Stressors For Physiotherapy Students In Clinical Practice

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Abstract- *Background: Clinical practice is very crucial for the students to acquire the knowledge and skills needed to properly develop professionally. The stress in clinical practice may have negative impact on their training. Objectives: To understand the extent to which clinical practice was stressful for students at federal institute of health sciences, Multan and to find out the main stressors associated with the practice. Design: Cross-sectional, descriptive, and observational study conducted in 2019 at federal institute of health sciences, Multan, Pakistan. Methods: A total of 120 physiotherapy students at federal institute of health sciences, Multan, Pakistan participated from February to April 2019 .Data was collected about socio-demographic variables, and was distributed together with the KEZKAK questionnaire, a validated scale was adapted. It has 41 items using a 4-point Likert scale, rating how much a particular situation caused worries them from 0 ('Not at all') to 3 ('A lot'). Results: Students were most concerned about issues relating to causing harm to patients and lack of competence. Men found clinical practice to be less stressful than women, both in general terms ($p < 0.001$) and with respect to all individual factors included in the questionnaire. Moreover, there were associations between the 'lack of competence' factor and having a job simultaneously ($p = 0.011$), the 'contact with suffering' factor and the school year ($p = 0.018$), and the 'being harmed by the relationship with patients' factor and the age group ($p = 0.013$).*

Conclusions: physiotherapy students, particularly women, see clinical practice as 'rather stressful', with the main stressors being those related to causing harm to patients.

Keywords- Stress, Education, physiotherapy, clinical practice.

I. INTRODUCTION

Stress is the feeling of being overwhelmed or unable to cope with mental or emotional pressure and Indeed, stress symptoms can affect your body, your thoughts and feelings, and your behavior.Furthermore, it has a negative impact on the lives of individuals, endangering their well-being (Lazarus and Folkman, 2019). It has become increasingly noticeable (Torrades, 2018), that work related stress more often leads to burnout syndrome (Salvagioni et al., 2017). Multiple studies mentioned that professionals like nurses, psychologists and physiotherapist suffer from these conditions more frequently (Laranjeira, 2018; Portero de la Cruz and Vaquero Abellán, 2019). Professional students in clinical practice work full time, meaning that they are subjected to not just all the stressors associated with academic life, but to the same kind of stress that professionals suffer from as well (Suresh et al., 2016). The students suffer from stress in clinical practice to varying degrees (Grobecker, 2019; Joolaee et al., 2018). The level of stress depends on many factors, including relationships with their work team, patients, and family (López and López, 2016). Adding to this, students with higher emotional intelligence handle stress better (Pulido-Martos et al., 2016). The stress effecting professional is closely related to role overload (Chang and Hancock, 2013). Many factors found to contribute to the stress, that are especially more common among fresh graduates. The most remarkable is the workplace, the level and nature of support from the rest of the team, experience, expectations, and the ability to learn and adapt to different situations and work environments (Parker et al., 2014). A study published in 2013, depicted the importance of support from other, more experienced professionals to reduce stress (Pennbrant et al., 2013). Stress in students creep-up the nervousness and anxiety and most significant during their first exposure to the hospital setting (Jimenez et al., 2010). Zryewskyj and Davis were first to identify stressors affecting students; they illustrated that academic and clinical experiences accounted for 78.4% of stressful situations, followed by personal experiences, accounting for 13.6% (Zryewskyj and Davis, 1987). Later studies also supported them (López and López, 2011; Moya et al., 2013. However, certain amounts of stress have advantages as well on performance in clinical practice (Eng and Pai, 2015). Furthermore, consequences mostly depend upon the circumstances and the individual. Rivas Acuña et al., 2014). Each individual copes with stress using different strategies,

