

Academic training and socio-psychological health of Tunisian future nurses during Covid-19 confinement.

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Abstract: Confinement is a global strategy imposed by several countries with the aim of fighting Covid-19 pandemic. The objective of our study is to assess during confinement, nursing students 'social and mental well-being, their perceived educational training and future nursing career choices. A survey was carried out among 300 Tunisian undergraduate nursing students. Results showed that 54% of participants confirmed experiencing multiple difficulties in term of training through online courses. 49% of participants reported that pedagogical strategies are poorly adapted. 28% of participants were psychologically affected during confinement while 45% of them kept solid social bond with family and 44% conserved relationship with friends. These results should be seriously taken into consideration with initiatives to address educational strategies during crisis situation and to help students overcome negative effects of confinements in the future.

Keywords. Confinement, Nursing Sciences, Psycho-social Impact, Student, Training.

المخلص: الحجر الصحي هو استراتيجية عالمية فرضتها عدة دول بهدف مكافحة جائحة كوفيد-19. الهدف من دراستنا هو تقييم تأثير الحجر الصحي على التعليم الأكاديمي لطلاب علوم التمريض وكذلك على حياتهم الاجتماعية والنفسية. مع تحديد اتجاهاتهم المستقبلية نحو مهنة التمريض. تم إجراء استقصاء 300 طالب تونسي بعلوم التمريض. أظهر تحليل النتائج أن 54% من الطلبة قد واجهوا صعوبات متعددة فيما يتعلق بالتدريب الأكاديمي ودورات التعليم عن بعد. أقر 49% من الطلبة بأن الاستراتيجية التربوية المعتمدة أقل من ملاءمة وأكد 28% من المشاركين أنهم تأثروا نفسياً وقت الحجر. على المستوى الاجتماعي، أكد 45% من الطلبة احتفاظهم برابطة اجتماعية قوية إلى حد ما مع العائلة، و44% من الطلبة أكدوا احتفاظهم بالرابطة الاجتماعية مع الأصدقاء. هذا البحث العلمي يعد من البحوث النادرة بهذا المجال ونتيجة لذلك، سنكون قادرين على التفكير في السبل والاستراتيجيات الجديدة لتحسين نظام التعليم في حالة الأزمات وأيضاً مساعدة الطلاب على التغلب على الآثار السلبية لهذه الفترة الحرجة على المدى المتوسط والطويل

الكلمات المفتاحية. الحجر الصحي، التأثير النفسي والاجتماعي، التعليم الأكاديمي، الطلبة، علوم التمريض.

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1. Introduction

Preventive measures have been established to deal with Covid-19. In several countries and for weeks, confinement has been imposed as a global strategy against the virus spread. In March 2020, Tunisia established a comprehensive set of preventive measures including confinement. However, as it has been indicated in several researches, certain areas were affected and in particular higher education (Abed Ennasser, 2020). Indeed, Transformations experienced over the past two years have revealed fragility within the academic field, which has not been able to adapt quickly and properly to the demands imposed by the pandemic. Among these difficulties, we recall the lack of logistics equipment, as well as the lack of mastery of new technologies, and others (Student organization in France, FAGE, 2020).

In Tunisia and during the pandemic, nurse's role has been valued. Health crisis introduced new academic educational strategies in nursing sciences based on online learning. Changes led experts in nursing sciences and in humans' sciences to interrogate the confinement impact on learning efficiency and the wellbeing of future nurses. In the same perspective, a survey carried out in OVE (2020) indicates that use of online education can lead to several changes in nursing sciences education (Patros et al., 2010). Likewise, changes in educational strategies highlighted other factors likely to further minimize the effectiveness of educational methods. In addition to these cumulative difficulties related to training and pedagogical aspects other constraints in organizing can impact students' personal life. In this sense, it is important to highlight that many of them can experience traumatic events such as losing a loved one due to Covid-19, losing a job or not being able to move from one city to another in order to continue their studies (Hegedus. 2020).

The National Observatory for Student Life (2010) investigated the living conditions of students from different training courses in France. The results showed that nursing students are those who demonstrate the most symptoms of faintness In fact 59% of nursing students reported being tired and 85% admitted being nervous (Patros et al., 2010). Undergraduate nursing students are confronted to daily stressors that have influence upon their wellbeing. Stress persistence may lead to risky behaviors such as

excessive alcohol consumption, or even suicide attempts (Patros et al., 2010). According to Dugué et al (202) following the pandemic, nursing students may therefore experience major disruption in their training such as being forced to cancel internships and practical work which are crucial for the development of their nursing skills. Periods of confinements were followed by psychological discomfort evolving in some cases emotional distress leading students to drop out their studies and to modify for their career plans (Dugué M. et al., 2020).

From a psychological point of view confinement may induce psychological distress depending on the characteristics of individuals and their living environment. It may lead to psychological disorders, likely to persist beyond the crisis. It is therefore important that certain individuals are endowed with adaptive capacities and they therefore express feelings of well-being. While there are those who mobilize less effective adaptive strategies, which increase risks in developing health problems and dropping out of school (Douglas & al., 2020). At a social level, confinement can break social bonds and generate social conflicts (Famechon, 2020). Vignoli et al (2005) stipulate those negative social repercussions extend to affect young people, particularly during confinements, and this, for failing to meet friends. As drive, young people may have resort to virtual connections through social networks (Vignoli et al., 2005). It important to specify that social bond is important for young people. It allows them to interact properly, to seek right information and to obtain social support in the event of difficulties (Silver & Wortman, 1980). Social sharing can also play a regulatory role, as an adjustment strategy, through the exchange and verbalization of one's emotions (Scherer, 1992). Investigating psychological and social wellbeing of undergraduate nursing students will help to initiate self-developmental strategies and to reinforce positive emotions during post-confinements (Famechon, 2020).

