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Psychological Distress and Academic Achievement: A Study on CamEd's Freshman Year Students

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ABSTRACT

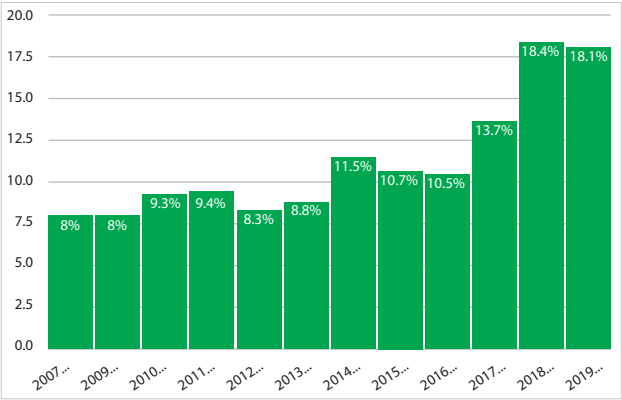
This study aims to analyse the influence of Psychological Distress on grades of freshman years student on CamEd Business school to further increase data on metal well-being in CamEd students. Psychological distress of 208 respondents was measured by the SRQ-20.112 SRQ-20 scores where compared with there course psychology grades. Differences on Psychological Distress between Gender and amount of enrolled schools where also analysed. High levels of Psychological distress where found in this study (above 60% at risk for mental health disorders), which is in line with earlier findings. There was no significant difference in PD between gender although a difference was found in gender and having a high risk for mental health disorders. No significant differences where found for number of enrolled schools and there was no correlation between PD and grades. Limitations and possible explanations are discussed. The findings of this study show the need to further research to the relationship between PD and academic achievements for this specific population.

Keywords: Psychological Distress, Students, Academic Achievement, Cambodia.

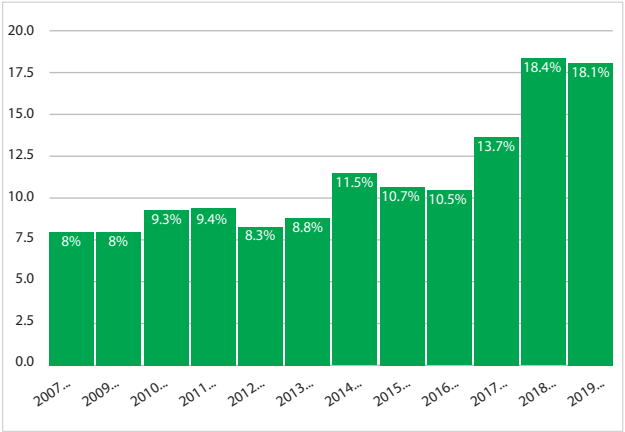
INTRODUCTION

Psychological distress (PD) in students is recognized worldwide as in important public mental health issue. High levels of PD are more prevalent in students than in the general population (Stallman, 2011). Data from the healthy minds network show that rates of severe anxiety (graph. 1), major depression (graph. 2), eating disorders, suicide ideation and self injury in students from over 100 different universities and colleges in the United States are increasing almost every year. This results in 33% of the American higher education student population meeting the criteria for a mental health disorder in 2019 and suicide being the second biggest cause of death in students (Data retrieved from: https://healthymindsnetwork.org/data/).

Graph. 1. Major Depression in American higher education students per year



Graph. 2. Severe anxiety in American higher education students per year



These findings are not limited to the United States only. Studies from other countries such as Canada, Malaysia and Australia show similar trends in their respective student populations (Kessler et. al., 2003; Salam et. al., 2013; Adlaf et. Al., 2007), where in the UK the current amount of psychological problems in the age group 16-24 is six times higher than in 1995 (Pitchforth et. al., 2019).

Although there is increased public attention to this growing problem, it is still not completely clear why this population is more vulnerable to PD and why more and more students seem to suffer from mental problems. PD in general refers to a wide range of symptoms and experiences that relates to someone's

