What are stress sources of Business students in Moroccan Universities?

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ABSTRACT: Stress situations confronted in anyone's study and work environment are seen as a chief characteristic of our modern society. Therefore, researchers from different scientific fields, perpetually, are studying this phenomenon and trying, by several tools and methods to suggest an appropriate conceptualization. This hard exercise conducted by researchers emphasize how this concept called *stress* is related to a complex phenomenon, why its study is significant for many stakeholders (public administrations, private organizations, universities, families, students, etc.) and to what extent the results obtained from empirical investigations could be beneficial to establish efficient strategies or at least adjust others deployed somewhere. This article is in search of explaining the business students' stress on the subject of the situations that could explain their emergence in a university context. Methodologically, our research paper was based on a quantitative questionnaire distributed to 500 college business students in Kingdom of Morocco to emphasize their evaluation of the sources recognized to be the catalyst of stress felt in their study and living environment. Classification, in the light of the business students' stress, was made to aggregate, in factors, the situations acknowledged to be sources of anxiety for business students. As a result, six factors underlying the business students' stress sources were found. Nevertheless these factors, when confronted to the literature, explicit divergence that could be enlightened to fit comprehension and simplification purpose.

KEYWORDS: Stress, Anxiety, Business Students, Moroccan Universities.

1   INTRODUCTION

   Stress is recognized as one of the common constraints that human being confronts in our modern life. Office, home, university, etc. these are places where people deal with different situations that the appropriate behavior isn't clearly known. In university, business students are supposed to handle several aspects (courses, marks, teachers, friends, administration, diploma, etc.) that make their study environment complex and hence sources of stress. Therefore, these multiple stress

sources, those business students have to deal with, impact their cognitive process and are also recognized as a catalyst of depression in their private life.

In management literature, much has been said about several aspects on the subject of business students. In fact, these aspects concern their perception about specific managerial phenomenon, cognitive troubles, factors affecting their performance in particular knowledge area, etc. As well, business students' stress was studied but not deeply investigated and analyzed so that we can identify the trend of these stress sources.

This paper is based on relevant research studies that treated previously several aspects of business students in different contexts in order to underline business students' stress sources characteristics, their trend and hence their potential categorization. Via this research, we seek to deal with stress sources heterogeneity in order to provide universities, administrations, companies, etc. some insights about crucial aspect that affects business students behavior and performance.

2   LITERATURE REVIEW

Theoretically, stress felt in different situations is highly treated in many knowledge areas [1-6] to attempt conceptualization and hence suggest appropriate behavior that should be adopted. In fact, each research field studies this concept called stress in the way to explicit or investigate about one of its specific aspects or in particular environment (university, public organization, SMEs, etc.). Business students, on the subject of stress sources, could be seen as an important aspect that academic (administrative staff, teacher, etc.) and professional (CEO, HR managers, etc.) stakeholders should integrate in their strategies and plans.

2.1   STRESS SITUATION

Stress could be defined as a pressure or worry caused by the problems in somebody's life [7]. In this simple definition it's clear that stressful situation disturb the normal trend of somebody's life. Therefore, stress situation has a negative impact on somebody's activity or life environment. Another conception, more technical, of stress situation shows that it is a medical term for a wide range of strong external stimuli,…, which can cause a physiological response called the general adaptation syndrome, first described by Hans Selye in the journal Nature [8].

In order to give an appropriate conception that includes more aspects of this complex situation, it could be argued that stress is often described as a feeling of being overwhelmed, worried or run-down. It can affect people of all ages, genders and circumstances and can lead to both physical and psychological health issues. … Some stress can be beneficial at times, producing a boost that provides the drive and energy to help people get through situations like exams or work deadlines. However, an extreme amount of stress can have health consequences and adversely affect the immune, cardiovascular, neuroendocrine and central nervous systems [9]. From this conception, more holistic, stressful situation besides its negative impact it has a positive impact that enhances people energy to do well in difficult situations in different environment. However, this conception lacks the lay out exactly the amount of stress that provides negative or positive impact and to define precisely the boundaries between these impacts. Factors recognized to be the facilitators of stressful situation emergence are, theoretically, treated without mentioning if that the same factors could impact positively or negatively people's life and work.