In the light of what was presented above, the present study aims to assess social and mental well-being of nursing students, their perceived educational training and future career choices in nursing during confinement.

2. Materials and methods:

2.1. Population:

The study included 300 undergraduate nursing students (176 male and 124 female), from the Higher Institute of Nursing Sciences of Tunis, Tunisia. This is therefore a study addressed to the entire student population of the institute (exhaustive population) belonging to three academic degrees; 1st grade (n=106), 2nd grade (n=87), and 3rd grade (n=107).

2.2. Investigation tool:

A preliminary survey was developed based on the literature review while taking into account the Tunisian context. The survey contains 49 items divided into six themes; (1) student identification, (2) general conditions of confinement following Covid-19 during the period of March-2020, (3) nursing student learning and training, (4) social wellbeing, (5) psychological wellbeing and (6) future projects and professional orientations. A survey pre-test was carried out, corresponding to the inclusion and exclusion criteria, which we set beforehand. The pre-test allowed to ensure the clarity of items understanding and to make the necessary modifications before final version distribution. This pre-test did not reveal any changes, or misunderstandings.

2.3. Study duration

This study was carried out during the periods of March 15 to 30, 2021. The survey was carried out in two methods; paper version was distributed directly to 92 students at the Higher Institute of Nursing of Tunis and an online version was distributed to 208 students who were unable (due to confinement) to fill paper version.

2.4. Statistical data processing methods

Statistical processing of the data was performed by using Excel software and being represented in the form of tables and graphs. Statistical analysis in terms of percentages and means was performed with the SPSS tool.

2.5. Ethical considerations

The study was conducted in strict compliance with the ethical rules of research. Agreement with the research projects committee of the Higher Institute of Nursing Sciences of Tunis was obtained. Each participant was invited to complete the questionnaire by himself. Free and informed consent was obtained following the

description of the nature and purpose of our research. All participants were informed that data will be treated anonymously and confidentiality will be ensured. Objective and content of the study were explained to each respondent upon submitting the survey.

3. Results and Discussion

3.1. Socio-demographic data:

Table (1). Socio-demographic characteristics of undergraduate nursing students.

Sociodemographic characteristics	Frequency	Percentage (%)	Means
Age (years)			22
18-19	52	17	
20-21	171	57	
22-23	58	19	
>24	19	7	
Total	300	100	
Gender			
Female	176	60	
Male	124	40	
Total	300	100	
Academic degree			
Level 1	106	35	
Level 2	87	29	
Level 3	107	36	
Total	300	100	

300 Undergraduate nursing students participated to the study with an average age of 22 and a sex ratio of 0.7 (124 males and 176 females) (table 1).

3.3. Confinement conditions:

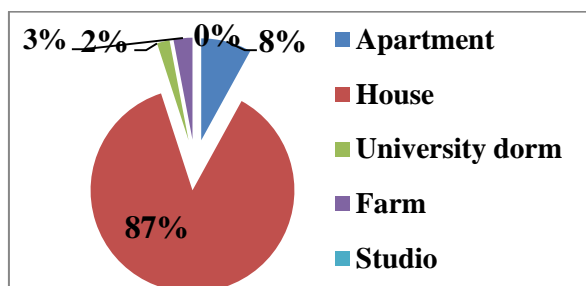


Figure (1):

Percentages of nursing students' responses regarding nature of residence during confinement.

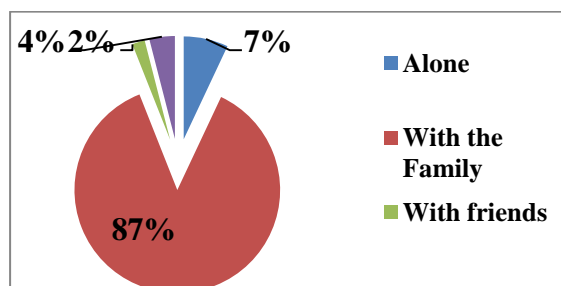


Figure (2):

Percentages of nursing students' responses regarding people with whom they were confined

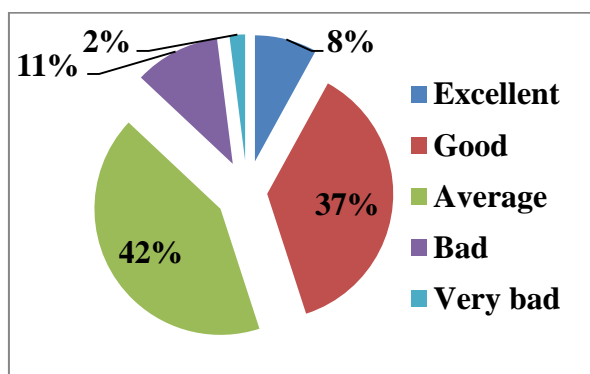


Figure (3):

Percentages of nursing students' responses regarding their general evaluation of confinement conditions.

