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SUSCEPTIBILITY, PREVALENCE AND FACTORS ASSOCIATED WITH DEPRESSION AND SUICIDE AMONG NURSES: AN INTEGRATIVE REVIEW

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Abstract: Nurses are in a category of professionals who are more likely to develop mental problems than the general population. **Objective:** Know, understand and argue about the reality of the class of nurses in relation to depression and suicide. **Method:** Based on the inclusion and exclusion criteria, 12 articles were selected for analysis in an integrative review. **Results:** Studies by different authors on the themes of depression and suicide among nurses were selected. Most studies aimed to identify the prevalence of cases and the different motivating factors based on representative samples. **Conclusion:** This review compiled data from studies from different developed, underdeveloped and developing countries, from the five continents, and the reality is always that nurses are more likely to develop mental disorders and more susceptible to suicidal behavior than the population in general. These results always point to the emerging need for intervention policies and support programs for this class of people.

Keywords: Suicide, depression, nurses, mental health, suicidal ideation

INTRODUCTION

Health professionals are more likely to develop mental health problems than the general population (TRAN et al., 2019), and among these, the class of nurses stands out, especially when in relation to evidence of suicidal behavior (DAVIDSON et al., 2020). Suicidal behavior is a phenomenon resulting from a complex interaction between several factors: biopsychosocial, genetic, cultural and environmental (BOTEGA, 2015; TURECKI, BRENT, 2016).

Many cases of suicide are evident all over the world, causing great inconvenience to society as a whole. However, a small portion of the population is actually concerned with this context, given the existing resistance to face death, especially when it is caused by the victim himself. (PAHO/WHO, 2016)

According to the Pan American Health Organization and the World Health Organization (PAHO/WHO), suicide and suicide attempts are considered a serious public health problem and must be seen as a global priority (PAHO/WHO, 2016). According to the first report on suicide in the world, in 2014, PAHO/WHO disclosed in 2016 that annually about 800,000 new cases of suicide are reported around the world (see also: O'CONNOR & KIRTLEY, 2018), being the second leading cause of death among people aged 15 to 29 years old, and every 40 seconds someone commits the act. Davidson et al. (2018) point to more than 1 million cases in the world per year.

Suicide attempts reach a number of 10 to 20 times greater than the consummated act (MORAES et al., 2016; WHO, 2017). The suicide mortality rate in Brazil is lower than the global average, comprising 6.1 per 100,000 inhabitants (BRASIL, 2018); however, it remains among the ten countries with the highest absolute rates of suicide (WHO, 2017). For this reason, the World Health Organization recommends that the issue of suicide and attempts be prioritized in the formulation of public prevention policies and in health agendas (MORAES et al., 2016).

In view of the significant numbers reaffirmed every year in world statistics regarding suicide, the National Policy for the Prevention of Self-Mutilation and Suicide (PNPAS) was created in Brazil, consolidated by Law No. greater control and intervention in cases of suicide attempts and self-mutilation, based on compulsory and confidential notifications by professionals from health, security, schools and guardianship councils (BRASIL, 2019). In addition to this, Ordinance No. 1,876 of 2006 established National Guidelines for Suicide Prevention and highlighted the need for

research focused on the theme of suicide.

Although the current legislation covers the general population, some groups in specific circumstances are more exposed to the risk of suicide, such as indigenous people, the elderly and young people (15-29 years old) (WHO, 2017; BOTEGA, 2015). Regarding work classes, health professionals have higher rates than those presented by the general population (CHEUNG, LEE & YIP, 2016; MILNER et al., 2016), and are therefore considered to belong to risk groups for suicide (GERADA, 2018). A survey conducted in the United States between 2005 and 2015 identified suicide rates for nurses and physicians at 18.51 and 40.72 per 100,000 inhabitants, respectively (in contrast to the 10.5 per 100,000 inhabitants of the global average for the general population), (DAVIDSON et al., 2018). In Peru, a study covering 18 hospitals detected a 19.6% risk of suicide among physicians (CARRASCO-FARFAN et al., 2019). In Brazil, in 2020, the lifetime prevalence of suicide attempts among nurses was 9.41% and physicians 2.29%, and the identified variables were between (respectively, from highest to lowest): not having partner, history of suicide attempt and symptoms of stress and depression (FREIRE et al., 2020).

