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THE IMPACT OF THE ACADEMIC OVERLOAD ON STUDENTS' WELL BEING IN SECONDARY SCHOOLS IN SOUTH LEBANON

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Abstract

This research aims to investigate the impact of academic overload on students' well-being in grade 12 "LS section" in secondary schools in the three districts of South Lebanon "Saida, Tyr & Nabatiyeh". A sequential explanatory design using a descriptive methodology through quantitative analysis and based on deductive analysis to identify from a sample of 119 students "Appendix E" belonging to 7 high schools from the public and private sectors, if the grade 12 students are academically overloaded and by which type then to relate this overload if proved to students' wellbeing "mental and physical health"; the next step that follows is focused group interviews for teachers and students of grade 12 "LS" in addition to the school counsellor through open-ended questions. This unprejudiced study detected that students are academically overloaded by information overload and that when the overload decrease, the score of both mental and physical health will improve significantly. Our findings indicated that the information overload can create in some of the secondary students a distress thus transforming into an academic stressor that can negatively impact the students' Quality of Life (QOL) and consequently impacting their psychological and physical well-being. These results can be used for revising the curriculum in schools for each subject course in order to subtract any unnecessary added information in addition to the alignment of assignments and quizzes by teachers during the week; anything that can favor the decrease of the academic overload therefore the academic stress and thus enhancing students' wellbeing.

Keywords: students' wellbeing; students' mental health; students' physical health; academic overload; information overload; academic stress or stressors

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1. Introduction

Secondary classes and especially grade 12 is a critical stage for students in ending the schooling academic phase in a way that promotes for the university phase. This suggests being academically, emotionally and mentally prepared without neglecting the possible influence of some physical mechanisms like the academic overload on students' physical and mental health thus on the state of students' wellbeing; the academic overload in this grade level can take different aspects starting from information overload, many assignments, research projects, limited time for assignments, research projects, school exams, official exams, university admission exams and scholarships. These various aspects of the academic overload are considered as potential triggers for stress knowing that stress is any natural or external trigger of biological changes affecting the body and the state of awareness of students in response to stressors; students' responses to stressors are known as stress responses (Yaribeygi et al., 2017). Academic stressors can create anxiety and sleeping disorders in students (Michaela et al., 2019); the continuous stress represented by the academic overload may elicit in the students some clinical signs like headaches, fatigue, weight gain, stomach aches, sleeping troubles (Chraif et al., 2012) which can have a negative impact on their physical health. Students may be able to academically process & complete educational tasks but they do feel overloaded mostly, and when overloaded repeatedly they might end up academically stressed in an accumulative way which can diminish their aptitude to accomplish educational tasks. In addition, there's the impact of academic overload on working memory which has a direct cognitive effect which demands the understanding of the brain's architecture & that of the memory for better perception of the concept of working memory; Miller, Galanter & Pribram were the first to come up with the term working memory in 1960 in the book "Plans and the structure of Behavior" then it was used in 1968 by Atkinson and Shiffrin in an influential paper (Baddeley, 2010). Knowing that the capacity of the short-term memory is very small when compared to the capacity of the long-term memory; thus whenever we overload the short term memory or working memory, the retrieval of information from it by the mean of the long term memory won't be easy (Baddeley, 2010).

Thus processing information such as multiple assignments, exams ……etc. might be affected negatively depending on students' ability to handle multiple tasks and depending on their coping style with the situation; this can negatively influence their ability to sleep which would drastically decrease their ability to focus while in the classroom and thus their class engagement is lowered.

1.1. Purpose of the study

The aim of this study was to investigate the impact of the academic overload on students' state of well-being "mental and physical health" in grade 12 "the life science section" in an attempt to prevent the negative results of the impact in case of their validation to simplify information storage and information retrieval in addition to preserve the health of the students from all its aspects thus abiding to the UN 2030 agenda regarding the goals of sustainable

development known by UNESCO SDG's and especially the third goal (Popoola, 2019); doing this can ensure secondary students' cultural development beside their cognitive development (Wiktor-Mach, 2018).

1.2. Research questions

This study answers the following questions:

1. Are grade 12 students "the LS section" academically overloaded?
2. Is there any significant correlation between the academic overload and grade 12 "LS" students' mental health?
3. Is there any significant correlation between the academic overload and grade 12 "LS" students' physical health?

1.3. Research hypotheses

$H_0$1: Grade 12 "LS" students aren't academically overloaded.

$H_1$1: Grade 12 "LS" students are academically overloaded.

$H_0$2: Academic overload doesn't affect Grade 12 "LS" students' mental health.

$H_1$2: Academic overload affects Grade 12 "LS" students' mental health

$H_0$3: Academic overload doesn't affect Grade 12 "LS" students' physical health.

$H_1$3: Academic overload affects Grade 12 "LS" students' physical health.

1.4. An approach to measure Students' wellbeing

According to the World Health Organization "WHO", the state of wellbeing was defined and I quote "Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity" (Kühn et al., 2017). It is reasonable to say that chances for the wellbeing, effective learning and good improvement of youth are generally wanted by all educational institutions reinforced by studies in positive psychology. It's no more just about the educational needs in schools but more likely to promote in addition to the educational needs, the students' wellbeing. (Peterson, 2006)

According to the research study titled "a multidimensional approach to measuring well-being in students: application of the PERMA framework" conducted by the researchers Margaret L. Kern, Lea E. Waters, Alejandro Adler & Mathew A. White and that was published in the journal "the journal of positive psychology" in the year 2014 (Kern et al., 2015), the PERMA theory with its five bricks "positive emotions, engagement, relationships, meaning, and accomplishment" which was described by Seligman in year 2011 constitute the best model to

measure students' wellbeing, knowing that each brick of the five pillars can be measured separately but the whole five bricks together can define students' wellbeing

1.5. Academic overload as an academic stressor

Stress is considered as contrary conduct, a conflicting physical and psychological cycle that happens when the individual attempts to adjust or bargain with stressors known also by stress stimuli (Prabu, 2015).

In the study titled "Stress in High School Students: A Descriptive Study" that investigated the main sources of stress in high school students and their levels and that was published in the journal "Journal of Cognitive Behavioral Therapy" in 2018 (Acosta-Gómez et al., 2018), the researchers derived that among 335 high school students between the age of 15 & 19 years in Guanajuato- Mexico, 54% of the students were normal, 39% with stress levels and that the main sources of stress are exams, choosing a career path and family troubles. Knowing that exams are one type of academic overload thus this type of academic overload is considered as a stressor.

1.6. Impact of academic overload on students' wellbeing "mental and physical health"

According to Reupert in 2019 in her book (Mental Health and Academic Learning in Schools: Approaches for Facilitating the Wellbeing of Children and Young People) there's a strong connection between students' well-being and academic learning (Reupert et al., 2019).

In the study (Lemon et al., 2011) titled "Early Identification of Potential High School Dropouts: An Investigation of the Relationship among At-Risk Status, Wellness, Perceived Stress, and Mattering" that was published in the Journal of At-Risk, the researchers foucsed on the relation between wellness of students as the state of students' wellbeing and their perceived stress which is due to factors like academic overload and can result in dropping out the high school. The study was conducted on 175 students of a medium-sized high school present in the south-eastern part of the United States and has accounted for 35.1% of the variance in at-risk status for dropping out of high school.

In another study that was published in the journal named "Journal of Clinical & Diagnostic Research" a relation was built between the quality of life, mental health and educational stress. The research was conducted in the year 2017 and titled "Quality of Life, Mental Health and Educational Stress of High School Students in the Northeast of Thailand" (Assana et al., 2017); it consisted of a sample of 1112 students belonging to grades 10th, 11th and 12th. Association of mental health, educational stress, and QOL of high school students was the primary outcome to be quantified. The results obtained after data analysis showed that the educational stress is a common emotional state among high school students and that the inability of adolescents to cope with the stress properly could result in mental ill health. Mental health problems have influences on both physical health and QOL of high school students.