2.2   BUSINESS STUDENTS STRESS

Many studies (eg. [1], [10], [11], [12]) treated different aspects (perceptions, skills, performances, etc.) about the subject of business students. This importance accorded, by managerial literature, to this community is justified by the fact that business students are recognized as a future stakeholders of organization management. Therefore, this business students' aspect is interesting in the sense to clarify factors affecting this community performance and hence calls attention to what should be taken as an action to succeed in organization management.

Recently, Business students' Stress is one of the subjects that the managerial literature (eg. [13-16]) outlines in order to seek conceptualization or at least highlight the insufficiency about specific skills (stress management, communication, etc.) developed by the initial training at the university that should be completed by other training program accomplished in the organizational structure.

2.3 BUSINESS STUDENTS STRESS SOURCES

With reference to this specific subject called sources of business students' stress is moderately highlighted by the managerial literature (eg. [15-16]). Indeed, these sources encompass all over the situations (changes in social activities, trouble with parents, spoke in public, missed to many classes, etc.) that researchers and experts think they disturb study and private life of business students.

The study of these business students' stress sources is conducted by suggesting specific scales (eg. [15-17]). The conception of these scales is based on the literature that lays out different aspects presented in items and categorized in blocs relatively homogeneous such as interpersonal, intrapersonal, academic, etc.

3 METHODS

In this research we adopted the quantitative approach and the type of data we collected were primary data which means that information was not gathered before but collected ad hoc for a specific research purpose. The questionnaire was chosen as the survey instrument because it is practical and it consisted of a self administered questionnaire, with 20 items and finally data were analyzed using SPSS. Our population of interest covers all undergraduate business students in the first year that constituted the research subjects. We ran a random sampling procedure and the questionnaire was distributed to 500 students of 2 public business faculties located in two different cities in Morocco. The questionnaire was written in frensh, because the business education system in Morocco is in frensh, and then results were translated into English. Even there are many channels to receive responses (e-mails, online questionnaires, etc.) the questionnaire was filled during the course session time to make sure that the rate of response is higher as possible because if students were let to fill questionnaire online when they are at home they would forget or procrastinate. Before they started filling the questionnaire a little time was devoted to introduce and explain to students the utility and purpose of this research, this step is very important because it motivates them to fill the questionnaire with more commitment and responsibility which will have a positive impact on the reliability of the study. In order to keep the questionnaire as short as possible there was only one section in the questionnaire which concerns the main questions of the study and one demographic question which is of gender, we wanted to avoid long questionnaires that contains many questions about demographic questions which makes the respondent feel boring. Students were given a list of items about stress sources and asked to rate the importance of each one. There were 20 qualities consisted of 20 variables that were measured using the 5 points Likert scale (1= very low: not important 5= very high: very important). After screening questionnaires we had received we found that out of the 475 questionnaire filled, 390 were usable completed questionnaires resulting in an 82, 10% rate which is a significant proportion of the overall participants.

The study applied Factor analysis. FA is used when the researcher is interested in identifying a smaller number of factors underlying a large number of observed variables [18]. FA analysis allows finding variables sharing the same characteristics. Factor analysis operates on the notion that measurable and observable variables can be reduced to fewer latent variables that share a common variance and are unobservable, which is known as reducing dimensionality [19]. In order to conduct a factor analysis certain conditions should be met, among these conditions is the sample size. It is obvious that the more the better. "A rough guide is that a minimum of 100 participants should really be used. However, there should always be more participants than there are variables (with a minimum ratio of 2:1 participants to variables). Therefore, if we have a scale consisting of 60 items that we wish to analyze using factor analysis; we would need a minimum of 120 participants)" [20]. In our research, this specification is met because we have 20 items and 500 participants.

4 RESULTS AND DATA ANALYSIS

The results which are extracted from factorial analysis conducted with the collected empirical data are presented in tables. Each table highlights a key aspect in our analysis. The main goal from the generation of these tables via SPSS is to achieve the identification of the business students' perception on the subject of the qualities of an ideal manager. In this perspective, we follow a line of investigation to provide some categorization of these qualities in terms of very specific factors.

