Understanding Nursing Student Stress and its Consequences: A Qualitative Study in France

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Abstract

Background

Student nurses have perceived stress higher than students of the other training. The objective is to understand the weight of contextual determinants on this stress, its consequences for the success of training and the means implemented to cope.

Method

Semi-directive individual interviews were conducted with twenty students or former nursing students registered or who had been registered at a Norman establishment. They have been selected according to promotions and availability. Three types of factors influencing the stress level of these students were addressed: academic, clinical and personal.

Results

Four major themes were identified through these interviews: representation and training requirements; the difficult confrontation with the field; perception of stress and its consequences; and defense mechanisms used.

Conclusion

Students who perceive their stress positively report a more positive impact on their performance and adopt more active coping strategies. The ability to effectively manage this stress is rarely mentioned in this training. It seems important then to be able to offer students tools that would enable them to remedy them and thus avoid the negative consequences.

Key Words: Stress; Contextual Determinants; Consequences; Coping; Nursing Students

Introduction

Health of French students, in particular health care education (i.e., nursing, medicine), is worrying. A recent survey conducted by the French Federation of Nursing Students reveals a profound unease among these students [1]. Low physical health, financial insecurity and addictive behaviors add to the stress experienced on a daily basis. Non-specific response of the body to stressors that can be both physiological and psychological, stress requires adaptation [2]. Indeed, stressors are not pathogenic to the organism but it is the reaction to them that can be. When a situation is perceived in a negative and insurmountable way, it can lead to psychological distress in the individual [3,4]. These potentially stressful situations seem to be very common in nursing education.

A previous study shows that students in health education (i.e., Nursing and Health) are more stressed and perceive their health more negatively than students in other education program (i.e., Sport...
and Psychology) [5]. Moreover, perceived stress can be explained by psychological determinants, including coping strategies [5]. Thus, some students seem to be more protected than others on the basis of these psychological determinants. However, other more contextual and situational determinants such as education program, courses and internship conditions can influence students’ feelings. Thus, the determinants or sources of stress as well as the mostly negative consequences in nursing education have been the subject of much studies.

Three kinds of factors influencing stress level have been identified in the literature: academic, clinical and personal [6-14]. Academic determinants concern theoretical courses, including gap between theory and practice, workload or examination periods. Moreover, nursing education program has the highest hourly volume compared to other programs (on average 30 hours of courses/week and a total of 14 hours of personal work spread over the whole week [15]). Moreover, more than 50% consider the content of training intense [16]. Clinical determinants involve internship situations. Clinical education is an important part of the nursing curriculum (i.e., 2100 hours spread over 3 years). During this period, students are directly confronted with sources of stress encountered by professionals (e.g., confrontation with death, problems with the patient or his family, relationship with the staff...) without being particularly prepared and with little experience, especially in the first year. However, as the experience increases, the stress is less present in nurses [17]. Finally, personal determinants may also include financial, family or health problems.

Stress can have positive effects on students. For some students, stress can lead them to accomplish their goals and allow them to be successful [8]. Thus, stress can lead to motivation, alertness, attention and concentration and even develop psychological well-being and general satisfaction [8,18,19]. Thus, this stress is negatively correlated with academic and clinical performance [20,21]. But chronic and persistent negative stress can lead to many adverse health, behavioral and social problems such as absenteeism, somatic illness, emergence of risky behaviors, deterioration in sleep quality [22].

Previous research show that nursing students use ineffective coping strategies to deal with these stressful situations [23,24]. Behavioral and cognitive strategies called coping are implemented by the individual to cope with a stressful situation [25]. If event control is effective, there are very few physiological, biological or behavioral disturbances [26]. There are disruptions if the individual is unable to improve his stressful environment or if he is unable to regulate his emotions in the face of what he considers to be an insurmountable situation. Gibbons (2010) has argued that nursing students who use active coping strategies, have better clinical performance (i.e., diagnosis), learn better and express higher well-being than those who use passive strategies [9].