Also, according to the research study titled "Academic stress and mental health among high school students" which was published in the journal named "Indian Journal of Applied Research" in year 2017 (Subramani et al., 2017), academic stress turns to be indispensable in the life of high school students and can create consequences on students' learning, their mental health in addition to endangering their solace. The main objective behind this study was to explore the academic stress "resulting from different types of academic stressors like information overload" and its connection with the high school students' mental health and for this reason the researcher have chosen 200 high school students belonging to public and private sector from in and around Salem city, Tamil Nadu in India to conclude at the end that the high school students do suffer from academic stress but it was more significant in the private sector compared to the public one, in addition that these high school students do have mental health issues and also more importantly in the private sector compared to the public one. In the end, they did infer an important relation between academic stress and students' mental health. Likewise, a study conducted in "Bucharest, Romania" titled "Overload Learning, Attachment and Coping Styles Predictors of Mental and Physical Health of Teenage High School Students in Romania" and that was published in the journal "Procedia-Social and Behavioral Sciences" in the year 2012 (Chraif et al., 2012) and through the help of 285 high school students as participants, aged between 16 & 18 years old, it was concluded that positive coping styles, attachment and extra activities overload are predictors not only for mental health but for physical health too among high school students.

Maybe some people can criticize the fact that the researcher in this study investigated the impact of academic overload on students' physical health; for them maybe students' physical health is a minor influencer of the students' state of well-being when compared to students' mental health concerning their impact on students' academic performance. But according to a study investigated in Europe and titled "Physical Education and Sport in Schools: A Review of Benefits and Outcomes" that was published in the journal named "Journal of School Health" in the year 2006 (Bailey, 2006), the researcher concluded that physical activities can stimulate the development of movement skills and physical competencies which in their turn, and when presented fittingly and in an applicable way, can be precursors for the development of social skills which is compatible with the Walberg's theory regarding the psychological characteristics of students (Walberg, 1992) and in certain cases they can also be precursors for academic and cognitive development.

1.7. Overload learning, attachment and coping styles predictors of mental and physical health

A study conducted in "Bucharest, Romania" titled "Overload Learning, Attachment and Coping Styles Predictors of Mental and Physical Health of Teenage High School Students in Romania" and that was published in the journal "Procedia-Social and Behavioral Sciences" in the year 2012 (Chraif et al., 2012) and through 285 high school students, aged between 16 & 18 years old, it was concluded that positive coping styles, attachment and extra activities overload are predictors of perceived physical and mental health which shed the light on the

importance of the consideration of the quantity of homework, the daily hours of studying away from the school as indicators of for the physical and psychological health's development of high school students.

1.8. The impact of academic overload on students' wellbeing depends on their physiological strengths and coping style

A study that investigated the impact of information overload on students' learning "Impact of Information Overload on Students' Learning: it's an Empirical Approach" and that was published in **"**FWU Journal of Social Sciences; Peshawar Vol. 10, Iss. 1:58-66" (Khalid et al., 2016) inferred and through the help of 360 students of M.A. second year from the five departments of institute of education and research, University of Punjab, Lahore that the information overload won't affect students' learning someway when their interpersonal and communication skills were solid and harsh thus the impact of information overload on the students depends on their coping style with the academic overload.

Another study titled "Students' coping with Stress at high school level particularly at 11th & 12th grade" and that was published in the year 2011 in the journal named "Procedia-Social and Behavioral Sciences" (shahmohammadi, 2011) revealed and through the help of 100 students from 11th and 12th grade belonging to public secondary schools located in Tehran, Islamic Republic of Iran; that the percentage of distressed students in the secondary public schools was 26.1% as it is shown in the histogram represented in figure 1below:

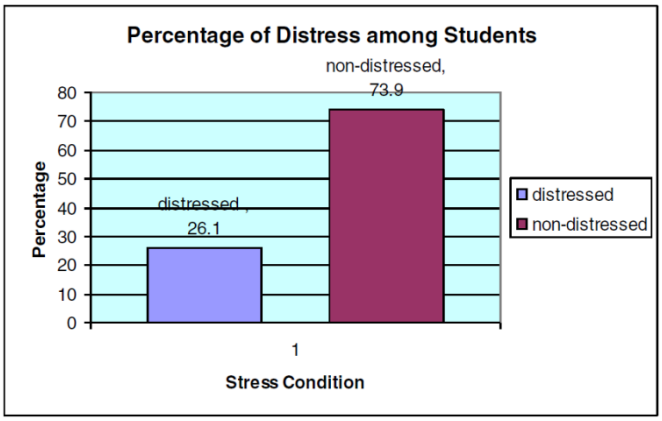

Figure 1. Percentage of Distress among Students

Also the findings reveal the different types of stressors perceived by the students of the chosen sample; these stressors that are mostly academic stressors are classified in the table in figure 2 below according to their degree of stimulating a distress or negative stress.

According to the above table, the researcher noticed that the top ten stressors are the following: feeling afraid not to be accepted in a university, getting low marks, time stress, examination, some difficulties inn understanding the content of learn subjects, information

overload, too many tests, peer competition, too many assignments in different subject courses and a heavy packed learning schedule. It was very obvious that the most important stressors are academic stressors.

Rank	Items	Degree of stress Mean [SD]	Rank	Items	Degree of stress Mean [SD]
1	Afraid of the possibility not getting place in any university	3.02[1.11]	23	Negative thinking toward own-self	1.54[1.24]
2	Getting poor marks	2.57[1.01]	24	Uncertainty of what are expected from me	1.52[1.06]
3	Lack of time to do revision	2.43 [1.01]	25	Lack of recognition to work done	1.51[1.15]
4	Examination	2.36 [1.14]	26	Studying for the sake of family	1.43[1.48]
5	Difficulties in understanding content that have been learnt	2.33 [1.07]	27	Conflict with family	1.41[1.31]
6	Too many content to be learnt	2.24 [1.00]	28	Conflict with teachers	1.42[1.43]
7	Tests are too frequent	2.22 [1.19]	29	Family desire to stop schooling	1.39[1.61]
8	Competitive learning environment	2.06 [1.06]	30	Lack of feedback from teachers	1.37[1.09]
9	Too many assignments given by teachers	2.06 [1.09]	31	Giving wrong answer in the class	1.36[0.94]
10	Learning schedule are too packed	2.01 [1.10]	32	Verbal or physical abuse done by teachers	1.34[1.32]
11	Unable to answer questions from teachers	2.01 [0.98]	33	Inappropriate assignments given by teachers	1.32[1.09]
12	Feeling of incompetence	1.97 [1.10]	34	Lack of guidance and supervision from teachers	1.31[1.13]
13	High self-expectation	1.92 [1.22]	35	Lack of free time with family and friends	1.26[0.91]
14	Getting behind revision schedule	1.81 [0.96]	36	Verbal or physical abuse done by peers	1.26[1.29]
15	Participation in class presentation	1.43 [0.98]	37	Verbal or physical abuse done by family	1.25[1.25]
16	High expectation imposed by others	1.83 [1.11]	38	Came late to the school	1.24[1.11]
17	Unfair assessment grading systems	1.82 [1.21]	39	Crowded classroom	1.12[1.16]
18	Lack of motivation to learn	1.71 [1.08]	40	Participation in group discussions	1.11[0.98]
19	Teachers lack of teaching skills	1.66 [1.13]	41	Answering friends' questions	0.99[0.87]
20	Interruptions by others during learning	1.66 [1.23]	42	Talking personal problems with peers	0.87 [0.93]
21	Insufficient reading material	1.59 [1.08]	43	Unwillingness to go to school	0.79[1.29]
22	Conflict with peers	1.59 [1.00]	44	Family desire to continue schooling	0.56[0.99]

