science undergraduates (n=79), followed by Business students (n=74), then the undergraduates of Information technology (n=42), finally the students of Humanities (n=24). Similarly, Highest number of moderate level LASRS was report among student of Applied sciences (n=6), then students of Information technology (n=3), and the least number of cases were reported in students of Humanities (n=2). Moderate level of LASRS was not recorded among the undergraduates of Business field.

4. To explore the methods of coping with stress

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Coping strategies used by the undergraduates (N=230) as measured by Brief COPE scale (M=50.05, SD= 6.00). Coping strategies' scores ranged from 33-69. Subscales of Brief COPE reported the following results for the sample (N=230); Self-distraction (M=,5.23, SD=0.88), Active coping (M=3.96, SD=1.23), Denial (M= 2.23, SD=0.45), Substance use (M=2.12, SD=0.47), Emotional support (M=4.43, SD=1.53), Instrumental (M=4.45, SD=1.55), Behavioral disengagement(M=3.81, SD= 1.32), Venting (M=3.42, SD=0.91), Positive reframing (M=4.42, SD=1.74), Planning (M=3.23, SD=0.89), Humor (SD=2.49, sd=1.02), Acceptance (M=4.30, SD= 1.07), Religion (M=3.50, SD= 1.52), and Self –Blam (M=2.46, SD=0.85).

Brief COPE scores (0-36) were observed in 2 participants (0.87 %) and moderate level (38-75) of Brief COPE score was observed among 228 participants (99.13%). There was no high level (76-112) of Brief COPE score reported among the participants. Male and female undergraduates reported same number of cases in low level of Brief COPE (50.0%). Whereas moderate level of Brief COPE score was reported slightly higher in the male students (50.04%) than in the female students (49.60%).

5. To examine the differences in coping with stress among first year undergraduates of state and private degree awarding institutions and across different disciplines.

Both state and private undergraduates reported same number of cases in low Brief COPE score (50.0%) and 100% of moderate LASRS score. On the other hand, higher moderate level of Brief COPE was recorded in private university (54.4%) sector than in the state university sector (45.6%). No degree awarding institution reported high level of Brief COPE score. Bief COPE score varied across different disciplines. Both Business and Applied science undergraduates reported same amount of score in the low Brief COPE level (50.0%). Students of Information technology and Humanities were not reported low Brief COPE score. Highest number of

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moderate level of Brief COPE score was reported among Applied Science undergraduates (n=84), followed by Business students (n=73), then the undergraduates of Information technology (n=45), finally the students of Humanities (n=26).

Mann -Whitney test indicated that there is no significant difference in the Brief COPE score between male (mdn=49.0) and female (mdn=50.0) undergraduates, [U= 6319.0, $p>0.05$].

Further, Mann-Whitney test revealed that Brief COPE score was significantly greater among state undergraduates (mdn=51.0) than among the private undergraduates (mdn=49.0), [U=5202.0, $p<0.05$].

6.To investigate the factors associated with academic stress and perceived stress in first year undergraduates of the degree awarding institutions.

Table 5 shows that the highest source of stress experienced by the students of both state and private sectors were demands of the university, followed by socializing with others at the university, then difficulty in following a degree in English medium and the academic work load. However, bullying at the university is considered as the source of least stress experience by the participants.

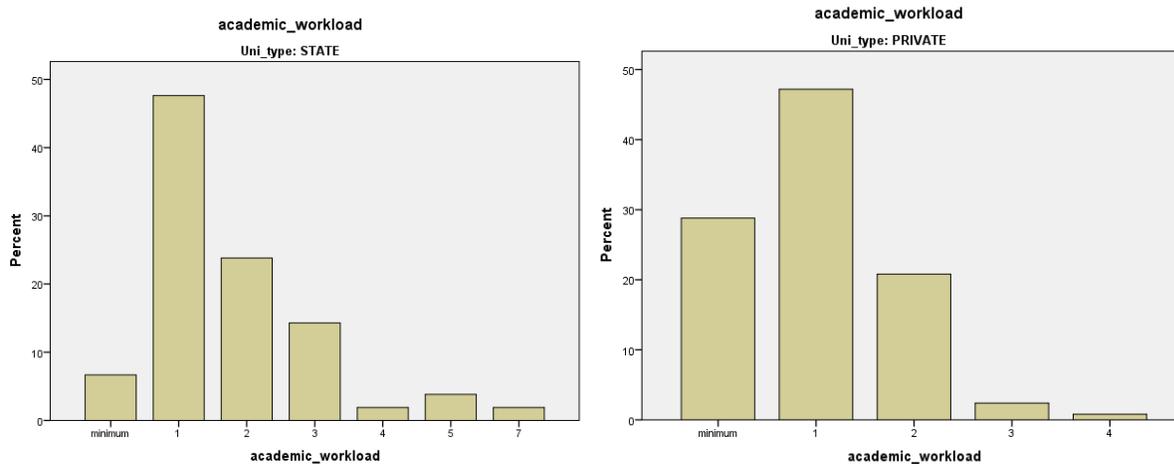
Table 5

Source of stress experienced by the students of both state and private university sectors (N=230)