In the first table communalities we are interested in the third column labeled Extraction. It provides for each variable the total amount of variance that all factors explain. It is obvious from the table that the extracted factors explain 65,3% of the variance in the variable Responsibility and it is the highest value. When this value is low it means that the variance of the variable is not much explained by the extracted factors and therefore it might be excluded from the analysis.

The next table titled Total Variance Explained gives a summary of the total variance that is explained by the factor analysis solution and indicates how many factors are useful. This table contains three principal parts and under each part there are three columns; total, % of variance and cumulative %. The first principal part is Initial Eigen values which gives the Eigen value for each potential factor that are listed from the highest to the lowest. The second column % of Variance shows how much variance can be explained by each single factor. The second principal part, titled Extraction Sums of Squared Loadings provides information about factors having Eigen values higher than 1. The next column Cumulative % contains values for the extracted factors added together explaining 52,971 % of the variance. The last principal part is Rotated Sums of Squared Loadings which shows the extracted factors after rotation. After the execution of rotation, there is a change of Eigen values, however the cumulative percentage value does not change. Five factors were found with Eigen values over 1. In some cases we can find that after rotation some factors with Eigen values falling down from 1.

Table 1. Communalities

	Initial	Extraction
1. Financial difficulties	1	0,604
2. Family problems	1	0,59
3. Friendship problems	1	0,535
4. Illness/death of a relative	1	0,644
5. Making new friends	1	0,605
6. Become sick	1	0,47
7. Marriage	1	0,445
8. Clothing	1	0,363
9. Residence change	1	0,537
10. Public speaking	1	0,653
11. Hating a class/teacher	1	0,551
12. Homework to do	1	0,338
13. Exams periods	1	0,645
14. Missing an important class	1	0,591
15. Language problem	1	0,547
16. Class/ amphi theatre is full	1	0,479
17. Transportation problems	1	0,607
18. Lack of Equipments	1	0,499
19. Problems with administration	1	0,413
20. Living conditions	1	0,48

Table 2. Total Variance Explained

Component	Initial Eigen values			Extraction Sums of Squared loadings			Rotation Sums of Squared Loadings		
	Total	% of variance	% cumulative	Total	% of variance	% cumulative	Total	% of variance	% cumulative
1. Financial difficulties	3,909	19,545	19,545	3,909	19,545	19,545	2,2	10,999	10,999
2. Family problems	1,797	8,985	28,53	1,797	8,985	28,53	2,083	10,414	21,412
3. Friendship problems	1,564	7,82	36,35	1,564	7,82	36,35	2,062	10,31	31,722
4. Illness/death of a relative	1,199	5,994	42,344	1,199	5,994	42,344	1,69	8,452	40,175
5. Making new friends	1,075	5,374	47,718	1,075	5,374	47,718	1,303	6,516	46,691
6. Become sick	1,051	5,253	52,971	1,051	5,253	52,971	1,256	6,28	52,971
7. Marriage	0,982	4,91	57,88						
8. Clothing	0,897	4,483	62,363						
9. Residence change	0,854	4,268	66,632						
10. Public speaking	0,837	4,187	70,819						
11. Hating a class/teacher	0,771	3,853	74,672						
12. Homework to do	0,701	3,507	78,179						
13. Exams periods	0,672	3,36	81,539						
14. Missing an important class	0,648	3,241	84,78						
15. Language problem	0,608	3,042	87,822						
16. Class/ amphi theatre is full	0,578	2,891	90,713						
17. Transportation problems	0,521	2,604	93,317						
18. Lack of Equipments	0,493	2,466	95,783						
19. Problems with administration	0,438	2,189	97,973						
20. Living conditions	0,405	2,027	100						

In the third table Component Matrix details are given about the factor loadings of each extracted factor before the execution of rotation. Here we are given the original picture of unrotated factors, as we can see the variable there are several variables have high loadings on more than one factor which makes it difficult to interpret. In order to overcome this, Rotation is indispensable because it helps solving this kind of problems.