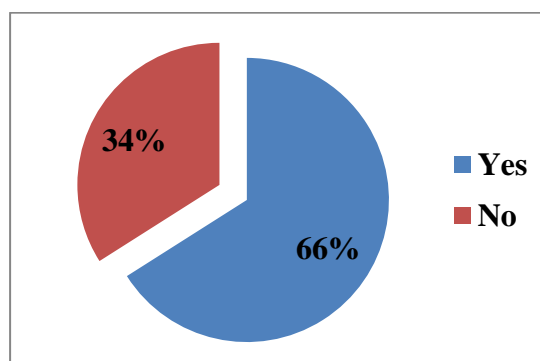


Figure (4):

Percentages of nursing students' responses regarding a proper workspace.

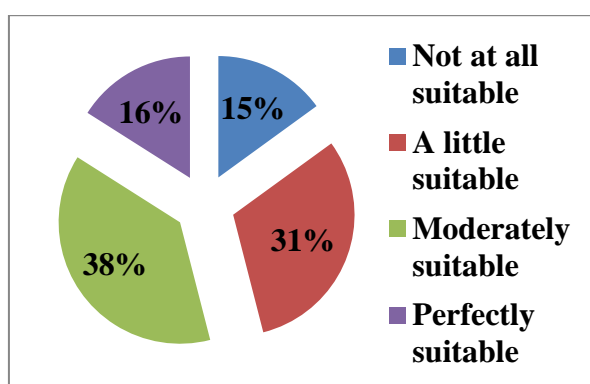


Figure (5):

Percentages of nursing students' responses regarding their workplace comfort

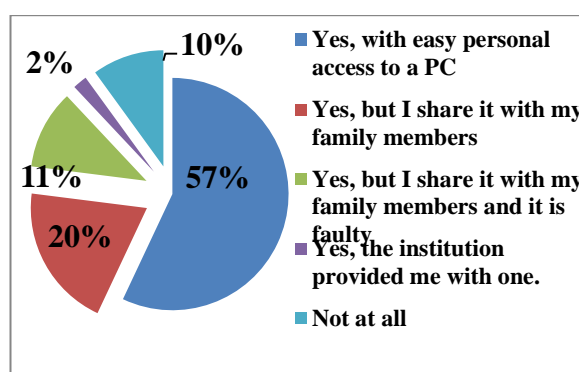


Figure (6):

Percentages of nursing students' responses regarding logistic equipments.

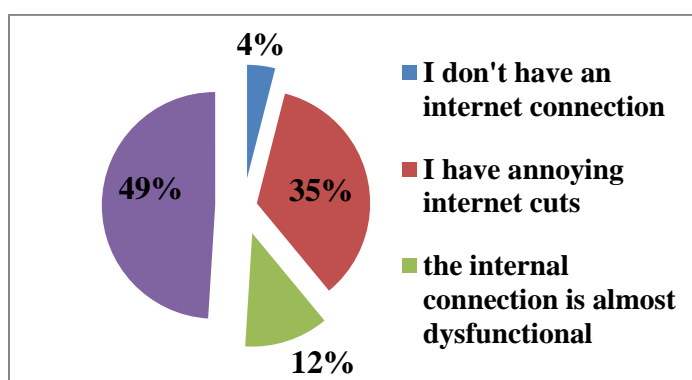


Figure (7):

Percentages of nursing students' responses regarding internet connection.

87% of nursing students reported being their houses during confinement (Figure 1). 87% of the participants reported spending confinement with their families and only 7% spent it alone (Figure 2). According to students' responses 17% of the students reported bad

confinement conditions and only 2% of the participants reported very bad conditions (Figure 3). 66% of the nursing students confirmed that they dispose of their own workspace (Figure 4). 38% of the participants reported that their workspace is moderately suitable to be able to work properly. 57% of the nursing students confirmed having personnel access to a laptop (Figure 6). Almost half of the students reported that internet connection is efficient at home, and only 4% of the participants do not have internet access (Figure 7).

3.2. Nursing students' academic learning:

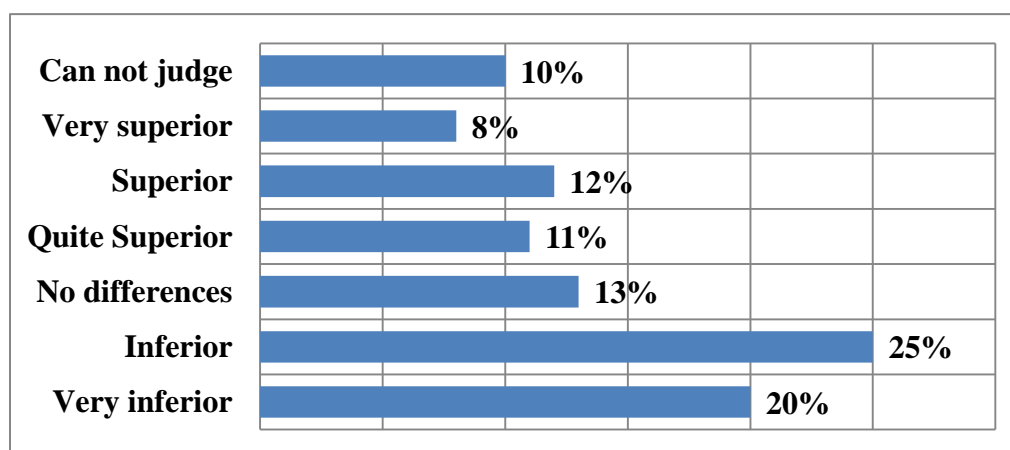


Figure (8):

Percentages of students' responses regarding the workload associated with online learning compared to regular learning.