Among the various factors related to suicide identified in the general population are those resulting from the job performed and the work environment, especially those specific to health professionals (MILNER et al., 2016; BROOKS et al., 2018). The numerous demands for quick and proficient conduct, such as dealing with the duality of life and death, physical and emotional pain and the suffering experienced together with the patient and his family are situations that make the hospital environment stressful, exhausting (SILVA et al., 2015), predisposing professionals to mental illness. Stress, anxiety, depression, use of psychoactive substances, easy access to various mechanisms and tools used for the suicidal act, as well as the ability to handle them,

Silva et al. (2015) reaffirms the idea that the triggering factors of the suicidal act are inherent to psychic health, sometimes influenced by intense, inconstant, oppressive and exhausting labor relations. Regarding the population of nurses, Silva et al. (2015) adds that the arduous reality experienced by them in their care routines is a clear example of a debilitating work relationship, especially those who establish direct relationships with individuals who need comprehensive care.

Also, literature reviews carried out in Brazil and Canada pointed out that the main causes of the event among health professionals (doctors and nurses) were the greater awareness of psychiatric disorders (such as stress, anguish, depression and excessive use of substances), in addition to psychological distress related to experiences inherent to the profession, such as long workload, sleep deprivation, problems with patients, unhealthy environments, financial difficulties and information overload. (SANTA & CANTILINO; 2016; ALDERSON, PARENT-ROCHELEAU & MISHARA, 2018).

De Melo et al. (2019) point to the need for an analysis of the ramifications that the theme of suicide has repercussions on social ideations, in terms of causes and motives of the victims. For an analysis of this nature, it would be necessary to consider the social conditions of the individual, within a cultural perspective and in their family reality, as well as to observe possible manifested mental health conditions and how these conditions were significant in the individual's decision-making. In short, one must not attribute to a single factor any causes or reasons for such a situation.

Given this information, the guiding question for the follow-up of this study is: What are the factors associated with depression and

suicide risk among nurses?

For this, the main objective of the work is to know, understand and argue about the reality of the class of nurses in relation to depression and suicide. The specific objectives are: (i) Conduct a compilation of studies through an integrative review on the subject of depression and suicide among nurses; (ii) Understand the differences in the subject of depression and suicide between the nursing class in Brazil and in different countries of the 5 continents based on the research analyzed; and (iii) Propose intervention measures for this public as a way to minimize the chances of consummating the suicidal act and, consequently, contribute to improving the quality of life of these professionals through motivational strategies and guidance with trained professionals.

METHODOLOGY

The present study was guided by digital searches of academic and scientific documents with the objective of formulating, after the selection and analysis of articles, an integrative review – proposed design of the present study. The searches took place between August and November 2020 using the Pubmed and Virtual Health Library (VHL) platforms as search engines and the SciVerse Scopus, Medical Literature Analysis and Retrieval System Online (MedLine) and Scientific databases. Electronic Library Online (SciELO).

An integrative review is understood as a compilation of research results on a particular topic or question. Such results are analyzed and summarized with the aim of deepening the knowledge of a given subject and pointing out possible fillings of gaps observed in the literature. In addition, reviews of this nature make it possible to provide support for decision-making and improvements in clinical practice. (MENDES, SILVEIRA & GALVÃO, 2008; SILVA et al., 2015)

The search strategies involved the use of descriptors and crossings for each of the aforementioned databases. The DeCS descriptors (Health Sciences Descriptors) from the terms "suicide", "depression" and "nurses" in English and Portuguese with the combination of the Boolean "AND", were adapted to each of the databases and in three steps: (i) "suicide AND nurses". (ii) "depression AND nurses"; and (iii) "suicide AND depression AND nurses".

The inclusion criteria adopted for the selection of works were: original publications, covering the years 2015 and 2020; publications in English and Portuguese; empirical research, with health professionals as research subjects.

The exclusion criteria adopted for the selection of papers were: non-empirical research; publications not restricted to the years 2015 to 2020; publications not restricted to English and Portuguese; dissertations and theses; research subjects that are not consistent with the area of Health, and any work that does not deal with the theme of depression and suicide among nurses. Also, works whose abstracts and/or full content were unavailable for access were excluded from the analysis.