Table 3.   Component Matrix

		Component					
		1	**2**	**3**	**4**	**5**	**6**
1.	Financial difficulties	0,523	-0,161	0,406	-0,084	0,263	-0,251
2.	Family problems	0,459	-0,395	-0,149	-0,009	-0,261	-0,364
3.	Friendship problems	0,386	-0,399	-0,027	0,407	-0,236	-0,067
4.	Illness/death of a relative	0,601	-0,251	-0,266	-0,385	0,027	-0,001
5.	Making new friends	0,093	-0,205	0,347	0,619	0,144	0,172
6.	Become sick	0,529	0,059	-0,272	-0,31	0,002	0,128
7.	Marriage	0,357	-0,386	-0,215	-0,05	-0,332	0,099
8.	Clothing	0,34	-0,321	0,034	0,215	-0,119	0,287
9.	Residence change	0,44	-0,121	0,029	-0,203	0,324	0,426
10.	Public speaking	0,316	-0,081	-0,413	0,148	0,517	-0,294
11.	Hating a class/teacher	0,39	0,415	-0,281	0,258	0,203	0,199
12.	Homework to do	0,428	-0,049	-0,031	0,235	0,211	0,227
13.	Exams periods	0,431	0,543	-0,276	0,228	-0,048	-0,184
14.	Missing an important class	0,459	0,412	-0,288	0,01	-0,294	0,201
15.	Language problem	0,555	0,258	0,012	0,121	0,083	-0,388
16.	Class/ amphi theatre is full	0,234	0,456	0,301	0,042	-0,338	-0,097
17.	Transportation problems	0,371	0,267	0,6	-0,162	0,05	-0,095
18.	Lack of Equipments	0,5	0,171	0,326	-0,2	0,033	0,268
19.	Problems with administration	0,547	0,036	0,156	0,119	-0,253	0,104
20.	Living conditions	0,554	-0,241	0,266	-0,126	0,032	-0,166

Table 4 presents the table titled Rotated Factor Matrix which has rotated factor loadings. In order to obtain a good factor solution, a variable should have higher loading on one factor and lower loadings on the rest of factors. It is common for researchers to consider 0.40 as a criterion for high loadings. Our research output shows that the variables which have high loadings on factor 1 have low loadings on factors 2, 3, 4, 5 and vice versa. If a variable was found loading high on more than one factor, in this case we can exclude it from the factor analysis and revise factor specification relying on previous theoretical research. After we had obtained the particular variables for the corresponding factors, we gave them names. As we can see factor 1 encompasses four variables—11, 13, 14, 16. Factor 2 contains three variables — 1, 17, 20. Factor 3 includes two variables — 2, 7. Factor 4 has two variables — 6, 9. Factor 5 contains one variable, 5. Factor 6 contains one variable 10.

Seven variables 3, 4, 8, 12, 15, 18 and 19 were dropped from the analysis because they are loading high on more than one factor (3,4,15,18) or they have 0 loadings (8, 12, 19). These six factors include the variables (stress sources) that are statistically significant. It should be noted at this point that three variables are excluded from the formation of these factors because they are not statistically significant. The composition of these factors, according to the business students, is carrying of important lessons and indicatives of significant managerial implications.