Figure 2. Types of Stressors and their Percentages

Also there's an investigation regarding how the character strength predict the subjective wellbeing; the name of the study was "character strengths predict subjective wellbeing during adolescence" and it was published in "The Journal of Positive Psychology" (Gillham et al, 2011). The study examined whether the character strengths predict the future wellbeing of adolescents through the use of specific questionnaires measuring some qualities in students "like quality of life, happiness, depression, certain life values such as love, hope, gratitude, honesty, judgment, curiosity, forgiveness, kindness, fairness…..''; the study enrolled 149 students of a suburban high school in the North-eastern United States among them 72boys and 77 girls that were randomly assigned as control condition with no intervention at all. Students were subjected to several assessments from the fall of the 9thy grade to the spring of the 10th

grade then and for the following 2 years, another 347 students "170 boys and 177 girls" between 9th and 10th grade were subjected to interventions "by receiving courses of positive psychology in grade 9" and they were asked to fill the same questionnaires when they became in grade 10. Finally and through data comparison, it was revealed that several character strengths predicted fewer symptoms of depression and higher life satisfaction thus relating character strength to students' quality of life; knowing that students' quality of life can be used to measure their wellbeing. So whenever the students' quality of life increases "as when it's not perturbed by the academic overload", their life satisfaction increases which in its turn increases the students' character strengths. And when students' character strength increases, their wellbeing would be preserved as shown in the diagram of figure 3 below:

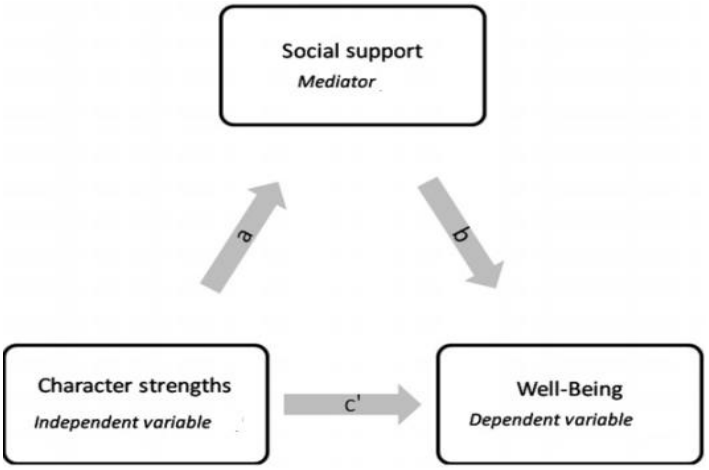

Figure 3. Diagram Showing the Relation between the Independent Variable and the Dependent One.

2. Method

2.1. Participants

Choosing the schools where the samples of students were taken was based on a non-probability convenience sampling or purposive sampling. From this convenience sampling, the researcher tried to validate the formulated hypotheses so that definite answers can be inferred from the feedback in order to benefit the whole population in Lebanon.

The researcher conducted the research in seven secondary schools in the three districts of south Lebanon "Saida, Tyr & Nabatiyeh" belonging to both sectors "public and private". The study was established in life science sections of grade 12 with a total of 119 students. In addition to the students, the teachers of this class and the school counselor in each of the concerned schools were involved in the study. All the participants were asked to fill and sign consent forms; among them:

- Students of grade 12 "the life science section" in each of the schools where the investigation was conducted.

- Parents of the concerned students.
- Teachers of grade 12 "Life science section" in each of the schools that these students belong to.
- The school counselor in each of the schools that these students belong to.

2.2. Data collection

Regarding the impact of academic overload on students' wellbeing "physical and mental health", the researcher conducted a descriptive approach through quantitative analysis. The descriptive methodology regarding the quantitative work was first based on a Survey method that is used to gather information by filling a questionnaire "Appendix E: questionnaire for students of grade 12, the life science section". This questionnaire "Appendix E" contains questions divided into:

a. Questions regarding the academic stressors.
b. Questions relating the impact of academic overload on students' mental health and these questions are based on the PERMA hypothesis. (Seligman, 2018)
c. Questions relating the impact of academic overload on students' physical health.

Then in the second phase the researcher referred also to focused group interviews for teachers and students for this grade level and section by asking open-ended questions in addition to open-ended questions directed to the school counselors"; noting that all this work was based on the outcomes of the quantitative work.
This sequential explanatory design allowed to correlate the academic overload to students' quality of life, then to correlate students' quality of life to their mental health and finally correlation of students' mental health to their physical health.

2.3. Data Analysis

After the questionnaires were collected from students, the researcher proceeded by coding and categorizing then analyzing the data by applying descriptive and inferential statistical measure. The significant effect of the different factors of the academic overload on students' well-being was discovered through several comparisons by using SPSS. SPSS software was used to test the reliability of the scale used in the questionnaires and the interconnection between the different items of each of the three components "types of academic overload, impact of academic overload on students' mental health and finally impact of academic overload on students' physical health" through CRONBACH'S ALPHA test. In addition to the retrieval of the histograms for each item, SPSS was also used to structure a table of correlation "table of normality" used to validate the formulated hypotheses and a table of T test that is necessary to know what type of correlation test to use "Kendall, Spearman and Pearson"; finally SPSS was used to build a multiple linear regression model which permits to identify the relationship between the dependent and independent variable "when considering the academic overload as the dependent variable while students' physical and mental health as independent variables". The data analysis is intended to conclude and through a correlational

design using the answers of the questionnaire "Appendix E" representing the 1st part of the quantitative work of the study and also through using the open-ended questions of the 2nd part of the quantitative work of the study that are presented to teachers, students and school counselors, the relation between academic overload & students' well-being depending on students' character strength or students' psychological state & depending also on students' coping style.

3. Results

Analyzing the statistical results "both from the survey in appendix E and from the open-ended questions divided into sections A & B respectively" permits to investigate the impact of academic overload if valid on the secondary students' state of well-being "mental and physical health" in grade 12 "the life science section" in seven high schools in the three districts of south Lebanon "Saida, Tyr and Nabatiyeh" in an attempt to prevent the negative results of the impact in case of their validation to simplify information storage and information retrieval in addition to preserve the health of the students from all its aspects.

3.1. Reliability of the questionnaires

At the beginning, the researcher started by checking the reliability of our scale as to check the internal consistency or steadiness of the items we're using in the questionnaires and that involve three components; the types of academic overload, the impact of the academic overload on secondary students' mental health and finally the impact of the academic overload on secondary students' physical health. Knowing that the first section which is the types of academic overload consist of seven items while the second section which is the impact of the academic overload on secondary students' mental health consist of forty items divided into four parts according to PERMA pyramid which consist of five bricks "positive emotions, engagement, relationships, meaning and finally achievement"; as said the 40 items represent only 4 bricks out of the five bricks of PERMA: 20 items for positive emotions, 8 items for engagement, 5 items for relationships and 7 items for meaning. Last but not least, the third section which is the impact of the academic overload on secondary students' physical health consists of five items.

In the first component "types of academic overload" the CRONBACH'S ALPHA was 0.743 while in the second component "impact of the academic overload on secondary students' mental health" it was 0.85 and finally for the last third component "the impact of the academic overload on secondary students' physical health" it was 0.70; all results revealed values above 0.6 indicating that the scale is reliable for all the variables in the questionnaire "Appendix E".

3.2. Identifying which type of academic overload has the highest weight on secondary students

The researcher started by analyzing table 1 "types of academic overload" showing statistical results of the students from a sample of 119 students concerning each of the seven items representing the component "types of academic overload";

Table 1. Types of Academic Overload

Types of Academic Overload	Strongly disagree		Disagree		Neutral		Agree		Strongly agree	
	Count	Row N %	Count	Row N %	Count	Row N %	Count	Row N %	Count	Row N %
I am academically overloaded by assignments	8	6.7 %	16	13.4%	46	38.7 %	33	27.7%	16	13.4%
I am academically overloaded by examination	12	10.1 %	19	16.0%	38	31.9 %	29	24.4%	21	17.6%
I am academically overloaded by extracurricular activities	44	37.0 %	28	23.5%	27	22.7 %	11	9.2%	9	7.6%
I am academically overloaded by Info overload in different subject courses	10	8.4 %	13	10.9%	33	27.7 %	33	27.7%	30	25.2%
I am academically overloaded by school schedule more than 35 hrs per week	24	20.2 %	22	18.5%	24	20.2 %	20	16.8%	29	24.4%
I am academically overloaded by school projects	64	53.8 %	25	21.0%	20	16.8 %	5	4.2%	5	4.2%
Information overload in exams is much more in the 2nd semester	7	5.9 %	23	19.3%	36	30.3 %	18	15.1%	35	29.4%

It's very clear that the only item's percentage that surpasses 50 % of the sample of 119 students chosen from the class of grade 12 "the life science sections" is being academically overloaded by the factor "information overload in different subject courses" which means that in overall students are not academically overloaded by any of the factors except by information overload in different subject courses.