The selection was carried out in stages through the readings: (i) first of the titles of the works, followed by (ii) reading of the abstracts, and finally, (iii) the full reading of the articles. For each of the points i, ii and iii, a new selection was performed, to proceed with the most comprehensive readings, until the final selection for analysis. All works contained in the final selection met the pre-established inclusion criteria. Finally, 12 articles were selected for analysis.

RESULTS

The selection of studies for analysis was carried out by inclusion and exclusion criteria, covering works published in the last five years in English and Portuguese. Electronically available articles dated January 2015 to

November 2020 were included.

It is important to warn the reader that the number displayed in searches based on the keywords "suicide", "depression" and "nurses" did not exclusively contemplate the search intention; most of the results pointed to nursing professionals as active in the face of the disease and suicidal behavior, and not as patients/victims. The flowchart below presents the job selection steps:

The extracted results were divided into two tables: (i) The first table with works that addressed issues related to mental disorders (stress, anxiety, but especially depression and burnout) in nurses and health professionals; (ii) The second table with studies that addressed issues related to suicide and suicidal behavior among nurses and comparisons of such incidences with the general population.

Nguyen, Luong, et al. (2019) – Stress, anxiety and depression in clinical nurses in Vietnam: a cross-sectional survey and cluster analysis

The aim of this study was to investigate stress, anxiety and depression in a sample of 787 nurses from a surgical hospital in Hanoi, Vietnam, and to explore heterogeneity in the group in terms of demographic characteristics and working conditions.

The survey confirmed that the prevalence of mental health problems among clinical nurses was even higher than that of the general population or other health professionals. Younger nurses reported the lowest prevalence of mental health problems, and had better physical health conditions (low prevalence of chronic diseases). In this Vietnamese hospital, younger nurses, due to their understandable lack of experience and training, were less exposed and assigned to care for patients with serious conditions or to physical tasks that represented great psychological challenges.

Nearly half of clinical nurses suffered from at least one mental health problem, and 7.3% reported all three conditions—stress, anxiety, and depression. The prevalence of stress, anxiety and depression was 18.5%, 39.8% and 13.2% respectively. The managerial role, career development opportunities, marital relationship, more years working in the hospital, better physical health and harmonious working relationship were associated with lower rates and severity of mental disorders.

Silva, Marcolan (2020) – Working conditions and depression in hospital emergency service nurses

This work, of a qualitative nature, analyzed questions to nurses regarding inadequate working conditions in two emergency hospitals in the city of São Paulo. About the disorganization of work, complaints arose about the lack of protocols, norms and routines that would standardize care. The inadequate relationship with the immediate superior was considered harmful; there were complaints about the lack of support, disrespect and favoring of colleagues due to personal closeness with the boss. Disrespect can also be observed in the form of aggression suffered by nurses in the performance of their duties, not only by the medical team, but also by patients and caregivers. Another important point mentioned was the devaluation and lack of social recognition referred to as an obstacle to the satisfaction of professional nurses. Finally, the physical structure was perceived as inadequate by the nurses when, in partnership with their team, they had to make greater efforts to guarantee the provision of assistance to critical patients, but encountered obstacles arising from the precariousness of the structural conditions of the services; this factor affects not only the quality of care but also the professional itself, and can be exemplified by: lack of material, work with an insufficient number of employees, work overload, etc.
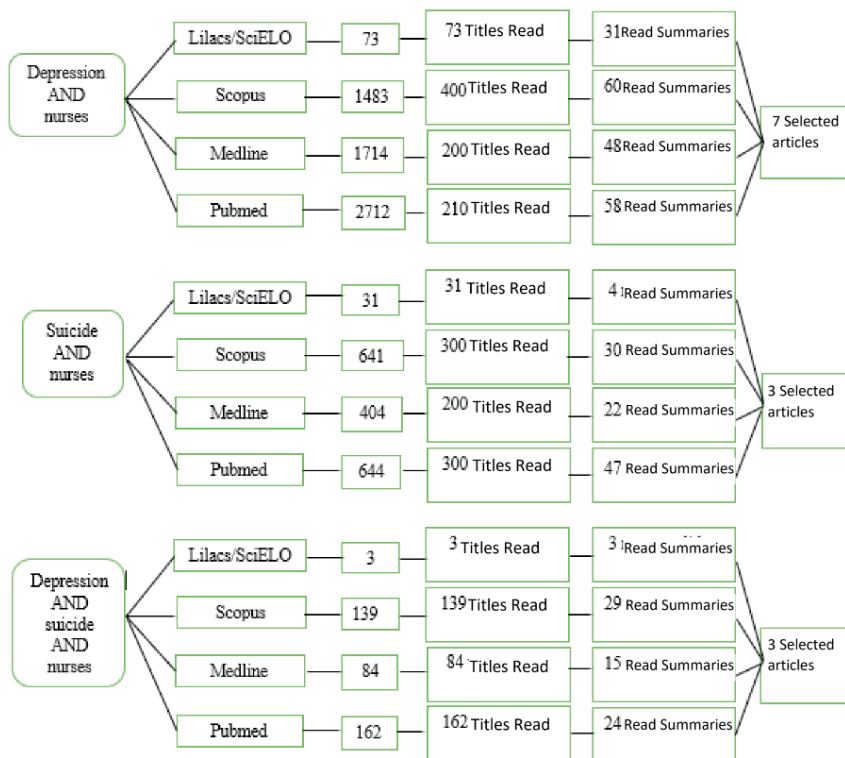
Flowchart 1. Article selection steps on different platforms and databases