Table 4. Rotated Component Matrix

	Component					
	1	2	3	4	5	6
1. Financial difficulties	-0,067	0,703	0,15	0,16	0,124	0,206
2. Family problems	0,039	0,205	0,71	-0,076	-0,053	0,183
3. Friendship problems	0,074	0,056	0,58	-0,073	0,424	0,066
4. Illness/death of a relative	0,084	0,179	0,501	0,491	-0,256	0,216
5. Making new friends	-0,066	0,109	-0,027	-0,054	0,765	0,013
6. Become sick	0,3	0,095	0,272	0,481	-0,242	0,084
7. Marriage	0,012	-0,086	0,627	0,201	0,019	-0,065
8. Clothing	0,003	-0,007	0,366	0,258	0,393	-0,087
9. Residence change	-0,007	0,154	0,03	0,701	0,119	0,083
10. Public speaking	0,192	0,04	0,088	0,105	0,032	0,771
11. Hating a class/teacher	0,624	-0,056	-0,126	0,273	0,174	0,194
12. Homework to do	0,213	0,092	0,096	0,34	0,362	0,168
13. Exams periods	0,777	0,102	0,021	-0,062	-0,038	0,158
14. Missing an important class	0,674	-0,059	0,179	0,239	-0,094	-0,187
15. Language problem	0,481	0,468	0,142	-0,064	0,001	0,269
16. Class/ amphi theatre is full	0,416	0,352	-0,036	-0,168	-0,029	-0,389
17. Transportation problems	0,114	0,716	-0,146	0,097	0,016	-0,223
18. Lack of Equipments	0,188	0,438	-0,008	0,459	0,058	-0,241
19. Problems with administration	0,319	0,29	0,327	0,17	0,213	-0,213
20. Living conditions	-0,035	0,548	0,36	0,195	0,064	0,081

5   DISCUSSIONS

The aim of this research paper is to accomplish, through factor analysis, the identification of the trend of business students' stress with reference to their sources. Our findings involve the explanation of some ideas raised by observing the results derived from the analysis. The first idea is that we had developed six factors. *Factor 1* is composed of the following four stress sources: *Hating a Class/Teacher*, *Exams Periods, Missing an Important Class, Classroom/Amphi Theater Full*. In this factor, three of these stress sources - *Hating a Class/Teacher*, *Exams Periods, Missing an Important Class* - are related to what could be recognized as an academic anxiety sources that business students confronts. The fourth stress source - *Classroom/Amphi Theater Full* – is classified in infrastructure or environment category. *Factor 2* deals with stress sources such as: *Financial Difficulties, Transportation Problems, and Living Conditions*. The components of this factor are classed in different categories. Indeed, *Financial Difficulties* are classified in intrapersonal category*, Transportation Problems,* and *Living Conditions* are related to infrastructure and environment category*. Factor 3* contains two stress sources –*Family problems* and *Marriage*- that deal respectively with interpersonal and intrapersonal of stress sources' categories. *Factor 4* encompasses two stress sources –*Become Sick* and *Residence Change*- that are related respectively to intrapersonal and

infrastructure and environment categories. *Factor 5* is composed of one anxiety source – *Making New Friends*- that is classified in interpersonal category. *Factor 6* contains one stress source –*Public Speaking*- that is classified in intrapersonal category. The second idea is that the heterogeneity found in our empirical factors on the subject of business students' stress sources categories gives some lessons related to the trend of specific stress sources (eg. Intrapersonal with interpersonal) that could be in potential association with each other in despite of their categorization in divergent registers. As well, this potential association between specific stress sources could be explained by the nature of our empirical business students' sample.

The divergence between our findings and theoretical categories could be explained by particular reasons. In fact, business students in their academic and private living environments could be impacted simultaneously by several stressful situations' sources that are catalogued in different stress sources registers. Furthermore, the boundaries between the theoretical stress sources' categories are established to facilitate the comprehension of these stress sources nature and hence their categorization becomes possible. The establishment of these stress sources' categories explicates the meaning of each stress source but don't provide any insights about the trend of the stress sources in higher education context.

6   CONCLUSION

The objective of this research paper is to try a specific categorization of undergraduate business students' stress sources, specially, in Moroccan universities. In fact, our task in this paper was the development of factors that aggregate business students' stress sources in order to seek the understanding the trend of the business students, as a future organizational management stakeholder, concerning a key aspect such as stress. The confrontation between our findings and theoretical categories gives us some important lessons.

This research has some limits that open future researches. These limitations could be summarized in two points. The first is that results got from this analysis cannot be generalized to the entire population of undergraduate business students because data concerned only students of two Moroccan universities. The second is the fact that aggregation of these stress sources in factors developed via our statistical analysis don't clarify if there is a significant relationship or correlation between stress sources encompassed in each factor.

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