3.3. Identifying which factors of the PERMA bricks are mostly negatively impacted by the academic stressors in addition to the total number of impacted factors through the analysis of each of the 40 items in the questionnaire representing the impact of the academic overload on students' mental health

The researcher started by analyzing the custom tables "see tables titled Custom Tables: Table 2, Table 3, Table 4 & Table 5" showing the statistical results of the students from a sample of 119 students concerning the component "impact of the academic overload on secondary students' mental health".

3.3.1. First Brick "Positive Emotions", Items' Analysis "Table 2"

The custom table 2 shows the statistical results from a sample of 119 students regarding the twenty items representing the first brick "positive emotions" concerning the component "impact of the academic overload on secondary students' mental health".

Table 2. Custom Tables "First Brick: Positive Emotions"

	Strongly disagree		**Disagree**		**Neutral**		**Agree**		**Strongly agree**	
	Count	**Row N %**	**Count**	**Row N %**	**Count**	**Row N %**	**Count**	**Row N %**	**Count**	**Row N %**
When distributing exam's marks my interest is not only with mine but with those of my peers	19	16.0%	32	26.9 %	35	29.4%	17	14.3%	16	13.4%
I am in a competition with my peers	44	37.0%	21	17.6 %	29	24.4%	14	11.8%	11	9.2%
Examination makes me anxious	15	12.6%	7	5.9 %	26	21.8%	20	16.8%	51	42.9%
Low marks make me anxious	9	7.6%	10	8.4 %	17	14.3%	25	21.0%	58	48.7%
I am a worrying person	12	10.1%	14	11.8 %	22	18.5%	26	21.8%	45	37.8%
Information overload makes me anxious due to time stress	10	8.4%	10	8.4 %	20	16.8%	24	20.2%	55	46.2%
Information overload is fatiguing	7	5.9%	5	4.2 %	29	24.4%	28	23.5%	50	42.0%
Assignment overload makes me anxious	8	6.7%	20	16.8 %	30	25.2%	26	21.8%	35	29.4%
Extracurricular activities make me anxious	33	27.7%	27	22.7 %	29	24.4%	11	9.2%	19	16.0%
Not being admitted to a reputable	11	9.2%	14	11.8	26	21.8%	18	15.1%	50	42.0%

university makes me anxious				%						
I feel afraid for my reputation amongst my family	20	16.8%	22	18.5 %	26	21.8%	24	20.2%	27	22.7%
I feel afraid for my reputation amongst my peers	27	22.7%	33	27.7 %	25	21.0%	19	16.0%	15	12.6%
I feel afraid for my reputation amongst teachers school staff	28	23.5%	24	20.2 %	27	22.7%	21	17.6%	19	16.0%
I feel afraid for my reputation amongst my small community	31	26.1%	34	28.6 %	26	21.8%	11	9.2%	17	14.3%
My teachers encourage me to talk express myself when I'm sad	61	51.3%	22	18.5 %	21	17.6%	7	5.9%	8	6.7%
In general I am a happy person	18	15.1%	15	12.6 %	35	29.4%	27	22.7%	24	20.2%
My parents encourage me to talk express myself when I am sad	58	48.7%	22	18.5 %	25	21.0%	6	5.0%	8	6.7%
My teachers are good listeners	56	47.1%	26	21.8 %	24	20.2%	5	4.2%	8	6.7%
I am emotionally supported by family, friends and teachers	14	11.8%	27	22.7 %	30	25.2%	31	26.1%	17	14.3%
Generally I am satisfied with my intellectual academic results	19	16.0%	24	20.2 %	43	36.1%	21	17.6%	12	10.1%

Concerning “positive emotions” and although every statistical number is important by itself but the researcher couldn’t but notice the following surprising percentages: 59.7 % of the students become anxious during exams, 69.7 % of the students can get anxious due to low marks, 59.6 % of the students consider themselves as worrying persons, 66.4 % of the students can get anxious when overloaded by information in different subject courses, 65.5 % of the students are fatigued when overloaded by information, 51.2 % of the students become anxious from assignment overload, 57.1 % of the students become anxious if not being admitted in a reputable university, 69.8 % of the students are not capable or given the opportunity to express themselves when sad by their teachers, 67.2 % of the students are not capable or given the opportunity to express themselves when sad by their parents and 68.9 % disagree that their teachers are good listeners.

3.3.2. Second Brick "Engagement"; Items' Analysis "Table 3"

The custom table 3 shows the statistical results from a sample of 119 students regarding the eight items representing the 2nd brick "Engagement" concerning the component "impact of the academic overload on secondary students' mental health".

Table 3. Custom Tables "Second Brick: Engagement"

	Strongly disagree		**Disagree**		**Neutral**		**Agree**		**Strongly agree**	
	Count	**Row N %**	**Count**	**Row N %**	**Count**	**Row N %**	**Count**	**Row N %**	**Count**	**Row N %**
I am motivated with side talks in the class	24	20.2%	24	20.2 %	32	26.9 %	19	16.0 %	20	16.8 %
I am motivated with almost all classes "curricular activities."	31	26.1%	39	32.8 %	24	20.2 %	13	10.9 %	12	10.1 %
I am almost always engaged in the participation in the class	19	16.0%	24	20.2 %	33	27.7 %	26	21.8 %	17	14.3 %
I am motivated to participate in almost all the classroom discussions.	22	18.5%	21	17.6 %	35	29.4 %	27	22.7 %	14	11.8 %
Extracurricular activities motivates me	21	17.6%	20	16.8 %	41	34.5 %	23	19.3 %	14	11.8 %
I am motivated to achieve my homework's assignments	23	19.3%	34	28.6 %	27	22.7 %	26	21.8 %	9	7.6%
Disruptive behaviors in the classroom are annoying for me	15	12.6%	23	19.3 %	34	28.6 %	19	16.0 %	28	23.5 %
Time flies or passes quickly in the class in almost all subjects	40	33.6%	33	27.7 %	23	19.3 %	12	10.1 %	11	9.2%

Concerning "engagement", the researcher couldn't but notice the following percentages: 61.3 % of the students see that time doesn't pass quickly in most of the courses and 58.9 % of the students are not motivated in most of the classes' curricular activities.

3.3.3. Third Brick "Relationships"; Items' Analysis "Table 4":

The custom table 4 shows the statistical results from a sample of 119 students regarding the five items representing the 3rd brick "Relationships" concerning the component "impact of the academic overload on secondary students' mental health".

Table 4. Custom Tables "Third Brick: Relationships"

Third brick: Relationships	**Strongly disagree**		**Disagree**		**Neutral**		**Agree**		**Strongly agree**	
	Count	**Row N %**	**Count**	**Row N %**	**Count**	**Row N %**	**Count**	**Row N %**	**Count**	**Row N %**
I do have time almost every day to spend the evening with my family	30	25.2 %	32	26.9 %	24	20.2 %	20	16.8 %	13	10.9 %
I do have time almost every weekend to socialize with family	27	22.7 %	27	22.7 %	24	20.2 %	21	17.6 %	20	16.8 %
I spend weekends socializing having a good time with friends	38	31.9 %	28	23.5 %	29	24.4 %	13	10.9 %	11	9.2%
I socialize with family in holidays	15	12.6 %	31	26.1 %	33	27.7 %	25	21.0 %	15	12.6 %
I socialize and go out with my friends in holidays	43	36.1 %	28	23.5 %	20	16.8 %	17	14.3 %	11	9.2%

Concerning "Relationships", the researcher couldn't but notice the following percentages: 52.1% of the students admitted that there's no remaining time to spend evenings with their families and also 55.4 % of the students can't find enough time to go out socializing & spending a good time with their friends in weekends.

3.3.4 Fourth Brick "Meaning"; Items' Analysis "Table 5"

The custom table 5 shows the statistical results from a sample of 119 students regarding the seven items representing the 4th brick "Meaning" concerning the component "impact of the academic overload on secondary students' mental health".