Avoiding the problem by the student, on the other hand, has more harmful effects on health. The escape strategy may lead the student to abandon or interrupt his training, while the strategy to deal with situations will lead the student to reflect on the means he could put in place to improve his learning conditions. In addition, students who face the problem perceive situations as less stressful than those who are emotionally focused.

Many studies have adopted quantitative methods to examine the stress of this student population [6,7,9-14]. However, this kind of method may limit the number of variables that can explain this phenomenon because of closed-ended questions, unlike open-ended questions that will be asked in an interview and that offer greater freedom of response [27]. Thus, the objective of this study is to understand how students perceive and cope with the different determinants of stress related to their education and the consequences, through a qualitative method. The aim is to verify whether the student who perceives his stress positive, uses effective stress coping strategies and expresses a positive impact of this stress on the success of his training, particularly on his academic and clinical performance.

Method

Procedure and Participants

Semi-directive individual interviews were conducted with nursing students enrolled or who had been enrolled in a French institution. Twenty students or former students participated in this study. They have been selected according to promotions and availability. The average age is 24.05 years (SD = 4.82) (table a).

An announcement explaining the study was distributed via social networks. Interested students were invited to contact the researcher for more information and to arrange an interview date. The interviews were interrupted after 20 interviews (5 per level of training L1, L2 and L3 as well as 5 students who dropped out of training) on the basis of the principle of data saturation. Indeed, the collection of new data did not provide additional answers. The interviews were conducted between

### Table a. Participants description

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L1 : first year; L2 : second year; L3 : third year; A : abandonment; W: Woman ; M: Man ; A : Average ; SD: Standard deviation.
April 1st and 26, 2018, face-to-face in a quiet place where dialogue could take place or by phone depending on students’ preferences and availability. The interviews lasted between 25 and 45 minutes, were recorded and then transcribed within 48 hours of the interview. Before the start of each interview, oral agreement was obtained to record the session. The anonymous nature of the use of the data collected was recalled and a brief presentation of the study was made.

Material

The interview guide is composed of open-ended questions and is developed using the literature that addressed the different determinants of stress from a contextual perspective. It was structured in 4 distinct parts: the first one was an ice-breaker. For example, it allowed him to explain the reasons that led him to carry out this education program, his hobbies outside his education program, etc. The second part discussed rather personal determinants of stress (e.g., everyday stress situations or ways to finance education). The third concerned the determinants linked to the rather theoretical education in which the workload, the examinations or the perception of relations with teachers and other students in the training are discussed. Finally, the last part of the interview focused on the internship situation and any difficulties encountered.

Data Analysis

Thematic analysis was chosen as the most appropriate method of analysis to study the data collected during the interviews. Indeed, this method is commonly used to describe, analyze and communicate themes and trends in the data [28]. Sequenced thematization, aiming at a hypothetical-deductive approach, is used [29]. This analysis is carried out in two stages. On the one hand, a thematic sheet is produced by analyzing a sample chosen at random from all the interviews. Different themes are then identified. The second stage of this analysis consisted in applying this thematic sheet to all the interviews [29].

Results

Four major themes are identified through these interviews: the representation and requirement of education; the difficult confrontation in the field; the perception of stress and its consequences; and the defense mechanisms used.

Representation and Education Requirements

The first theme describes how students represent their education through the motivation that led them to carry it out. Several kinds of motivation came up quite regularly concerning the relational aspect of the profession, desire to help people, the possibility of evolving in different places of practice and in the career as well as the technical aspect of the profession. However, some mentioned discrepancy between what they expected when they started education program and, in particular, their motivation to integrate it, and what is actually happening. For example, students mentioned the lack of practical courses and content that was too theoretical and difficult to link to the field. Others mentioned the fact that many courses are conducted at a distance. This seemed rather paradoxical for a student in view of the specific nature of the profession. Moreover, while some people noted a gap between their expectations and the reality on the ground, the positive situations encountered during the internship tended, on the contrary, to reinforce their motivations. As for the workload, it is perceived by many as important. It was also stressed the importance of rigor in overcoming it. The main advice given by the participants to ensure the success of this education was to work regularly. This workload has also been responsible for many of the abandonment or reduction of sports activities due to lack of time.