thereby making the process dynamic and personal (Silva Sánchez, 2015). Multiple studies supports that the coping strategies most often used by health care professionals studies include positive thinking and social support (Wolf et al., 2015), together with exercise, organization, and task planning (Clark et al., 2014; improved both the scores and health of the students to whom it was applied (Jameson, 2014). This potential for improvement shows the importance of intervention. There are many scales to measure stress in general (Ezzati et al., 2014; For our study, we chose the KEZKAK scale (Zupiria et al., 2003), which measures stress caused by different situations in physiotherapy students engaged in clinical practice. This scale is a perfect fit for the objective of this paper. A review of the literature reveals just 4 papers that exclusively discuss stressors in clinical practice in Spain. Moreover, all of them correspond to the old university education plan in Spain (López and López, 2011; Moya et al., 2013; Iit is imperative to know which factors have the largest effect, as this would pawed the way to develop the intervention programs that would help to prevent or minimize stress (Demerouti et al., 2018; Jameson, 2014. The purpose of this study is to determine the main stressors affecting physiotherapist students during their academic development in clinical practice.

Design A cross-sectional descriptive and observational study was conducted in the federal institute of health sciences. Multan. Participants a total of 120 students were included in the study. Sampling was not conducted, as the study attempted to cover 100% of the population. Only those students who voluntarily agreed to participate and who filled in at least 80% of the questionnaire and data collection sheet were entered into the study.

Instruments The KEZKAK questionnaire was used (Zupiria et al., 2003), together with a data collection sheet including different socio-demographic variables of interest. The KEZKAK questionnaire is an open access scale available on internet. It measures stressors during clinical practice. It is composed of 41 items, each correlated with a stressor, and is answered through a 4-point Likert scale, rating how much the described situation worries them from 0 (‘Not at all’) to 3 (‘A lot’). The various items are divided into 9 factors (lack of competence, contact with suffering, relationship with tutors and companions, uncertainty and impotence, lack of control in relationships with patients, emotional involvement, being harmed by the relationship with patients, patients seeking a close relationship, and overload), with each item potentially being grouped in more than one factor. The score for each item is tied to the level of stress involved in the described situation. Likewise, the total score of the questionnaire (123 points) reveals the extent to which students find clinical practice stressful in general. Furthermore, total scoring for each factor shows the extent to which students find the corresponding aspects stressful. The individual socio-demographic variables included on the data collection sheets include reference gender, school year in which the student is enrolled, age

Data collection was performed from December 2018 to February 2019, and was self administered and on-site. This ensured anonymity and confidentiality. Data analysis Data analysis was completed with the Windows SPSS 20 statistical package. Quantitative variables were described through arithmetic mean, standard deviation and range; qualitative variables were expressed through total frequency and percentage. For the comparison of variables, Student's t-test was used for independent samples, the ANOVA test was used for polytomous variables and the chi-squared test was used for qualitative variables.Values of $p \leq 0.05$ were accepted as statistically significant. Ethic considerations This study was carried out in accordance with The Code of Ethics of the World Medical Association (Declaration of Helsinki). Moreover, before conducting the study, Students received information about the aim of the study, remarking confidentiality and anonymity conditions. Informed consent was given.

II. RESULTS

Initially, 105 out of the 120 students (response rate of 87.52%) likely to take part in the study agreed to participate and answered the survey properly. Descriptive Statistics of the Population The age of the participants ranged from 18 to 25 years, with a mean of 21.50 years (SD ± 5.531). In total, 23 first-year students, 28 second-year students, 30 third-year students 20 fourth-year and 19 fifth year students were enrolled. In addition, 98.8% of the respondents were single. Finally, 15% of the sample was employed, with 5.7% performing health-related work. Of the latter group, more than 9.5% were working as physiotherapy assistants.

Descriptive Statistics of Responses to the KEZKAK Questionnaire

The physiotherapy students in the study saw clinical practice as ‘rather stressful’, with a mean overall score of 74.88. Students in the second year reported the most stress, especially those who were women. An association was observed between stress and gender, with women having a higher mean score ($p < 0.001$).