More than 50% of the nursing students reported that online learning workload is not as much superior compared to the regular learning (figure 8).

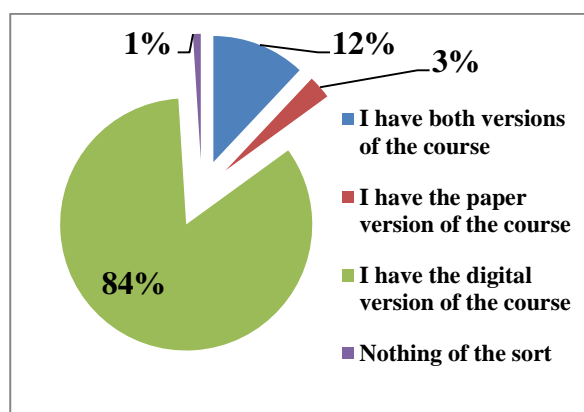


Figure (9):

Percentages of students' responses regarding the provision of course materials.

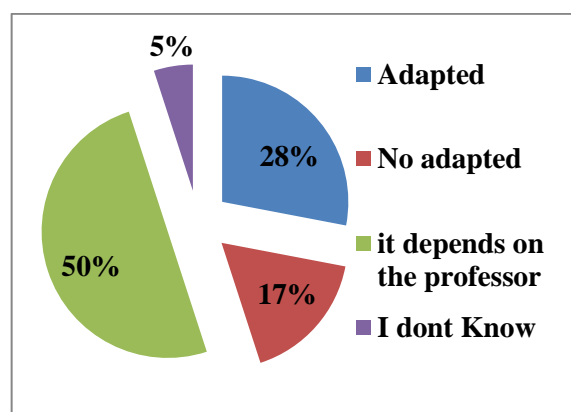


Figure (10):

Percentages of students' responses regarding the adaptation of courses' platforms.

84% of the nursing students confirmed having benefited of the digital form of courses (figure 9). 50% the participants reported that adapted platforms depend on professors' involvement (figure 10).

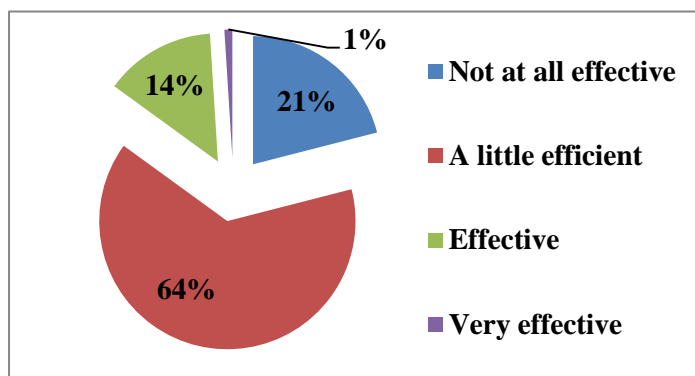


Figure (11):

Percentages of students' responses regarding the provision of course materials.

64% of nursing students consider that the quality of the academic training provided during this period of confinement is a little effective.

3.3. Nursing career choice during confinement:

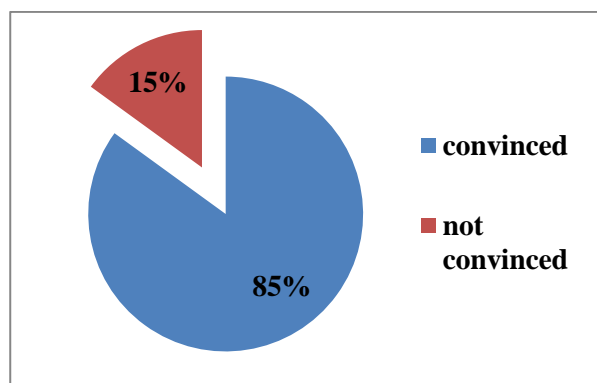


Figure (12):

Percentages of nursing students' responses regarding nursing career choice.

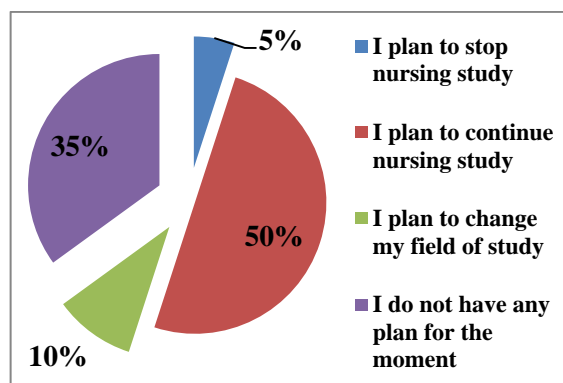


Figure (13):

Percentages of nursing students' responses regarding their academic orientation projects.