The Difficult Confrontation with the Field

Internship placement is perceived as the most important stressful situation for these students. Reasons are generally due to a lack of knowledge of the environment, which led to apprehension, particularly at the beginning of the internship. Lack of knowledge of the team, the department, the pathologizes, or even in some cases, the schedules that will be carried out, was cited almost systematically by students. Conditions of supervision, when they are not perceived as formative for the student, can be stressful. Indeed, students who met supervisors who refused to teach, who did not provide them with sufficient support in the provision of care or who changed too regularly, expressed that they were more stressed by the situation. Moreover, internship assessments are perceived in a rather stressful and dreadful way by students, especially when the supervision seemed insufficient. Indeed, in some cases, no skills had been validated during the internship. They learned everything that was wrong at the end of the internship without being told anything before. Some confrontations with the profession can be difficult for students. Among these confrontations, death, aggressiveness or refusal of care of a patient or the patient’s family with regard to the student’s status or emergency situations were mentioned several times. Places of internship such as emergency and resuscitation are also regularly cited by students for their stressful nature. They explain this by using more complex equipment than in other services. Psychiatry has also returned quite regularly and is due to public apprehension.

Perceived Stress and Consequences

The interviews identified consequences of stress based on the student’s perception of it. Students who perceived stress situations
negatives expressed a negative impact on their academic and clinical performance. They have noticed a loss of resources, made mistakes or forgotten things they knew beforehand. On a personal level, they felt irritable, lost self-confidence and some gave up or considered giving up. Stress also caused health problems for a student, which led her to drop out of training. Others have grappled with stress situations positively and have allowed them to perform better both on their concentration and on their memory skills. However, many expressed that the context had a significant impact on their perception of stress, particularly in relation to the management team. They felt that the mentoring team could generate negative stress by constantly observing students. But they also mentioned that when they trusted them, the stress became positive. This has led to more initiative, investment and confidence building.

**Defense Mecanisms Used**

To cope with this stress, students have put in place different defense mechanisms but there is no difference between level of study and gender for strategies used. They expressed that support was an important element in addressing them. Students reported that when they felt fully integrated and supported by the health care team, the internship became less stressful. In the context of theoretical education, peer support and self-help seemed particularly beneficial to them. Faculty support is expressed as an important part of stress management. However, when it is perceived negatively, it has created stress for students. Family support was also mentioned when students chose to leave education program, considered quitting or as financial support. Some students expressed difficulty coping with stress and no knowledge to learn how to manage it. Instead, they used situation avoidance strategies such as considering stopping during an internship. While other students used strategies that aimed to address the problems encountered. They questioned themselves, sought the solution and learned from the situation so that they could react effectively when the situation came up again. As part of the reviews, they used planning strategies to be organized to better understand the situation. In addition, students reported going out or exercising to relieve stress. Finally, the majority to express that it would be necessary to include tools in their training to learn how to better manage stress.

**Representation and Training Requirements**

During the various interviews, motivations for pursuing this education and the nursing profession were multiple (i.e., helping people, relational, possibility of career development and different places of practice, technical care). These motivations, which are mostly intrinsic, are also observed in the literature [30-32]. In addition, engagement is an important variable to consider in understanding the factors that lead to better academic performance, educational satisfaction and student well-being [33]. However, some students mentioned a discrepancy between what they expected when they started their training and what actually happened. Some reported a non-stimulating program organization (i.e., too many theoretical and little practical courses, too many distance courses, content of distance courses difficult to understand and link to the field). This disappointment, in view of the gap between expectations and realities, is likely to develop frustration, which may lead him/her to no longer wish to continue this education [34]. Student-centred learning environments that emphasize human and caring relationships within the academic and clinical environment help students address the challenges and stresses of their education [35]. In addition, students become more engaged in their education when they attend courses that focus more on clinical skills than purely theoretical courses [32].