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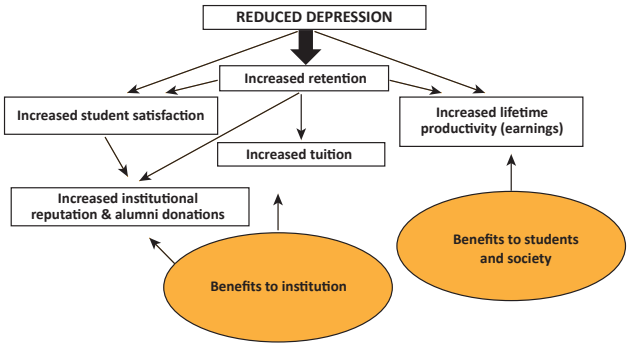
emotions and functioning. It is often related with anxiety en depression like symptoms and is strongly connected with a decrease in overall mental-well being and an increase in mental health problems (Payton, 2009; Riley 2014). Mental health disorders mostly have their first onset during the age of 18- 25 years old (Kessler et al., 2005), which can be related with elevated levels of PD. The healthy minds network also reports an increasing amount of evidence of negative effects from social media use on mental health, which can be related to this trend. The life long lasting effects of high levels of distress on burn-out risk and physical impairment (Riley, 2004) should be enough incentive for educators to take action, but there are also direct academic consequences of PD in students.

PD and academic achievement. PD has an overall negative correlation with academic achievement (Samouei et.al., 2015). Looking more closely Shankar and Park (2016) found that PD is hampering the ability to concentrate and pay attention, which are both pivotal parts in academic success. Research from Saddock and Saddock (2000) is supporting these findings and show that specifically symptoms from anxiety (worrying) and depression (problems with decision making, suicidal thoughts and sleep deprivation) are negatively influencing the ability to pay attention and spend time on important academic tasks. When looking at the influence of mental health on GPA we see a direct negative influence. There is a strong negative correlation between untreated depression and GPA, as where successfully treated depression is not (Hysenbegasi et al., 2005). A longitudinal study by Eisenberg et.a.l (2009) also found a significant negative correlation between depression and GPA. This correlation was even stronger when anxiety symptoms are co-morbid. They also found higher probabilities in drop-out when students are suffering form mental health problems. This link with drop-out rates and mental health is found in many different studies. For example 64% of students who dropped out of college report mental health related problems as the main reason in a study done by NAMI (2012). Studies from the healthy minds network show that students with mental health problems are two times more likely to drop-out from university. Moreover they found that students with mental health problems often develop negative attitudes about their educational institute before they drop-out (Lipson and Eisenberg, 2018). The effect of mental health in academic achievement is indisputable and investing in mental health services for students can give a return of investment in the form of increased tuition fees (higher retention rates) and high achieving graduates (American Counsel of Education). The ROI rate of investing in students mental well-being is dependent on certain variables but the healthy minds network makes a strong case for the economical benefit for higher education institutes to start investing (Fig. 1).

Fig. 1. Economic case for students mental well being by the healthy minds network



AIM OF THIS STUDY

This study aims to analyse the correlation between academic achievement and PD in Freshman year students from CamEd Business school. Although internationally studies show that a negative correlation between PD and GPA is to be expected, there is no research conducted on the Cambodian student population. Studies from Pan (2017) en Cornet (2018) show similar rates of PD in the Cambodian student population as students worldwide, although common general predictors of PD, such as gender, where found to be different. Further studies on the Cambodian student population are therefore needed. This study aims to: Compare the rates of PD in this studies population with worldwide averages, look at correlations between general demographics and PD and analyse the influence of PD on academic achievement (as measured in grades).

HYPOTHESIS

1. Rates of Psychological Distress will be similar with worldwide averages.
2. There will be no significant difference in rates of PD between different genders.
3. There will be no significant difference in rates of PD between different amount of enrolled schools.
4. There will be a significant negative correlation between PD and Grades.

METHODOLOGY

PARTICIPANTS

All participants of this study are 2019 freshman year students at CamEd business school located in Phnom Penh, Cambodia. In total 208 did the SRQ-20 and Social-Demographic Survey online. Some participants student id's couldn't be matched with the score overview from CamEd's database, in total 122 participants could be matched between both datasets. For data analysis on total rate of PD and for correlating Social-Demographical and PD, the data of all the 208 respondents is used (set 1). For analysing the correlation between PD and grades the adjusted data-set of

122 respondents are used (set 2). The average age of the participants in Set 1 is 19.06 (SD=.917) and in Set 2 18.99 (SD=.895). In set 1 67.8% of the respondents where female which is similar in set 2 where 63.9% of the participants where female (See table 1 and table 2).