Table 5. Custom Tables "Fourth Brick: Meaning"

	Strongly disagree		**Disagree**		**Neutral**		**Agree**		**Strongly agree**	
	Count	**Row N %**	**Count**	**Row N %**	**Count**	**Row N %**	**Count**	**Row N %**	**Count**	**Row N %**
I love establishing friendships	14	11.8%	18	15.1%	25	21.0%	32	26.9%	30	25.2%
I love socializing with family and friends	8	6.7%	10	8.4%	26	21.8%	30	25.2%	45	37.8%
I love most of the subject courses and /or corresponding teachers	15	12.6%	25	21.0%	40	33.6%	27	22.7%	12	10.1%
I love studying	31	26.1%	25	21.0%	27	22.7%	24	20.2%	12	10.1%
I love making my assignments	40	33.6%	13	10.9%	34	28.6%	22	18.5%	10	8.4%
I love interacting with class debates	23	19.3%	13	10.9%	40	33.6%	21	17.6%	22	18.5%
I love to participate in extracurricular activities	20	16.8%	21	17.6%	39	32.8%	23	19.3%	16	13.4%

Concerning "Meaning", the researcher couldn't but notice the following percentages: 52.1% of the students admitted that they do love to establish friendships and 63 % of the students also admitted that they love to socialize with family and friends.

3.4. Identifying which factor "s" among the five items representing students' physical health in the questionnaire are mostly negatively impacted by academic stressors

The researcher started by analyzing the custom table 6 which shows the statistical results of the students from a sample of 119 students concerning each of the five items representing the component "impact of the academic overload on secondary students' physical health".

Table 6. Custom Tables "Students' Physical Health"

Physical Health	**Strongly disagree**		**Disagree**		**Neutral**		**Agree**		**Strongly agree**	
	Count	**Row N %**	**Count**	**Row N %**	**Count**	**Row N %**	**Count**	**Row N %**	**Count**	**Row N %**
When academically overloaded, I tend to reduce my sleeping hours	21	17.6 %	14	11.8 %	18	15.1 %	28	23.5 %	38	31.9 %
When academically overloaded, I tend to replace my healthy food, beverages and consuming more candies	26	21.8 %	15	12.6 %	24	20.2 %	25	21.0 %	29	24.4 %
When academically overloaded during the school year, my focus in the classroom starts to diminish progressively.	10	8.4%	16	13.4 %	32	26.9 %	23	19.3 %	38	31.9 %
When academically overloaded, I tend to cancel all types of physical exercises for the sake of more studying	12	10.1 %	10	8.4%	20	16.8 %	24	20.2 %	53	44.5 %
Usually during the school year due to academic overload, I do gain weight	53	44.5 %	18	15.1 %	19	16.0 %	11	9.2%	18	15.1 %

Concerning the "impact of academic overload on secondary students' physical health", the researcher couldn't but notice the following surprising percentages: 55.4 % of the students sample agreed on reducing their sleeping hours when academically overloaded, 51.2 % of the students sample agreed that their focus in the classroom start to diminish during the school year due to academic overload, 45.5 % of the students sample agreed that when academically overloaded they tend to replace healthy food habits by fast food, beverages and consuming more candies, 64.7 % of the students sample agreed on the fact that they do increase their studying hours on behalf of the time usually provided for physical exercises and 59.6 % of the students sample disagreed on gaining weight during the school year when academically overloaded.

3.5. Validity of H01 or H11

In this part the researcher established T test tables "Tables 7titled One-Sample Statistics, & also see table titled One-Sample Test, Table 8" in order to check up the validity of the hypotheses "$H_0$1 or $H_1$1" concerning the first component which is "the academic overload"; recalling that hypotheses "$H_0$1 or $H_1$1" were the following:

$H_0$1: Secondary students aren't academically overloaded.

$H_1$1: Secondary students are academically overloaded.

Table 7. T Test Tables "One-Sample Statistics"

One-Sample Statistics

	N	Mean	Std. Deviation	Std. Error Mean
Academic overload score	119	20.62	5.423	.497

Table 8. T Test Tables "One-Sample Test"

One-Sample Test

	Test Value = 21					
					95% Confidence Interval of the Difference	
	t	df	Sig. (2-tailed)	Mean Difference	Lower	Upper
Academic overload score	-.761	118	.448	-.378	-1.36	.61

The T test table "see table titled One-Sample Statistics, Table 7" shows that the total mean of the seven items in the first component "academic overload" is 20.62; knowing that neutral case is represented by degree 3 in the questionnaire "3 out of .5" so the cut of point should be

3*7=21 which is clear in the histogram represented in Figure 4. "see histogram titled Graph of the Academic Overload Score, Figure.4" where we can see the cut of point regarding the academic overload score which is close approximately to 21 and thus the mean difference is (21-20.62) = 0.378 "see table titled One-Sample Test, Table 8".

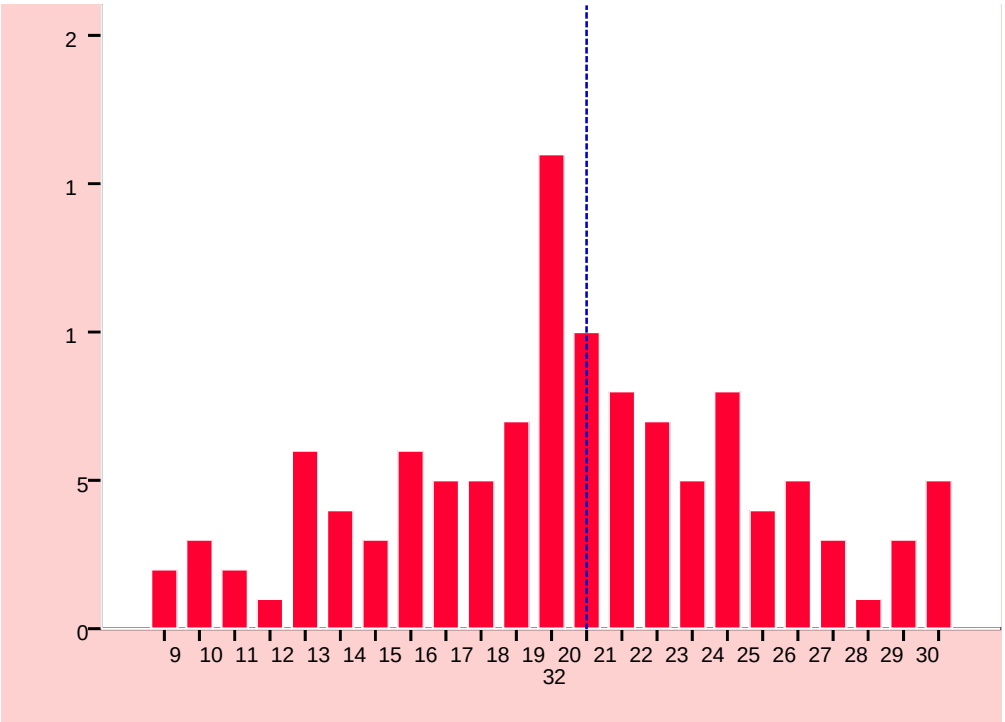

Figure 4. Histogram Showing the Academic Overload Score

The P value [sig. (2-tailed)] "see table titled One-Sample Test, Table 8" is 0.448 which is bigger than 0.05, so based on these data the researcher has deduced that secondary students are not academically overloaded thus the null hypothesis $H_0 1$ "Secondary students aren't academically overloaded" is accepted but hypothesis $H_1 1$ "Secondary students are academically overloaded" is rejected.

3.6. Validity of "H02 or H12" & "H03 or H13"

In this part the researcher has established a test of normality "see table titled Tests of Normality, Table 9" in order to see if the following three scores "academic overload score, mental health score & physical health score" are normally distributed so that we can identify the type of correlation to be used among the following three "Kendall, Spearman and Pearson" in the cases of the second and third hypotheses which consist on checking the correlation between the academic overload as independent variable or predictor from one side and students' mental health as dependent variable or outcome from the other side and also

checking the correlation between the academic overload again as independent variable or predictor from one side and students' physical health as dependent variable or outcome from the other side; once the researcher identifies the type of correlation to use, he will initiate by structuring the needed table of correlation "see table titled Correlations, Table 10" according to which the hypotheses "$H_0$2 or $H_1$2 & $H_0$3 or $H_1$3 " can be rejected or validated.