15% of undergraduate nursing students reported not being convinced anymore about their career choices (Figure 12). 50% of participants are planning to continue their nursing studies (figure 13).

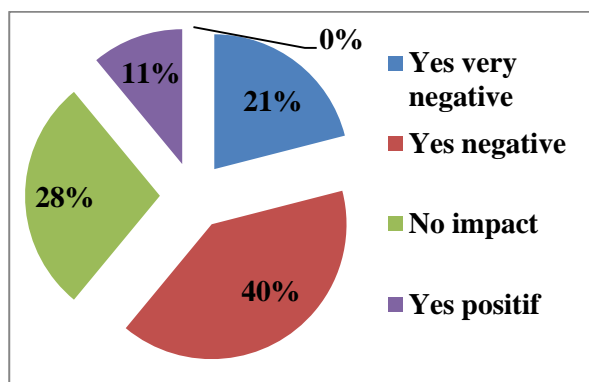


Figure (14):

Percentages of nursing students' responses regarding the impact of confinement on their training.

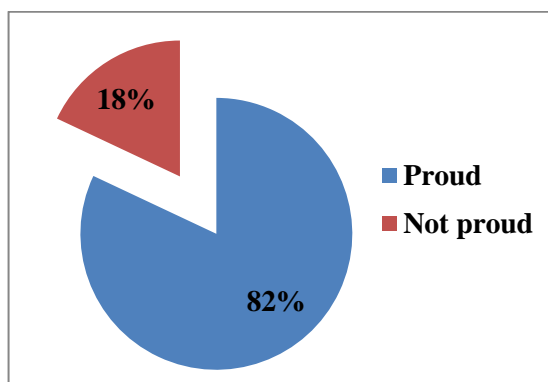


Figure (15):

Percentages of nursing students' responses regarding being proud to become nurses.

40% of nursing students confirm that confinement have a negative impact on their training (figure 14), but the majority of nursing students still proud of becoming future nurses, especially after the Covid-19 pandemic (Figure 15).

3.4. Psychological and social well-being:

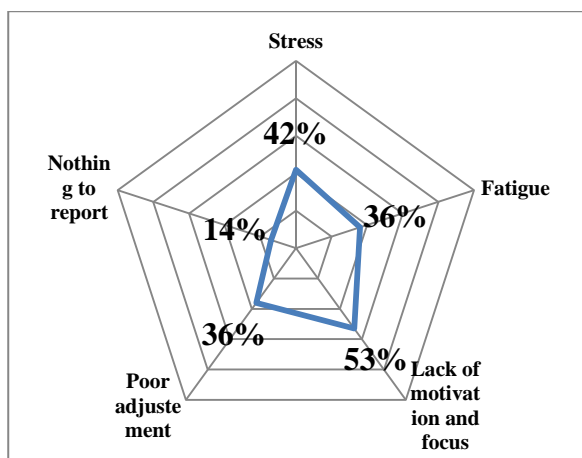


Figure (16):

Percentages of nursing students' responses regarding their psychological well-being during confinement.

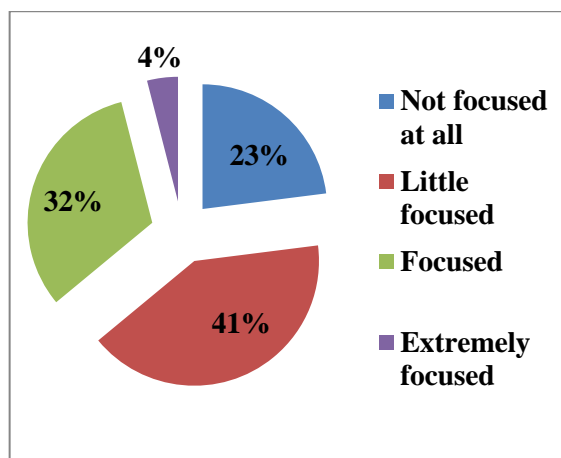


Figure (17):

Percentages of nursing students' responses regarding their focus during online courses.

53% and 41% of nursing students confirmed that online education generates lack of motivation and focus and 43% of the, reported being stressed (figures 16 and 17).

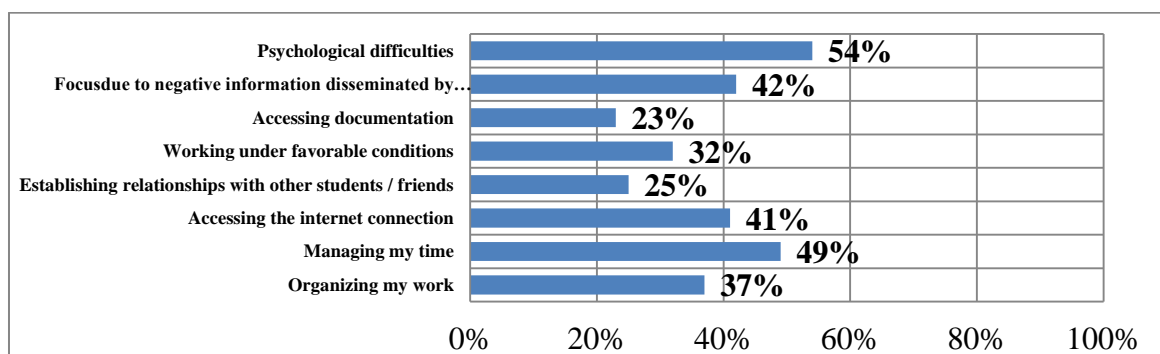


Figure (18):

Percentages of nursing students' responses regarding main difficulties encountered during online learning.