Table 1. Social-Demographic Characteristics Participants Set 1

	Frequency (n = 208)	Percentage
Gender		
Female	141	67.8%
Male	67	32.2%
Age		
17	3	1.4%
18	46	23.6%
19	104	50.0%
20	41	19.7%
21	8	3.8%
22	1	0.5%
23	2	1.0%
Enrolled schools		
1	125	60.1%
2	77	37.0%
3 or more	6	2.9%

Table 2. Social-Demographic Characteristics Participants Set 2

	Frequency (n = 122)	Percentage
Gender		
Female	78	63.9%
Male	44	36.1%
Age		
17	3	2.5%
18	28	23.0%
19	66	66.0%
20	20	20.0%
21	3	3.0%
22	1	1.0%
23	1	1.0%
Enrolled schools		
1	71	58.2%
2	49	40.2%
3 or more	2	1.6%

MEASURES

Psychological Distress. PD was measured with the Self-Report Questionnaire 20 items (SRQ-20) developed by Harding et. al. (1980). The SRQ-20 20 items which can be answers with 'Yes' or 'No". The items are asking respondents to answer if they recognize each statement in there day to day life in the last 30 days. The SRQ-20 is recommended by the World Health Organization to measure psychological distress seeing it is having strong internal and external validity and a good reliability (WHO, 2014). For this study the English version of the SRQ-20 was used, since a Khmer translation is not available and the participants there English is sufficient to fill in the questionnaire appropriately. A cut-off point can be used to determine when respondents are at risk for having a mental health problem. A cut-off point of 7/8 is validated in low to mid-income countries and therefore used.

Social-Demographic Variables. A short extra survey was send to participants attached to the SRQ-20. Participants where asked to fill in there Age, Gender, Number of Enrolled Schools and Nationality. Their student-ID was also required in order to connect the results of the online questionnaires with their average grades.

Academic Achievement. In order to measure academic achievement this study is using the total average grades for the course Psychology at CamEd from the year 2019. Due to time restraints other courses could not be included.

DATA COLLECTION AND ANALYSIS

Both the social-demographic survey and the SRQ-20 where offered online, through Google Docs. Participants where send a mail with a short explanation of the research and a link to the questionnaires. The questionnaires where given through: https://forms.gle/bLUDiQy9FzEpfzT58 and was open for 1 week. The grades where retrieved from the database of CamEd Business School. All the data was collected in Excel. For statistical analysis this study made use of IBM SPSS Statistics version 25.

RESULTS

Reliability and general data. The SRQ-20 was completed by 208 respondents in total (sample 1) and 122 respondents (sample 2) when using the adjusted dataset. The SRQ-20 was tested on internal consistency by using Cronbach's Alpha. Both samples indicate a strong internal consistency. Sample 1 α = .823 and Sample 2 α = .815 (table 3).

Table 3. Reliability score SRQ-20

	Cronbach's Alpha	Items
Sample 1	.823	20
Sample 2	.815	20

1. Rates of Psychological Distress will be similar with worldwide averages.

The average score on the SRQ-20 is 9.56 with a standard deviation of 4.595 (Table 4). 66.8% of the respondents had scores above the cut-off point, which means they are currently at risk of having a mental health disorder. (Table 5). This is in line with worldwide prevalences and earlier found prevalences in Cambodian students. The hypothesis is therefore accepted.

Table 4. Mean SRQ-20

	Mean	SD
SRQ-20	9.56	4.595

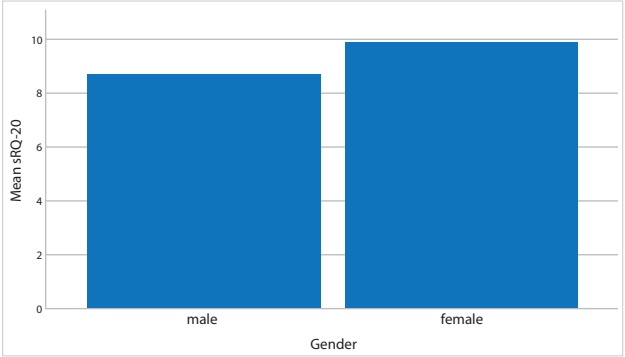
Table 5. Percentages according cut off

	Frequency	Percentage
7 or lower	69	33.2%
8 or higher	139	66.8%

2. There will be no significant difference in rates of PD between different genders

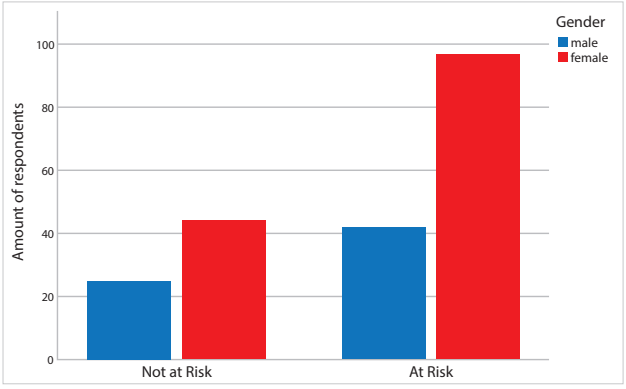
The differences in total SRQ-20 scores between gender seems small. Males score 8.73 (SD=4.389) and females 9.95 (SD=4.654) (Graph 1).