Source of stress	Rank	M	SD
University demands	1	1.93	1.88
Socializing with others	2	1.68	1.97
Difficulty in English	3	1.57	1.84
Academic work load	4	1.35	1.14
Bullying	5	0.66	0.88

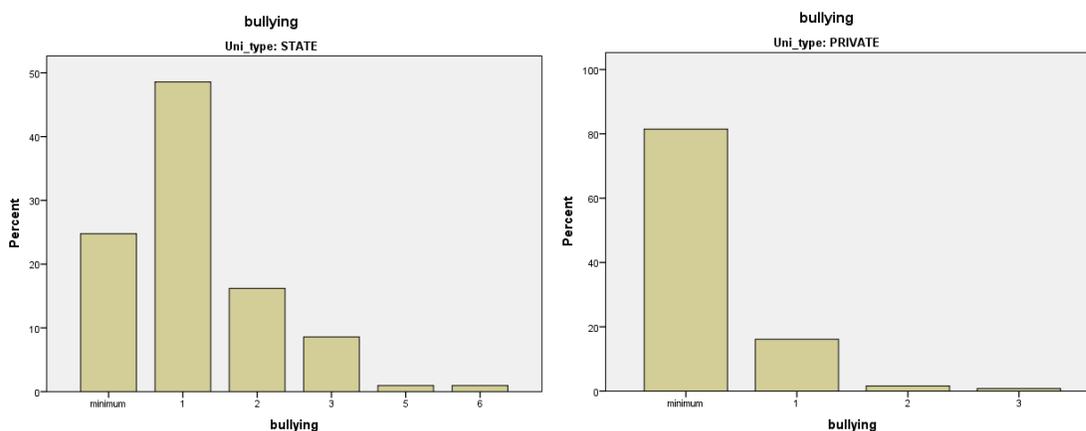
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Figure 6.1

Academic work load

As it is shown by figure 5.1 academic work -load has been reached to the difficulty level of 7 in the 0-10 point scale where 0 is minimum and 10 is maximum. Maximum level of difficulty is been reported at state universities. However, in both state (50) and private (59) most number of cases was reported on the difficulty level of 1 in the academic work-load.

Figure 6.2

Bullying at university

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According to figure 5.2 state university participants have reported up to difficulty level of 6 to show case their extend in which they were bothered about bullying at university. Whereas in the private university the level has reached only up to 4, when it comes to bullying. In the state universities maximum number of cases were reported in the level 1, on the other hand the level was minimum(0) in private degree awarding institutes.

Figure 6.3

Difficulty in English

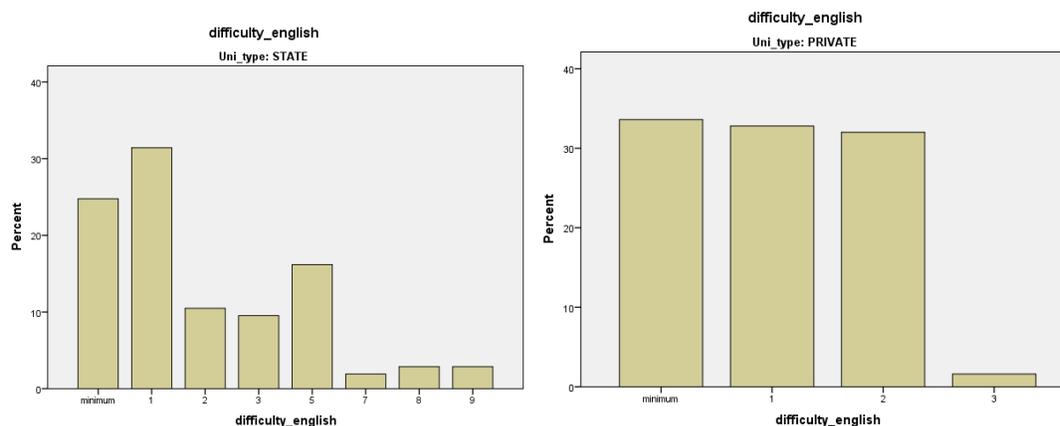


Figure 5.3 illustrates that, in the state degree awarding institutions level difficulty in following a degree in English medium is been extended to level 9, whereas in the private institutions maximum difficulty level is 3. In the private sectors, maximum number of cases (n=42) were reported at the minimum level and in the state sector maximum cases (n=33) were reported at the level 1.