More than 1/3 of nursing students reported facing multiple difficulties during the confinement period in relation to their academic training and to their psychological state (figure 18).

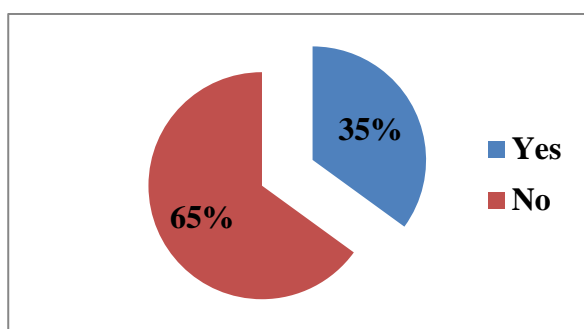


Figure (19):

Percentages of nursing students' responses regarding changes in relationship with family members during confinement.

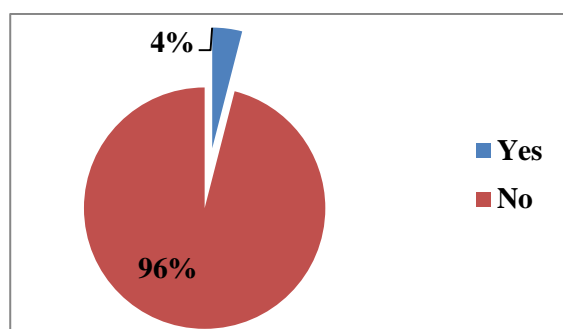


Figure (20):

Percentages of nursing students' responses regarding exposure to forms of domestic violence during confinement.

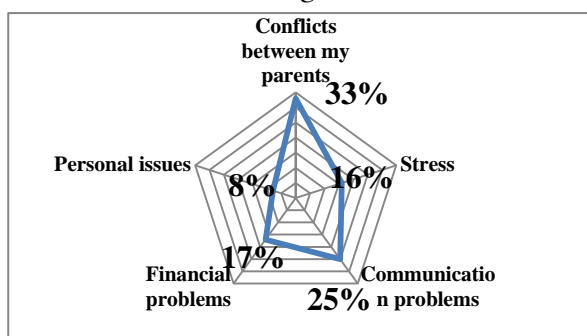


Figure (21):

Percentages of nursing students' responses regarding causes of domestic violence during confinement.

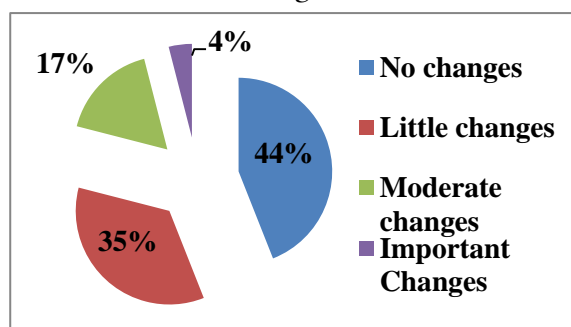


Figure (22):

Percentages of nursing students' responses regarding changes in relationships with friends during confinement.

35% of participants confirmed changes in their relationships with their families (figure 19) and only 4 % were exposed to domestic families during confinement (figures 20). Violence was mostly due to conflicts between parents (Figure 21). 44% of nursing students reported no changes in their relationship with friends during confinement (figure 22).

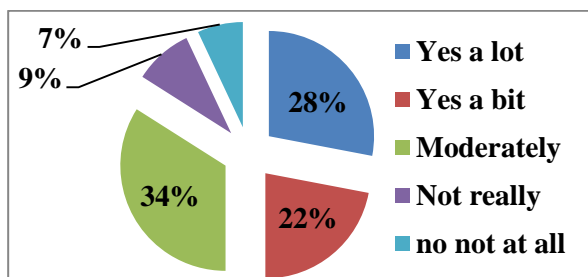


Figure (23):

Percentages of nursing students' responses regarding confinement impact on their psychological well-being during confinement.

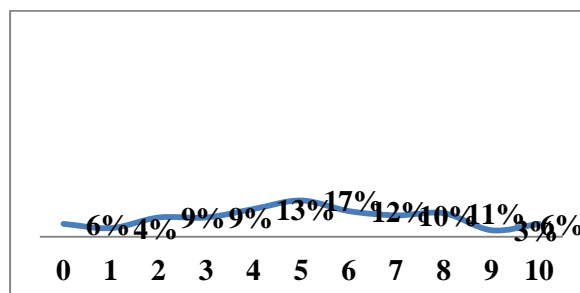


Figure (24).

Percentages of nursing students' responses regarding their degree of stress during confinement.