The table titled Tests of normality "Table 9, Shapiro-Wilk" shows that the P value "sig. value in Table 9" is 0.157 concerning the academic overload score while the P value regarding the mental health score is 0.287 and finally the P value for the physical health score is 0.025; knowing that if P value surpasses 0.05 it indicates that the scores are normally distributed and when normally distributed the type of correlation that can be used would be "Pearson Correlation or Linear correlation between two sets of variables". Accordingly two of the three P values in the table titled "Test of Normality, Table 9, Shapiro-Wilk" are above 0.05 "the P value of the academic overload score and the P value of the mental health score" thus when two out of the three scores appeared to be normally distributed, the researcher proceeded by using "Pearson Correlation".

Table 9. Test of Normality

	Kolmogorov-Smirnov[a]			**Shapiro-Wilk**		
	Statistic	**df**	**Sig.**	**Statistic**	**df**	**Sig.**
Academic overload score	.085	119	.036	.984	119	.157
Mental health score	.100	119	.005	.987	119	.287
Physical health score	.100	119	.005	.975	119	.025

a. Lilliefors Significance Correction

The table of correlations below "see table titled Correlations, Table 10" shows the percentage of relation in case of its existence between academic overload and mental health from one side and between academic overload and physical health from the other side and accordingly the researcher can validate or reject the second and third hypotheses "$H_0$2 or $H_1$2 & $H_0$3 or $H_1$3" based on the P value "sig. (2-tailed)" shown in Table 10; recalling that the second and the third hypotheses were the following:

$H_0$2: Academic overload doesn't affect secondary students' mental health.

$H_1$2: Academic overload affects secondary students' mental health

$H_0$3: Academic overload doesn't affect secondary students' physical health.

$H_1$3: Academic overload affects secondary students' physical health.

Table 10. Correlations

		Academic overload score	**Mental health score**	**Physical health score**
Academic overload score	Pearson Correlation	1	.234*	.289**
	Sig. (2-tailed)		0.011	0.001
	N	119	119	119
Mental health score	Pearson Correlation	.234*	1	.210*
	Sig. (2-tailed)	0.011		0.022
	N	119	119	119
Physical health score	Pearson Correlation	.289**	.210*	1
	Sig. (2-tailed)	0.001	0.022	
	N	119	119	119
*. Correlation is significant at the 0.05 level (2-tailed).				
**. Correlation is significant at the 0.01 level (2-tailed).				

3.6.1. Validity of "$H_0$2 or $H_1$2"

Table 10 reveals that the Pearson Correlation between academic overload score and mental health score is 0.234 "23%" indicating a low magnitude thus a significant correlation between academic overload and mental health which can be viewed in the statistical chart "see Figure 5. titled Dot Plot, row 1 & column 2" between academic overload and mental health where the dots are clearly concentrated in one area instead of being elongated as in cases of important correlations; the table of correlations "table of Correlations, Table 10" shows also that the obtained P value "sig. (2-tailed)" is 0.011 which is less than 0.05 so the researcher can reject hypothesis "$H_0$2" which propose that the academic overload doesn't affect the secondary students' mental health and thus deduce that the hypothesis "$H_1$2" which propose that the academic overload affects the secondary students' mental health would be accepted.

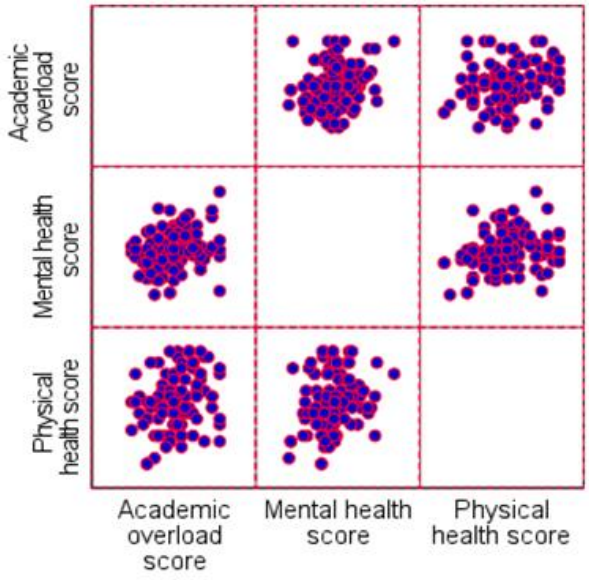

Figure 5. Dot Plot

3.6.2. Validity of "$H_0$3 or $H_1$3"

Also table 10 "table of Correlations" reveals that the Pearson Correlation between academic overload score and physical health score is 0.289 "28%" indicating a low magnitude thus a significant correlation which can be viewed in the statistical chart "see Figure 5. titled Dot Plot, row 1 & column 3" between academic overload and physical health; moreover table 10 reveals that the obtained P value between academic overload score and physical health score "sig. (2-tailed)" is 0.001which is less than 0.05 so the researcher can reject hypothesis "$H_0$3" which propose that the academic overload doesn't affect the secondary students' physical health & thus deduce that hypothesis "$H_1$3" which propose that the academic overload affects the secondary students' physical health would be accepted.

The researcher deduced that the relation between academic overload and mental & physical health is weak or significant in an inversely proportional manner as whenever the academic overload increase, the students' mental health and physical health decline slightly and vice versa.

3.7. A multiple linear regression model

After the correlation between the academic overload from one side and the mental health in addition to the physical health from the other side has been established, it's logical to make a line of regression between the academic overload and the mental health factor and a second line of regression between the academic overload and the physical health factor or better to

refer to the multiple linear regression methodology which sets relationships between the independent variables or predictors " the two health factors together: physical health factor and mental health factor" and the dependent variable or outcome which is the academic overload in order to check up whether the decline in students' physical and mental health can predict an increase in the academic overload; obtained results can be used to induce ways to reduce academic overload in schools if proven to have a negative impact on students' physical and mental health. Regression results are represented in Table 24 titled –Table of Multiple Regression Model.

Table 11. "Table of Multiple Regression Model"

Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method
1	Physical health score, Mental health score[b]	.	Enter

a. Dependent Variable: Academic overload score

b. All requested variables entered.

For this reason the relationship was calculated between the independent variables and the dependent variable "as previously indicated" in the table of Model Summary "Table 12 titled- Model Summary-"; this document reveals that the relationship is 0.339 which means that 33.9% of the variation in academic overload is explained by the mental health score and the physical health score.

Table 12. Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.339[a]	0.115	0.100	5.146	0.115	7.520	2	116	<0.001
a. Predictors: (Constant), Physical health score, Mental health score									

The researcher proceeded by the table titled Coefficients "Table 13 titled- Coefficients-" which reveals the betta's for academic overload in cases of mental health score and physical health score that are respectively 0.049 & 0.283 indicating that whenever the mental health wellness increase by 1 unit, the academic overload decrease by 0.049 and whenever the

physical health wellness increase by 1 unit, the academic overload decrease by 0.283 which means that both the mental & physical health scores are protective for academic overload; in other words the researcher deduced that the academic overload, mental health score and the physical health score are significantly inversely proportional and more clearly as the academic overload decrease, both scores of mental & physical health will improve significantly.

Table 13. Coefficients

Model		Unstandardized Coefficients	Standardized Coefficients		t	Sig.	95.0% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	10.283	2.997		3.431	<0.001	4.347	16.219
	Mental health score	0.049	0.024	0.181	2.027	0.045	0.001	0.097
	Physical health score	0.283	0.101	0.251	2.808	0.006	0.084	0.483
a. Dependent Variable: Academic overload score								

3.8. Interview “open-ended questions” results

The researcher initiated this phase through collecting data using: a focus group interview for 8 students belonging to grade 12 “the life science section”, another focus group interview for 6 teachers of grade 12 “the life science section” and an interview with one school counsellor; students, teachers and the school counsellor were asked about the types of academic overload for the students of this grade level and section in addition to questions regarding the impact of the academic overload on students’ mental health. Then, the students and the school counsellor were asked about the impact of the academic overload on students’ physical health in addition to the clinical signs of this negative impact and finally the school counsellor and the teachers were asked about the role of the school counsellor in diagnosis of the clinical signs of the academic overload and about the therapy if possible.