According to the survey conducted by Student Life Observation [15], nursing education has the highest hourly volume compared to other training courses. In fact, most of the students interviewed perceived a high workload and stressed the importance of rigor in overcoming it. This workload is also responsible, for the majority of students, for dropping out or reducing their participation in sports due to lack of time. Mirzaei, Oskouie and Rafii (2012) found that students spent most of their time on academic tasks to overcome stress [36]. Turner and McCarty (2017) observed a sense of overload expressed by these same students [37].

**The Difficult Confrontation with the Field**

Nursing education combines university work and professional experience, which together represent 4200 hours spread over 3 years. The requirements of vocational education introduce additional stress factors that can impact the health of students and have a negative impact on their performance. Moreover, internships are the most important stress situation expressed by students. Other studies have also highlighted the importance of this internship [38,11]. Indeed, students perceive clinical stressors more intensely than academic and external stressors and present psychological symptoms more frequently than physiological symptoms [38]. Several reasons are given by students to explain this level of stress during the internship.
First of all, it is due to a lack of knowledge of the environment which leads to apprehension, particularly at the beginning of the internship. Then, the framework conditions are regularly mentioned. Indeed, when these are perceived as not very formative by the student, they can generate stress. Students who met internship supervisor who refused to teach, who did not provide them with sufficient support in carrying out their care or who changed too regularly, expressed that they were more stressed. For some researchers, this factor is often cited as one of the main reasons for dropping out of training [16,34]. In view of the supervision, the internship assessments are also perceived in a rather stressful way and are quite dreaded by the students. Indeed, in some cases, students have been terminated without any validation of competence. The latter generally learned on the last day of the internship the grievances that the tutors or supervisors blamed on them [9].

These students also present sources of stress identical to state registered nurses such as confrontation with death, problems with the patient or family (e.g., refusal of care, verbal or physical violence...), lack of equipment or personnel. Confronting death is perceived as difficult for most nursing students and meeting families can be a scary factor for 2/3 of students [7,39]. A study by Magnavita and Heponiemi (2011) found that 34% of students reported at least one episode of physical or verbal abuse during their lifetime in a clinical setting [40]. Celebioglu and colleagues (2010) found that half of them were victims of violence and more than 90% of verbal violence [41]. Student status can also be a problem for patients or their families who do not want to deal with a student because of their lack of experience.

It would seem, through the students’ speeches, that some internship sites are more stressful than others. Among them, emergencies and resuscitation due to the use of complex equipment or psychiatry related to public apprehension are regularly mentioned. Indeed, the confrontation with death, the difficult pathologizes of certain services can make work very difficult, especially for such novices in the profession [42-44].

**Perceived Stress and Consequences**

Stress factors present in nursing education cannot be avoided by students. However, the perception of this stress may differ from one student to another. People who perceived stress negatively reported negative consequences such as a negative impact on their academic and clinical performance. Indeed, they expressed a tendency to lose their way, to make mistakes or to forget things they knew before hand. Researchers have shown this link between stress or anxiety level and clinical performance [20,45]. Students also reported that this kind of stress will lead to negative emotions that make them more irritable, but they also reported experiencing health problems or decreased self-confidence. These consequences are responsible for some people abandoning or considering stopping training. Students quickly made the decision to stop their nursing education because excessive academic demands had negative effects on their health and well-being [46]. Indeed, it has been shown that students with high levels of stress are more likely to have poor physio-psycho-social health [3]. This high level of stress during education can lead to psychological or emotional impairment during their working lives that can have an impact on the quality of care provided to patients [23,13].

Others have approached stress situations positive. These situations motivated them and moved them forward. These students required a certain amount of stress and physiological excitement to achieve optimal performance [8]. In addition, students who view the practice as a challenge are moderately stressed because they are more confident in their ability to adapt to stress [11].