Source: own author

MENTAL DISORDERS	
Research object	The co-occurrence of stress, anxiety and depression among clinical nurses
Population	Clinical nurses at a hospital in Vietnam (N = 787)
Comments	The prevalence of stress, anxiety and depression was 18.5%, 39.8% and 13.2%, respectively. 45.3% of participants reported symptoms of at least one mental disorder. 7.3% had all three.
Reference	Tran, Nguyen, Luong, Bui, Phan, Tran, Ngo, Minas, Nguyen (2019)
Research object	Working conditions and depression in hospital emergency service nurses
Population	Nurses in in-hospital emergency units in Brazil (N = 21)
Comments	95.24% of the evaluated nurses had depressive symptoms according to the observer's rating scales, most of them with mild and moderate intensity. Inadequate working conditions corroborated with suffering, and the factors that triggered depressive symptoms were: disorganized work, harmful relationship with immediate management, inappropriate medical behavior, aggression, lack of inputs, infrastructure, human resources and professional devaluation.
Reference	Silva, Marcolan (2020)
Research object	Occupational factors associated with depression in nurses
Population	Female nurses at a federal government hospital in Islamabad, Pakistan (N = 250)
Comments	Occupational factors such as work experience, working hours, work environment, harassment by patients/family members and superiors, job satisfaction and stress at work are directly linked to depression in nurses.
Reference	Bukhari, Habibullah, Mushtaq, Abbasi, Malik (2019)
Research object	*Burnout* and depressive symptoms in intensive care nurses

Population	ICU nurses in Brazil (N = 91)
Comments	Burnout was presented by 14.29% of the nurses and 10.98% had symptoms of depression. The higher the level of emotional exhaustion and depersonalization, and the lower the professional achievement, the greater the depressive symptoms. The association was significant between burnout and depressive symptoms.
Reference	Vasconcelos, Martino, France (2018)
Research object	Psychological variables and prevalence of burnout among nurses
Population	Nurses working in Primary Health Care in the Public Health Service of Andaluz, Spain (N = 338)
Comments	A total of 40.24% of the nurses studied had high levels of burnout. Those most likely to suffer from burnout syndrome are relatively young, people who suffer from anxiety and depression, and who have high scores on assessments for neuroticism and low scores for agreeableness, responsibility and extraversion.
Reference	Ortega-Campos, Cañadas-de la Fuente, Albendín-García, Gómez-Urquiza, Monsalve-Reyes, de la Fuente-Solana (2019)
object of study	Lifestyle and depression of nurses
Population	Hong Kong nurses (N = 850)
Comments	Three lifestyle factors (sleep, entertainment, and hobbies) have been shown to be closely related to depression
Reference	Cheung, Yip (2015)
Research object	Factors associated with mental health outcomes of health professionals exposed to coronavirus disease 2019
Population	Doctors and nurses from Wuhan City and other cities inside and outside Hubei Province, China (N = 1257)
Comments	In this survey of healthcare workers in hospitals equipped with fever clinics or wards for COVID-19 patients in Wuhan and other regions of China, a sizable proportion of participants reported symptoms of depression (634 [50.4%]), anxiety (560 [44.6%]), insomnia (427 [34.0%]) and anxiety (899 [71.5%]). Nurses, women, frontline health workers, and those working in Wuhan, China, reported more severe degrees of all measures of mental health symptoms than other health workers.
Reference	lai,Bad,wang,Falls, huh,Wei,Wu,Du,Chen,read,tan,kang,yao,Huang,wang,wang,liu,huh(2020)