3.8.1. Questions directed to the students, teachers and the school counsellor

3.8.1.1. Are secondary students academically overloaded?

Table 14. Results of the 1st question « Are secondary students academically overloaded? » directed to the students, teachers and the school counselor

Responses						
	Students		**Teaches**		**School counselor**	
Types of academic overload	**N**	**%**	**N**	**%**	**N**	**%**
Information overloads	7	87.5%	5	83.33%	1	100%
University admission exams	4	50%	2	33.33%		
Official exams	3	37.5%	4	66.66%		
Assignments overload	1	12.5%	0	0%		
Quizzes & tests overload	1	12.5%	1	16.66%		
Reputations overload	0	0%	2	33.33%		
University fees and scholarships	0	0%	2	33.33%		

Results at the end of the first question "Table 14," reveals that the greatest academic overload is the information overload followed by the official exams then the university admission exams.

3.8.1.2. Is there any significant correlation between the academic overload and secondary students' mental health?

Table 15. Results of the 2nd question; the negatively impacted bricks of PERMA pyramid due to academic overload

	Responses					
PERMA bricks	**Students**		**Teaches**		**School counselor**	
Positive emotions	N	%	N	%	N	%
Pleasure	7	87.5%	4	66.66%	1	100%
Academic enjoyment	7	87.5%	6	100%	1	100%
Engagement	N	%	N	%	N	%
Motivation	7	87.5%	6	100%	1	100%
Captivation	4	50%	5	83.33%	1	100%
Relationships	N	%	N	%	N	%
Interconnection with family	5	62.5%	4	66.66%	1	100%
Interconnection with friends	6	75%	4	66.66%	1	100%
Meaning	N	%	N	%	N	%
Reputation amongst friends	7	87.5%	4	66.66%	1	100%
Reputation amongst parents	6	75%	4	66.66%	1	100%
Achievement	N	%	N	%	N	%
Achievement of small goals	7	87.5%	6	100%	1	100%
Achievement of big goals	1	12.5%	3	50%	1	100%

3.8.2. Question directed to the students and the school counsellor

3.8.2.1. Is there any significant correlation between the academic overload and secondary students' physical health?

Table 16. Results of the 3rd question showing the negatively impacted factors that are related to physical health

	Responses			
	Students		**School counselor**	
Physical health	**N**	**%**	**N**	**%**
Sleeping hours	5	62.5%	1	100%
Focus in the classroom	6	75%	1	100%
Food habits	3	37.5%	1	100%
Body weight	4	50%	1	100%
Sports time	4	50%		

3.8.3. Question directed to the teachers and the school counsellor

3.8.3.1. What is the role of the school counsellor in diagnosis of the clinical signs resulting from the impact of the academic overload on students' wellbeing?

Table 17. Results of the 4th question showing the role of the school counselor in diagnosis of the clinical signs resulting from the impact of the academic overload on students' wellbeing

	Responses			
	Teachers		**Counselor**	
Diagnosis of clinical signs such as behavioral changes	**N**	**%**	**N**	**%**
Sole responsibility of the school counselor	2	33.33%		
Collaboration between teachers & school counselor	**2**	33.33%	1	100%
Sole responsibility of the teachers	2	33.33%		

4. Discussion

The research study inspected if secondary students and specifically the grade 12 students "LS section" are academically overloaded; then it investigated the impact of the academic overload on the grade 12 "LS" students' state of well-being "mental and physical health".

4.1. Answering research question one: Are grade 12 students "LS section" academically overloaded?

Based on quantitative findings "table 1" and qualitative ones "table 14", the researcher found that the information overload is the highest academic factor for overloading students in secondary schools of South Lebanon followed by university admission exams and official exams. The obtained P value [sig. (2-tailed)] "see table titled One-Sample Test, Table 8" is

0.448 which is bigger than 0.05, so based on these data the researcher has deduced that secondary students are not academically overloaded in general and accordingly the null hypothesis $H_0$1 "Grade 12 "LS" students aren't academically overloaded" was accepted on the contrary hypothesis $H_1$1 "Grade 12 "LS" students are academically overloaded" was rejected.

Accepting Hypothesis $H_0$1 indicated that secondary students aren't overloaded in general when considering all the seven items together but a descriptive examination reveals that these students are suffering from information overload which revealed the highest weight amongst the seven studied items of academic overload with a value that exceeds 50 % of the students.Taking into consideration that this research was applied during the CORONA Virus Pandemic period where teaching was mostly online with less assignments and exams compared to previous school years before the Pandemic nevertheless research studies in abroad countries revealed contrast results concerning the type of academic overload as it is clear in the descriptive study "Stress in High School Students" (Acosta-Gómez et al., 2018) where the results revealed that 39% of the students are with stress levels and that the main sources of stress were the exams, choosing a career path and family troubles which is in parallel to the results of another study "Development and Validation of the Questionnaire of Academic Stress in Secondary Education: Structure, Reliability and Nomological Validity" (Garcia-Ros et al., 2018) where it was concluded that the greatest saturation was taking exams followed by the lack of time to fulfil all the activities that students are asked to do.

Therefore, a conclusion was inferred that the students of grade 12 do suffer at least from information overload in some of the schools in South Lebanon but in abroad countries they do suffer from exams overload as a stressor.

4.2. Answering research question Two: Is there any significant correlation between the academic overload and secondary students' mental health?

Based on the quantitative findings concerning the impact of the academic overload on Grade 12 "LS" students' mental health that consists of forty items divided into four parts according to PERMA pyramid, the researcher derived that 19 out of the 40 items were negatively affected by the academic stressor; 10 out of the 20 items representing "positive emotions", 2 out of the 5 items representing "engagement", 2 out of the 5 items representing "relationships" and 5 out of the 7 items representing "meaning" were negatively impacted. These results are reinforced by the answers obtained from the open-ended questions "table 15" but when it comes for the fifth brick "Achievement" which represents the ability of students to achieve small and big goals and that was assessed only through open-ended questions, results showed that due to academic overload there's a considerable negative impact "87,5%, table 15" on small goals' achievement and only a significant negative impact "12,5%, table 15" on big goals' achievement since and according to the interviewed personnel's big goals are more related to the right choice of the major in the university and to the coping style of the students. And since these five bricks of PERMA pyramid are used to detect students' wellbeing

(Seligman, 2018) which in its turn is used to determine students' QOL "quality of life" that is measured through students' life satisfaction thus it can be deduced that the academic overload "information overload" has a clear negative impact on students' life satisfaction thus on students' QOL which decreases their character strength rendering them unable to cope correctly with distress that result from academic factors such as information overload therefore negatively impacting their mental health "creating mental ill health problems". The researcher identified, and through the test of normality "see table titled Tests of Normality, Table 9" which revealed that two of the three P values in the table are above 0.05, that the following three scores "academic overload score representing the independent variable, mental health score & physical health score and both representing the dependent variable" are normally distributed so the type of correlation to be used between these three scores is the "Pearson Correlation". The value of this correlation between academic overload score and mental health score is 0.234 "23%"according to the "table of Correlations, Table 10" which indicates a low magnitude thus a significant correlation between academic overload and mental health and that can be viewed in the statistical chart "see Figure 5. titled Dot Plot,, row 1 & column 2"; the table of correlations "table of Correlations, Table 10" shows also that the obtained P value "sig. (2-tailed)" is 0.011 which is less than 0.05 so accordingly the researcher can reject hypothesis "$H_0$2" which propose that the academic overload doesn't affect the secondary students' mental health and thus deduce that the hypothesis "$H_1$2" which propose that the academic overload affects the secondary students' mental health would be accepted.