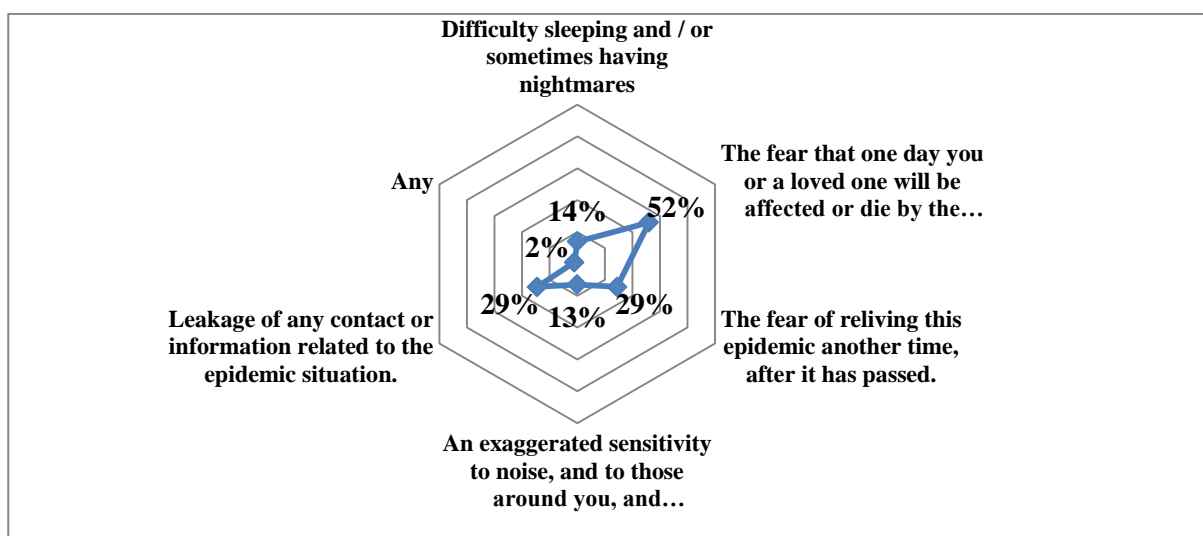


Figure (25):

Percentages of nursing students' responses regarding their psychological feelings during confinement.

Almost 1/3 of nursing students (28%) were significantly affected psychologically during confinement (figure 23). On a scale of 0 to 10, students' responses revealed that the degree of stress is perceived as average and only 18 nursing students (6%) perceived their level of stress in one of the extremes, either 0 or 10 (figure 24). More than half of students (52%) reported being afraid that one day, themselves or loved ones, would be affected or die by the pandemic during the period of confinement (figure 25).

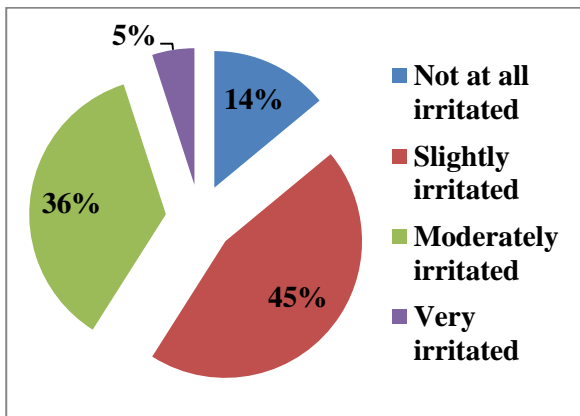


Figure (26):

Percentages of nursing students' responses regarding irritability during confinement.

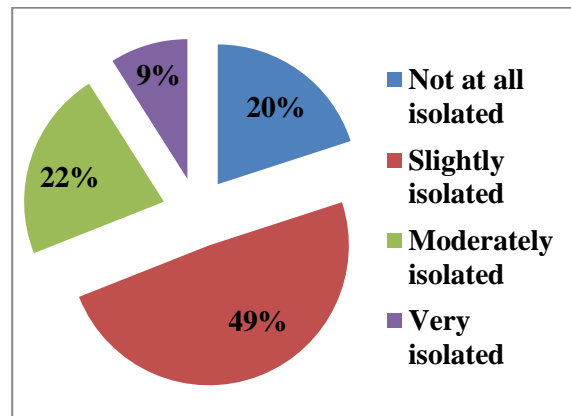


Figure (27):

Percentages of nursing students' responses regarding degree of isolation.

36% of nursing students were moderately irritated during confinements (figure 26). Study shows that only 9% of the participants felt isolation during the period of confinement (figure 27).

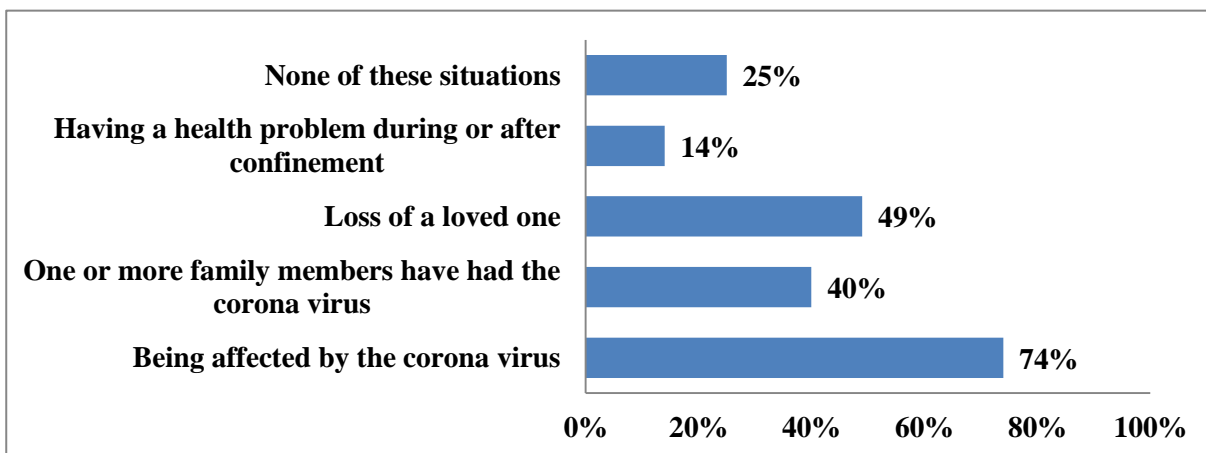


Figure (28):