Figure 6.4

Demands of the university

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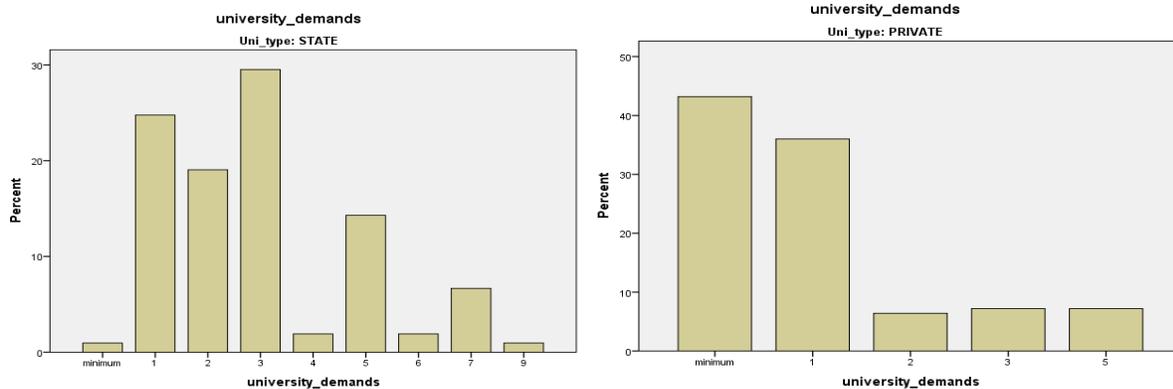
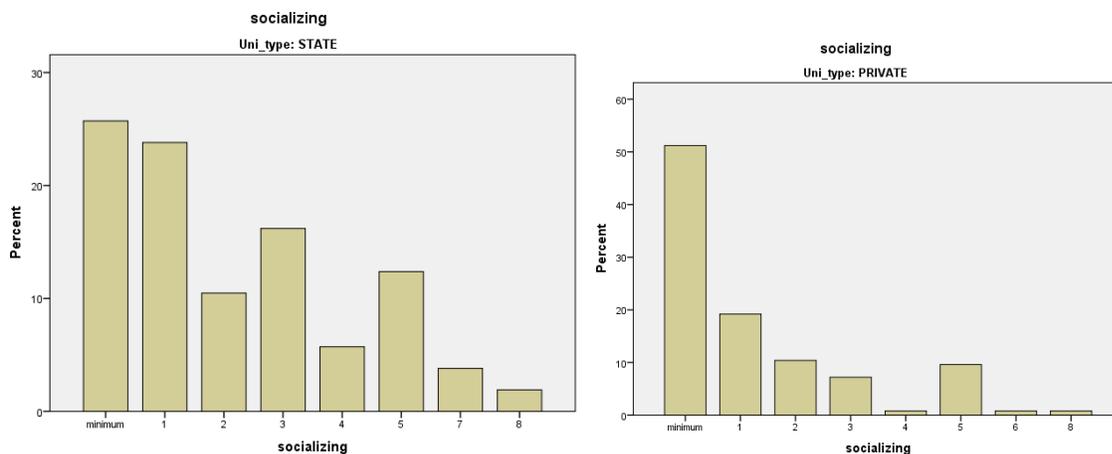


Figure 5.4 shows that, in the state degree awarding institutions level difficulty in adjusting to the demands of the university life is been stretched to level 9, whereas in the private institutions maximum difficulty level is 4. In the private sectors, maximum number of cases (n=54) were reported at the minimum level and in the state sector maximum cases (n=31) were reported at the level 3.

Figure 6.5

Socializing with others at university



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As it is shown by the figure 5.5 in both state and private degree awarding institutions level of difficulty in socializing with others at university is been reported level 8. Similarly, in both sectors most number of cases reported at the minimum level.

Chapter 04

4.1 Discussion

Main objective of this study is to find the perceived and academic stress levels in first year undergraduates of selected degree awarding institutions in Western province, Sri Lanka and exploring their methods of coping with stress. The study results revealed that the students indicated a significant level of both perceived and academic stress. On that point, academic stress level was higher than the perceived stress level among the undergraduates of both state and private degree awarding institutions. This finding is associated with those of Akgun and Ciarochi' s study(2003), majority of the students experience more academic stress level than the perceived stress level. This result was not surprising, as it been also proven in the study by Al-Rowaie (2001), that academic stress had affected university students than those of perceived stress.

Based on the second objective of the study, it was explored that majority of the undergraduates of state universities indicated more low scores on perceived stress than the private sector undergraduates. On the other hand moderate level of stress was higher among private university students than those of state university undergraduates. Besides, academic stress was higher among state university undergraduates. Therefore, this findings show cases that perceived stress was higher among private university students and academic stress was higher among state university students.