Graph 1. Mean scores SRQ-20 divided by Gender



When dividing the SRQ-20 cut-off scores per gender we see a large increase in female respondents scoring higher than the 7/8 cut-of.

Graph 2. At risk for mental health disorder according 7/8 cut off SRQ-20



An independent T-Test was used to further analyse gender differences on the SRQ-20. There was not significant difference (p=.740) on average SRQ-20 scores between males and females. The hypothesis is therefore accepted.

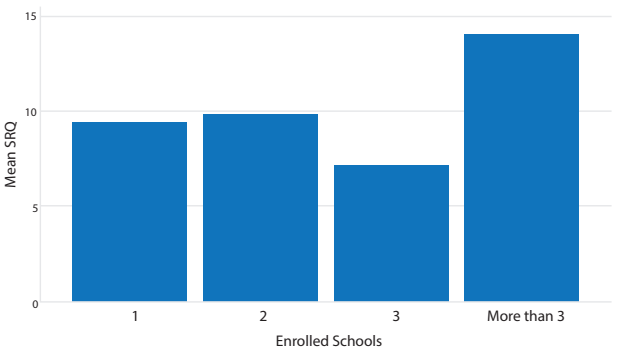
Table 6. Independent T-Test, differences SRQ-20 between gender

	n	Mean	sd	t	Sig.
Gender Male	67	8.73	4.389	-1.797	.740
female	141	9.95	4.654		

3. There will be no significant difference in rates of PD between different amount of enrolled schools.

Differences in scores when comparing amount of enrolled schools show a similar results. Being enrolled in more than 3 schools seems to have a strong positive correlation with SRQ-20 scores at first site, although only 1 respondent scored being enrolled in more than 1 school (Graph 2).

Graph 3. Mean scores SRQ-20 divided by amount of enrolled schools



An independent T-Test was used to further analyse differences on the SRQ-20 between amount of enrolled schools There was not significant difference (p=.448) between amount of enrolled schools. The hypothesis is therefore accepted.

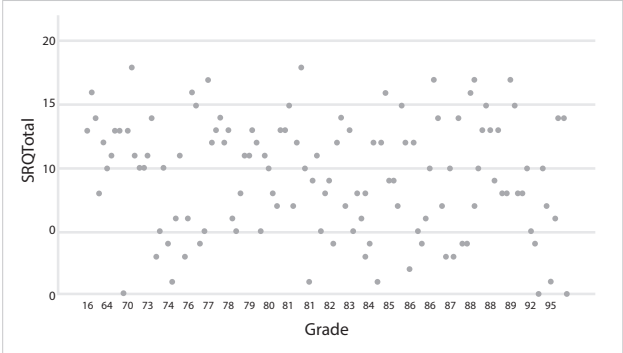
Table 7. Independent T-Test, differences SRQ-20 enrolled schools

	n	Mean	sd	t	Sig.
Enrolled schools 1	125	9.43	4.560	.889	.448
2	77	9.86	4.670		
3	5	7.20	4.438		
More than 3	1	14.00	-		

4. There will be a significant negative correlation between PD and Grades.

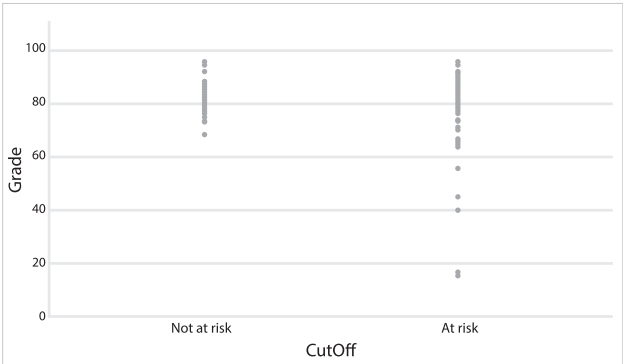
Total SRQ-20 scores from Sample 2 where compared with average grades from the course psychology. A Pearson's correlation was not conducted since a linear correlation could not be assumed according the scatter plot (Graph 4).