Students found the risk of causing harm to patients or themselves to be the most stressful situation. In contrast, the

least stressful items were 'when a patient of the opposite sex makes sexual insinuations' and 'to have to be with a terminally ill patient'. Students are most concerned about 'lack of competence' and 'uncertainty and impotence'.

Gender was shown to relate in a statistically significant manner with each overarching factor in the KEZKAK questionnaire, in that women demonstrated higher stress levels. Relations were also observed between the 'lack of competence' factor and students having a job simultaneously ($p = 0.011$), 'contact with suffering' and 'school year' ($p = 0.018$), and 'being harmed by the relationship with patients' and the age group ($p = 0.013$)

No significant differences were observed between 'emotional involvement' and year in school; the score for the first year (mean = 6.40) was lower than for the second year (mean = 7.11) and the third year (mean = 6.47), just 0.04 higher than for the fourth year (mean = 6.36) and 0.08 for the fifth year (mean = 5.36).. Stress relating to 'contact with suffering' peaked for students in their second year (mean = 18.81). First-year students achieved a score (mean = 17.06) similar to that of third year students (mean = 17.28) while fourth-year student gave the lowest score (mean = 16.33) and fifth year (mean = 16.36. No significant differences were observed between the 'overload' factor and the 'employment situation' variable; non-working respondents (mean = 8.50) gave a higher score than working respondents (mean = 7.90).

III. DISCUSSION

The main objective of this study was to understand the extent to which clinical practice was stressful for students and to find out the main stressors associated with the practice. This is imperative to maximize the learning of the students and help in establishing policy measures and preventative programmes to mitigate negative impacts on students (Demerouti et al., 2019; Fearon and Maggie, 2017; Gibbons et al., 2016; Jameson, 2014; Martínez Pérez, 2010).

Students experienced a medium-high level of stress related to clinical practice. Precisely, women reported more stress than men. We think that it would be of great interest to study the reason for this phenomenon in future investigations.

The factors causing more stress were the fear of causing harm to their patients or to themselves. This is in line with results from investigations carried out in the past (López and López, 2011; Moya et al., 2013). As the risk of fear cannot be removed altogether, we tend to believe that focus on basic principles of patient management and risk prevention during the theory classes would definitely help to reduce the stress.

Upon grouping 'lack of competence' and 'uncertainty and impotence' were found to cause stress (López and López, 2018). What comes out from the study results was an interrelation of these factors, as more stress was observed among those who felt uncertainty to a particular situation for not having been adequately trained or competent to handle it.Furthermore, incompetence may ends in stress, as many times, theoretical coursework do not adequately support the students in a hospital (Corlett, 2017). This could be due to a lack of time, a lack of material, or a failure to implement techniques under the 'ideal conditions' taught in theory classes.

In our study, we found 'relationship with tutors and companions' less involved in stress opposite to the former studies (Pades and Homar, 2016; Timmins and Kaliszer, 2012), in which the relationship affect was significant. It is very obvious that fourth-year students experience less stress during their clinical practice, given that they have more experience and training. However, second-year students experienced more stress than the rest; this is surprising, given that they have more training and hospital experience than first-year students. In this case, it is possible that first-year students are not yet aware of the responsibilities of patient care and of the amount of knowledge that they would need to assimilate. The fact that advanced courses require a higher level of competence may also be a factor. Similar results were observed when associating school year with the 'contact with suffering' and 'emotional involvement' factors. Finally, it seems interesting that, when associating the 'overload' factor with the 'employment situation' variable, non-working students are more stressed than their working counterparts; this runs contrary to what might have been expected.

IV. CONCLUSIONS

The main stressors affecting students were related to damage the patient or themselves. Moreover, they considered their clinical practice as 'rather stressful', with a greater impact on factors involving a lack of self-confidence. Stressful situations can generate a direct impact with several consequences to students' well-being. Increasing knowledge of main stressors involved in clinical practice is required in order to establish specific programs to improve quality of patient care and students´ health.

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