For more validity and accuracy in relationships, the researcher referred to the multiple linear regression methodology which sets relationships between the independent variables or predictors "the two health factors together: physical health factor and mental health factor" and the dependent variable or outcome which is the academic overload to check up whether the decline in students' mental and physical health can predict an increase in the academic overload. The researcher calculated the relationship between the independent variables and the dependent variable as shown in "table 11 titled –Table of Multiple Regression Model-" to obtain a value of 0.339 indicating that 33.9% of the variation in academic overload is explained by the mental health score and the physical health score in addition to the betta for the academic overload shown in "Table 13 titled- Coefficients-" in case mental health score which is 0.049 indicating that whenever the mental health wellness increase by 1 unit, the academic overload decrease by 0.049 which means that mental health scores are protective for the academic overload; in other words the researcher deduced that the academic overload and the mental health score are significantly inversely proportional and more clearly as the academic overload decrease, the score of mental health will improve significantly.

The results of this study are confirmed by several abroad research studies; first in a research study titled "Students coping with Stress at high school level particularly at 11th & 12th grade" (shahmohammadi, 2011) through which it was concluded that the percentage of distressed students due to overloads in the secondary public schools was 26.1%, second in "development and validation of the questionnaire of academic stress in secondary education:

structure, reliability and nomological validity" (Garcia-Ros et al., 2018) where a strong relationship was derived between the first order factors "like academic overload" and the second order factor "academic stress" from one side with students' psychological and physical well-being from the other side, third in the study "Academic stress and mental health among high school students" (Subramani et al., 2017) where academic stress turns to be indispensable in the life of high school students and can create consequences on students' learning, their mental health in addition to endangering their solace noting that these results are more significant in the private sector compared to the public one, fourth in the study "Overload Learning, Attachment and Coping Styles Predictors of Mental and Physical Health of Teenage High School Students in Romania" (Chraif et al., 2012) where it was concluded that positive coping styles, attachment and extra activities overload are predictors of perceived physical and mental health which shed the light on the importance of the consideration of the quantity of homework, the daily hours of studying away from the school as indicators of the physical and psychological health's development of high school students, fifth in another study "Impact of Information Overload on Students' Learning: it's an Empirical Approach" (Khalid et al., 2016) where it was concluded that the information overload won't affect students' learning someway when their interpersonal and communication skills were solid and harsh, sixth in a study "Quality of Life, Mental Health and Educational Stress of High School Students in the Northeast of Thailand" (Assana et al., 2017) where it was concluded after data analysis that the educational stress is a common emotional state among high school students and that the inability of adolescents to cope with the stress properly could result in mental ill health noting that mental health problems have influences on both physical health and QOL of high school students; finally there's an investigation "character strengths predict subjective wellbeing during adolescence" (Gillham et al, 2011) which concluded that whenever the students' quality of life increases "as when it's not perturbed by the academic overload", their life satisfaction increases which in its turn increases the students' character strengths.

4.3. Answering research question three: Is there any significant correlation between the academic overload and Grade 12 "LS" students' physical health?

Based on the quantitative findings, results revealed that at least 3 out of the 5 items representing physical health "see custom table titled Students' Physical Health, Table 6" were affected negatively by the academic overload. These results are reinforced by the qualitative interviews which revealed also a clear negative impact of the academic overload on students' physical health "table 16". As demonstrated in the previous question, the researcher established by the help of Pearson correlation that the correlation between academic overload score and physical health score is 0.289 "28%" indicating a low magnitude thus a significant correlation which can be viewed in the statistical chart "see Figure 5.titled Dot Plot, row 1 & column 3" between academic overload and physical health; the table of correlations "table of Correlations, Table 22" shows also that the obtained P value between academic overload score

and physical health score "sig. (2-tailed)" is 0.001which is less than 0.05 so the researcher can reject hypothesis "$H_0$3" which propose that the academic overload doesn't affect the secondary students' physical health and thus deduce that the hypothesis "$H_1$3" which propose that the academic overload affects the secondary students' physical health would be accepted. Also and for more validity, the researcher refereed to the multiple linear regression methodology that permits to check up whether the decline in students' physical health can predict an increase in the academic overload "see table 11 titled –Table of Multiple Regression Model-", for this reason the relationship was calculated as demonstrated in the preceding question "see Table 12 titled- Model Summary-" into 0.339 which means that 33.9% of the variation in academic overload is explained by the mental health score and the physical health score. Finally, the researcher proceeded by the table titled Coefficients "Table 13 titled- Coefficients-" which reveals the betta's for academic overload in case of physical health is 0.283 indicating that whenever the physical health wellness increase by 1 unit, the academic overload decrease by 0.283 which means that the physical health score is protective for the academic overload; in other words the researcher deduced that the academic overload and the physical health score are significantly inversely proportional and more clearly as the academic overload decrease, the score of physical health will improve significantly.

Research studies in abroad countries came compatible with this study; first in a study titled "Overload Learning, Attachment and Coping Styles Predictors of Mental and Physical Health of Teenage High School Students in Romania" (Chraif et al., 2012) it was concluded that positive coping styles, attachment and extra activities overload are predictors of perceived physical and mental health, second and according to "development and validation of the questionnaire of academic stress in secondary education: structure, reliability and nomological validity" (Garcia-Ros et al., 2018) it was concluded a reinforced and strong relationship of the first order factors "like academic overload" and the second order factor "academic stress" with students' psychological and physical well-being, third and in another study titled "Quality of Life, Mental Health and Educational Stress of High School Students in the Northeast of Thailand" (Assana et al., 2017) it was concluded that the educational stress is a common emotional state among high school students and that the inability of adolescents to cope with the stress properly could result in mental ill health in addition to the fact that the mental health problems have influences on both physical health and QOL of high school students so once mental health is affected, physical health would be too.

5. Conclusions

Results of this study were enough to conclude that Grade 12 "LS" students are overloaded mostly by information overload. According to (Yaribeygi et al., The impact of stress on body function: A review, 2017) Stress is defined by any natural or external trigger of biological changes affecting the body and the state of awareness of students in response to stressors, knowing that Information overload increasingly stimulated in secondary high school

students some odd psychological behaviors "mental since students are neither happy due to time stress nor academically enjoyed due to the overload of the working memory (Baddeley, 2010), emotional since students have lost part of their relationships with their families and friends, spiritual since students are relating themselves or their accomplishments to something bigger in life as their families and finally physical such as not getting enough sleep and losing focus in the classroom" as proven through the five bricks of PERMA pyramid (Seligman, 2018) thus information overload became an academic stressor with a clear negative impact on secondary students life satisfaction and accordingly on the students QOL knowing that when students' QOL is negatively impacted so it can be inferred that there's a significant correlation between academic overload and secondary students mental health in an inversely proportional manner as whenever the academic overload increase, students' mental health significantly decrease.

Students' cognitive aptitude is a certainty in the teaching/learning process but when students are academically overloaded and for a long period of time thus exceeding some secondary students' abilities to handle the stressful situation, it creates in some or most of the students conflict negative feelings such as being unsatisfied and edgy about the entire education depending on the psychological strengths of students and their coping style with the situation " Some of the students may drop-out the high school, others may drop-out few courses and a few will adapt but sacrificing their social and sports time". Sacrificing leisure times and sports time, exchanging health food by junk foods, reducing breaks in addition to diminishing the sleeping hours just to cope with the academic overload situation can trigger in secondary students additional problems such as sleeping disorders which may lessens students focusing in the classroom rendering them less motivated thus less engaged in the teaching/learning process and sometimes showing sudden unexplained mood changes and more engagement in classroom disruptive behaviors which results in a less effective teaching/learning process. From all this, it can be inferred that there's a clear significant correlation between academic overload and secondary students' physical health in an inversely proportional manner as whenever the academic overload increase, students' physical health significantly decreases.

According to the World Health Organization or WHO, the state of wellbeing was defined and I quote "Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity" (Kühn et al., 2017) so, and since the academic overloaded was proven to have a significant negative impact on students' mental and physical health, it can be derived that the academic overload have a significant correlation with secondary students' wellbeing in an inversely proportional manner but conditioned by students' character strength and coping style with the situation.

Results would be tremendous in promoting not only for secondary students' educational development but also for their cultural development (Wiktor-Mach, 2020) according to UNESCO 2030 agenda regarding the SDG's (Popoola, 2019).

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