Percentages of nursing students' responses regarding types of fear encountered during confinement.

With regard to the fear felt during confinement, 74% of nursing students were mostly afraid of being infected themselves or their relatives (figure 28).

The upheaval experienced by the whole world following Covid-19 pandemic has generated changes in the academic field. It is clear that confinement imposed by several countries in the world had negative consequences. Therefore, we have chosen to explore more closely the contextual situation among undergraduate nursing students in Tunisia. According to our study, the majority of nursing students spent the period of

confinement with their parents and almost half the participants felt that confinement conditions were quite acceptable. Therefore, our results corroborate with those of Lafabrière and Faugloire (2020). They showed that 93% undergraduate students from the UFR STAPS were confined either, in a couple, in pairs, or with family or between friends. 66% of them considered their confinement conditions as fairly acceptable, 11% reported condition as poorly acceptable (Lafabrière & Faugloire, 2020). Another study done by the National Observatory of Student Life found that more than three-quarters of students have changed the accommodation they occupied before the crisis to be confined with their parents (National Observatory for Student Life, 2020). Results also showed that the majority of nursing students felt the workload associated with online education was as inefficient as usual. In addition, most of these students had a workspace and half of them had easy personal access to a laptop computer with a good Internet connection. It is important to highlight that the results of our study also revealed that almost half of the students evaluated the quality of pedagogical relationship as unsatisfactory since the quality of academic training during confinement was somewhat effective. Regarding their satisfaction with the new learning method, 39% of them stated that distance education was "satisfactory to very satisfactory"; in contrast 25% of them considered it unsatisfactory due to the unavailability of personal equipment and the lack of a quiet space and/ or an efficient internet connection. Results also highlighted that teaching time and internet connection quality were the most difficulties encountered during confinement.

Regarding the social life, around two-third of nursing students reported no changes in their relationships with their families. However, minority experienced some form of domestic violence due mainly to conflict between parents. Comparing our results with other studies, some authors such as Emmanuel Charonnat (2020) found that family relationships were little impacted or even improved due to confinement (Charonnat, 2020). Williams et al (2021) reported that communication with families, or with roommates as well as with friends was strengthened during the period of social distancing (Williams et al., 2021).

Additionally, our results showed that confinement had a negative psychological impact in almost one third of nursing students. Indeed, on a scale of 0 to 10, responses revealed that only 36 students out of the total declared to be stressed in one of the scale extremes (0 or 10). In contrast, emotion of fear was strong and even amplified among students. According to them, their concern was mainly linked to the fear of being contaminated by covid-19 and more particularly the fear of losing a loved one. Same results were raised by the National Observatory of Student Life (2020) by confirming that 38% of the participants declared to be afraid during confinement (National Observatory for Student Life, 2020). Finally we recall that psychological difficulties (especially stress and lack of motivation) are first and foremost among the difficulties most encountered during online learning. However, other studies such as the one carried out among students at the University of Caen Normandie (2020) showed that social isolation and more particularly family estrangement were the main difficulties encountered during that period (Lafabrègue, 2020).

Regarding nursing career choice, results showed that despite confinement's conditions, half of nursing students planned to continue their nursing studies. Students expressed positive attitudes and declared to be proud of being future nurses. Our findings contrast those of Patros., & al (2020) who showed that 45% of interviewed university students consider that confinement would have negative effects on the course of the rest of their studies. (Patros., & al 2020). Similar results have been found in other studies, such as the one conducted at the University of Montreal. It indicated that the period of confinement greatly influences learning and academic path of students, and that pandemic situation has generated uncertainties related to the students' future projects (Guerrier et al, 2020).

4. Conclusion

To deal with the COVID 19 pandemic, certain protective measures have been put in place as part of a global strategy. In the absence of vaccines during the period March 2020, confinement was settled as one of the most preventive measures. The objective of our research was therefore to identify during confinement, the social and mental well-being of nursing students, their perceived educational training and their future nursing

career choices. Main results showed that almost one third of the students were psychologically affected. They declared that online education and the deteriorated relationship with teachers and administration were one of the most encountered difficulties that hampered their academic training. However, their relationship with family was overwhelmingly "good".

This research constitutes a first reference in the matter. To our knowledge, there have been no Tunisian studies investigating this subject. The specificity of this issue relies on the association of two most affected areas, considered to be the most affected by covid-19, namely the field of higher education and health. However, we recommend carrying out this study by extending investigation in other Tunisian Institutes, with the aim of identifying regional and intra-cultural differences that could influence nursing student's perceptions.

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