For the students interviewed, the context has a significant impact on their perception of stress, particularly in relation to the management team. They felt that it was generally the management team that was able to generate negative stress, particularly through constant observation during the internship. But they also mentioned that when supervisors trusted them, this stress became positive, confirming previous studies [47-49].

**Defense Mechanisms Used**

Students cannot avoid stressors, but it is their ability to cope with them that will enable them to succeed [4]. To cope with this stress, students have put in place different defense mechanisms. Support has consistently been recognized as an effective coping strategy. Support from family and friends, personal determination, interesting and enjoyable internships and staff support are reasons often cited in the continuation of training [50]. The students found that when they felt fully integrated and supported by the health care team, the internship immediately became less stressful. Teachers and clinical staff who understand the learning needs of students and who can facilitate their development in a respectful and interpersonal supportive environment can reduce the stress and anxiety associated with clinical practice [51]. They have a greater influence on the sense of belonging and learning of nursing students [52]. Peer support was seen as particularly beneficial. This support facilitates the improvement of students’ learning, skills development and personal growth [53]. Support relationships between students are recognized as essential for course work, exam preparation and to address certain situations of concern [54]. Family support is mainly used when students have made the decision to quit or have considered quitting. It is also mentioned as financial support. To cope with this stress, some have used strategies to deal with the problems encountered. Students who have used this method have
tended to question themselves, to seek a solution but also to learn how to deal with these situations. They explained that confronting them allowed them to know how to react in similar cases. However, students who perceive the least stress use active coping strategies to deal with the problems encountered [5]. It appears that active coping strategies are more effective in reducing and managing stress than passive coping strategies that have more harmful effects on the individual [9]. The use of ineffective coping strategies may explain the high level of stress expressed by some students [23,47,24]. In addition, when individual coping strategies do not allow the student to reduce his or her stress level, the student may have a negative impact on his or her ability to learn, clinical practice, well-being and satisfaction with the training [47,9]. Indeed, students who express a lack of coping skills tend to use avoidance strategies when they feel they can no longer cope. This strategy can lead the student to abandon his or her training. Moreover, O'Donnels (2008) has shown that students tend to withdraw from particularly stressful situations [46]. Planning and anticipation strategies were also used by students to better organize themselves and thus manage their time. This anticipation will allow them to feel safe and avoid failure [34].

Finally, students reported playing sports or going out with friends to relieve stress. Studies have shown that students who exercise are less stressed than those who do not [55-59]. In addition, one study found that a group with lower active participation is also the one that uses less active coping strategies [60]. Thus, the implementation of an education module combining physical activity and aiming to develop coping skills seems to be beneficial for this audience in order to enable them to cope more effectively with their stress. In fact, most students express the need to include tools that could teach them how to better manage their stress. This ability to learn to manage it effectively does not seem to be sufficiently addressed in their education [61].

Conclusion

The hypothesis of this study was that the student who perceived his stress positively adopted effective coping strategies and expressed a positive impact of this stress on the success of his training, particularly on his academic and clinical performance. With regard to responses obtained with the participating students during the interviews, it was identified that those who perceived their stress more positively reported a more positive impact on their performance than those who perceived it negatively (i.e., better performance, self-confidence, initiative and more investment in the internship...). The latter also reported more active coping strategies. As the ability to effectively manage this stress is not mentioned much in this education, it seems important to be able to offer students tools that would enable them to remedy it and thus avoid negative consequences. Especially since the development of effective defense mechanisms will be beneficial to them when they become graduate nurses.

Beyond the results obtained, it should be stressed that this study has some limitations. Data on academic and clinical performance could not be obtained for all participants, which did not allow us to empirically highlight what was suggested by students on the influence of their stress on their performance. We were thus only able to obtain the influence on their perceived performance.

Understanding stress and its consequences of the experiences of nursing students will allow us to reflect on the implementation of tools specifically adapted to this audience to influence their stress level.

References