Chart 1. Recent research (2015-2020) involving mental disorders in nurses.

Source: author himself

SUICIDE AMONG NURSES	
Research object	Suicide risk in England by specific occupation
Population	Suicide deaths in England between the years 2011-2015 (N = 18,998); female nurses who died by suicide (N = 148).
Comments	Six specific occupations among women were associated with high risk – artists, bartenders, caregivers, waitresses, nursery and primary education teachers, and nurses. In absolute numbers, caregivers and nurses stand out with the highest global rates.
Reference	Windsor-shellard, Gunnell (2020)
Research object	Longitudinal analysis of suicide among nurses in the United States (2005-2016)
Population	We evaluated 1,824 suicides of nurses and 152,495 suicides of non-nurses in the United States through the years 2005 to 2016.
Comments	Nurses had a higher risk of suicide than the general population. Nurses who completed suicide more frequently did so due to drug intoxication, while male nurses and the general public used firearms.
Reference	Davidson, Proudfoot, Lee, Terterian, Zisook (2020)

Research object	Assessment of suicidal behavior in nurses
Population	Canadian nurses (N = 3969
Comments	Considerable proportions of participants reported suicidal ideation in the year prior to the survey and/or lifetime (10.5%, 33.0%), plans (4.6%, 17.0%) and attempts (0.7%, 8.0%). 0%), numbers considerably higher than general population estimates. Significant differences were identified between age groups, years of service, marital status, regional location and type of nursing.
Reference	Stelnicki, Jamshidi, Angehrn, Carleton (2020)
Research object	Frequency of suicide attempts and attitudes towards suicidal behavior among physicians and nurses
Population	Doctors and nurses at Lagos State University Hospital, Nigeria (N = 226)
Comments	The frequency of suicide attempts is higher among doctors and nurses when compared to the general population. Physicians and nurses reported slightly positive attitudes towards suicidal behavior with significant differences in type of profession and levels of self-rated anger towards suicide.
Reference	Olibamoyo, Coker, Adewuya, Oqunlesi, Sodipo (2020)
Research object	To estimate the prevalence and factors associated with the risk of suicide among nurses and physicians.
Population	Physicians and nurses at a teaching hospital in Brazil (N = 216)
Comments	It was identified that variables such as not having a partner, history of suicide attempts, stress and depressive symptoms were statistically associated with the risk of suicide. The lifetime prevalence of suicide attempts among nurses was 9.41%, and among physicians, 2.29%.
Reference	Freire, Marcon, Espinosa, dos Santos, Kogien, from Lima, Faria (2020)
Research object	Suicidality among nurses
Population	Hong Kong nurses (N = 850)
Comments	14.9% of participants had thought about suicide, while 2.9% had attempted suicide one or more times in the past year. Women report suicidal thoughts or attempts more often than men. Religion, poor health, deliberate self-mutilation, depressive symptoms and poor self-perception of physical and mental health were significantly associated with suicide among nurses.
Reference	Cheung, Yip (2016)

Table 2. Recent research (2015-2020) involving the suicide of nurses.

Source: own author

95.24% of the assessed nurses had depressive symptoms, most with mild and moderate intensity. When analyzing the triggering factors, it was concluded that the working conditions were precarious and contributed to the suffering. The authors highlighted that, in their study, most nurses did not recognize themselves as patients. This fact made it difficult for them to seek help that would enable their recovery, as well as encouraging momentary relief strategies in the face of the inadequate conditions of their work environment. These strategies, however, were considered inadequate, of short duration and not resolving.