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This finding contrary many previous other researches, Struthers et al (2000), that students of state universities perceive the stress more higher than the students of private sectors. Many factors would have contributes towards this results. For example, students who are getting selected for state universities in Sri Lanka are eligible to pursue the free education; this releases the state universities students from the burden of bearing the cost for education. This in turn may affect their perception of stress on university life.

Even though state university students reported low perceived stress, their scores on academic stress was higher than the private university students. State university students reported moderate level of stress where as private sector students reported low level perceived stress. This results contradict the study results of Shields (2001), as it is been stated that private sector students reported higher academic stress score than those of state university students. Further this study also compared both academic and perceived stress level among the different disciplines, such as; Business, Applied sciences, Information technology and Humanities. As of the results it was discovered that students of Applied sciences reported highest stress, followed by students of Business, then the students of Information technology, least was students of Humanities. This results goes hand in hand with the results of Misra et al. (2000), student who belong to science faculty reported higher level of academic stress than the students of Business and Information technology. Further this also goes in line with the study by Tisdall (2001) that university students of Science stream scored higher perceived stress than those of Business students.

Demands of the university life, socializing with others at university, and following the degree in English medium were found to be the main source of stress. Sinhala was the language spoken at home by majority of the undergraduates of both state and private degree awarding

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institutions. This would have led the students experience the difficulty in following the degree completely in English medium.

Moreover, majority of the first year undergraduates used self-distraction, instrumental support, emotional support, positive reframing and acceptance as the five top most coping strategies to overcome the stress. On the other hand, humor, self-blame and substance use were the least scored coping methods among the undergraduates. This describes student's positive perspective towards the stressful circumstances and their responsibility in overcoming the barriers they face in their university life. This finding slightly little varied from the study by Misra et al. (2000), university students have used cognitive and behavioral approaches very often to deal with the stress they experience during the university life. However, Folkman and Lazarus (1988), concluded that coping strategy varied according to the consequences. Further female participants used more emotional support, while male participants used active coping very often to deal with the stress. This finding is associated with those of Roe et al. (2000), that females use emotional strategies to overcome the stress while males are weak in expressing the emotional support. Over all, the results and finding of the study goes hand in hand with the transactional model of stress and coping, which proposed that level of stress experienced is transactional between the person and the consequences (Lazarus & Folkman, 1984)

4.2 Limitations of the study

Following limitations of the study should be considered before generalizing the results of this study.

1. The study was conducted in Western province, Sri Lanka with the first year undergraduates of two state universities and two private universities. Thus, the results

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cannot be generalized to all the first year undergraduates of Sri Lanka, but however, there can be some similarities as the island follow the same education system.

2. The study did not consider the students' individual difference in stress level. As some are vulnerable to stress and the other are not.
3. Source of stress and the stress level was not compared with non- university students to make sure that the results were only related to the university life and not impact of the developmental stage.
4. Parents and lecturers perspectives and views should be taken into account when discussing university students' experience of stress. Due to the constraints in the resources it was unable to include those groups in the study.
5. As the study was conducted at the beginning of the semester it is possible that the students' stress level could have been lower than if the questionnaire was administered at the end of the semester, more stressful time.

4.3 Recommendations

In future, the study should be conducted in different districts of Sri Lanka, to increase the reliability of the results and to generalize it across the Island. It would be beneficial if parents' and lecturers views also taken into account in university students' experience in stress as they are the closest observers of the students. Future studies should also consider the other confounding variables such as; student's grade point average, parents' highest education level, and more stressors than what the study already had.

Future studies should be focused on students' personality type when considering the coping strategies of stress. University environment should be taken into account in future researches as

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it also plays a role in university students' stress level. In future, the questionnaire should be administered at different times of semester to increase the accuracy of the results.

4.4 Conclusion

This study explored the perceived and academic stress levels in first year undergraduates of selected degree awarding institutions in Western province, Sri Lanka while discovering their methods of coping with stress. The results revealed that undergraduates of state universities showed higher academic stress score and undergraduates of private universities showed a perceived score.

Further, this study discovered that self-distraction, instrumental support and emotional support were the main coping strategies used by the undergraduates respectively. Moreover, the study was also focusing on the source of stress; demands of the university life, socializing with others at university, and following the degree in English medium were found to be the main source of stress respectively.

Importance of this study is cannot be ignored as stress can have an impact in their academic and personal life. It is the society's duty to make sure that stress cannot be a barrier in student's life progress as they are the future of this society.

Further, it is believed that this study will be a practical use for academicians and policy makers who involves in making decisions on university students stress and their life. It is also believed that this study might reform the university students' current condition on stress and the coping methods they use to get over with it. This study could be a reference point for the researcher when investigating about university students' stress and coping strategies in future.

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