Graph 4. Scatter plot SRQ-20 total scores and psychology grades



To analyse the relationship between grades and PD more closely another scatter p lot was conducted where grades where separated between respondents below and above the SRQ-20 cut-off. We can clearly see that respondents fail the course psychology more often when scoring above the SRQ-20 cut-off and are at risk for a mental health disorder (Graph 4). The hypothesis is not accepted for now, additional data and more analysis is necessary to examine these findings.

Graph 5. Scatter plot SRQ-20 cut-ff scores and grades



DISCUSSION

OUTCOMES AND EXPECTATIONS

Results of this study show a high prevalence of PD in CamEd's 2019 freshman year students. The prevalences are in line with worldwide rates and as found two other studies done on the Cambodian

student population (Cornet, 2018; Pan, 2017). When looking at these elevated rates we have to keep in mind that PD peaks in the first year of university and is most likely lower in students from other years in CamEd (Bewick, et. al., 2010). Unlike general research on PD suggests, gender doesn't show a significant differences in total PD scores in this study student population. Which was also found by Cornet (2018) and Pan (2017) in similar Cambodian students' populations. Although this study found a clear difference in gender when we looking at students at risk for mental health disorders and students not at risk for mental health disorders. This once more hints to unique characteristics and variables in the construct of PD in the Cambodian students population. This is furthermore strengthened by not finding a correlation between PD an Grades, which goes against negative influence of PD on GPA that is found in most other studies. This outcome can be influenced by the vary narrow measure, grades for the course psychology, of GPA/Academic Achievement that is used in this study. By using average grades over the whole curriculum, the effect of PD on Academic Achievement in CamEd, outcomes may be different. Even with this limited measure, the study shows a clear trend of lower grades (and fails) when we group respondents according the SRQ-20 cut-off points.

IMPLICATIONS

These findings suggests that more research is needed to get a better view on correlations an characteristics of PD in the Cambodian students population. More analysis is needed to further look into the trend that was found between being at risk for mental health disorders and lower grades (and fail rates). Investing in the mental of students often gives a positive return in investment according the Healthy Minds Network. But in order to make a ROI more likely the specific needs of students and the influences on their PD should be known. Besides the possible financial benefits supporting students with mental problems can have possible effects during the rest of their adult life. Especially in Cambodia where mental health resources are scarce, the stigma around mental health still is big and research show prevalences of mental health disorders in the general population that are far higher than average. Higher education institutes can play a leading role in changing this situation for their students. Because lets not forget. Even when we say we find rates of PD similar as in other countries, we are still talking about more than half of this student population being at risk for currently having mental health disorders.

LIMITATIONS

This study has a couple of limitations. The academic achievement is, due to time restrictions, measured by grades for the course psychology only instead of all the courses given in Year 1 at CamEd. This makes the measurement of academic achievement very limited and can be an explanation why there was no significant correlation between PD and Academic achievement in this study. The population is, for the same reason, also limited to only freshman years. This can have elevate the found prevalence on PD seeing the first year of university show the highest rates of PD. For a more complete view this study should include participant throughout the complete curriculum CamEd. Lastly this studies focuses on students of CamEd business school, findings can therefore not be generalized to the general student population in Cambodia.

CONCLUSION

In line with earlier research on students of CamEd businesschool, levels of up to 65% of PD where found, which amplifies the need to more research and support for amEd's, and Cambodia's, student population. Although this study didn't find a negative or relation between PD and Grades, it found signals of negative influence of high levels of PD (on the level of probably having a mental health disorder) on grades. Supporting students with their mental distress makes academic and economical sense for higher education providers, but most importantly improve the lives and future careers of their students.

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APPENDIX A

SRQ-20

Do you often have headaches?

Is your appetite poor?

Do you sleep badly?

Are you easily frightened?

Do your hands shake?

Do you feel nervous, tense or worried?

Is your digestion poor?

Do you have trouble thinking clearly?

Do you feel unhappy?

Do you cry more than usual?

Do you find it difficult to enjoy your daily activities?

Do you find it difficult to make decisions?

Is your daily work suffering?

Are you unable to play a useful part in life?

Have you lost interest in things?

Do you feel that you are a worthless person?

Has the thought of ending your life been on your mind?

Do you feel tired all the time?

Are you easily tired?

Do you have uncomfortable feelings in your stomach?