Bukhari, Habibullah, Mushtaq, et al. (2019) – Occupational factors associated with depression in nurses working in a federal government tertiary care hospital in Islamabad

In this study, data regarding symptoms of depression were collected based on work experience, workload, work environment, harassment by patients/family members and superiors, job satisfaction and stress at work. The results showed that most nurses (79.4%) complained about not being allowed to make decisions according to the patient's needs. Around 72% reported a lack of appreciation and feedback on their work by their superiors. Harassment by management was reported by about two-thirds of the group, and the vast majority (94.4%) believed they had more responsibilities and less authority at work. All nurses believed that they had to work quickly and exert more physical effort than expected to meet the demands of the job. About four-fifths of nurses reported having suffered injuries on the job. 68% experienced verbal abuse by the patient/family member or superior, and a quarter of the sample experienced harassment from them. Finally, more than half of the nurses (58.8%) were dissatisfied with their jobs, and a large majority (89%) saw their work as stressful.

This study was undertaken to determine occupational factors related to depression in a sample (N = 250) of nurses working at a federal government tertiary hospital in Islamabad, Pakistan, and a number of occupational factors were reported to be related to depression in that study. The highest rate of depression was found in nurses who had been working for 5-7 years in this profession and/or those who suffered an injury while on the job. These findings can be explained by their inexperience and lack of emotional stability due to the low level of coping and skills, which generate stress in these individuals, and which, if prolonged, lead to depression.

Vasconcelos, Martino, France (2018) – **_Burnout_ and depressive symptomatology in intensive Care nurses: relationship analysis**

This research was carried out with 91 nurses from the intensive care units of a university hospital in the city of São Paulo. The results showed that 14.3% had burnout syndrome and 11% had symptoms of depression.

The nurses in both groups with burnout and with depressive symptoms were predominantly young (31-35 years with burnout and 20-40 with depressive symptoms), women, single and without children - which, according to the authors, is evidenced by the inexperience of work and greater tensions in the face of intercurrences. Interpersonal relationships were identified here as one of the main factors that cause the syndrome. As for the depressive profile, the majority worked more than 60 hours a week and attended to more than 10 patients a day. The authors argue that ICU nurses attend to many highly complex patients on a daily basis, and the insufficient number of patients added to the excess of tasks per subject configure an even greater burden on nurses.

Most individuals with symptoms of depression had a low income, while those

with burnout had a higher income. It was also evidenced that the chances of nurses with burnout to present depressive symptoms is 5.33 times greater than those without burnout.

Ortega-Campos, Cañadas-de la Fuente, Albendín-García, et al. (2019) – A multicentre study of psychological variables and the prevalence of burnout among primary health care nurses

This study was conducted from a sample of 338 nurses working in Andalusia, Spain, in order to verify the prevalence of burnout syndrome in these professionals. The results showed that the prevalence of burnout is high among nurses, especially those who are younger, who suffer from anxiety and depression and who have high levels of neuroticism and low levels of agreeableness, responsibility and extroversion.

The authors believe that, in relation to younger people, their limited experience and exposure to organizational problems and even a hostile work environment can provoke negative attitudes – in extreme cases even suicidal behavior. With regard to personality factors, the authors argue that when a nurse has a high level of neuroticism, this is usually associated with an increase in the severity and frequency of personal problems. Low levels of acceptance, responsibility and extroversion often mean less involvement and a decrease in the quality of care, poor social skills or unsatisfactory working conditions.

Finally, the authors conclude that the greater the number of negative personality traits in a nurse, the greater the risk of suffering from burnout, and advocate that the prevention of *burnout* helps create a positive work environment, promotes nurses' autonomy, and facilitates the achievement of their objectives.

Cheung, Yip (2015) – Lifestyle and depression among Hong Kong nurses

This study analyzed how lifestyle choices were related to depression in the nursing profession, based on questions related to lifestyle habits such as eating habits, sleep patterns, levels of physical activity, social and/ or recreational activities.

The prevalence of depression found in this study was significant (35.8%) in a sample of 850 nurses from Hong Kong. In the United States, a similar study (WELSH, 2009) also reveals a prevalence rate of 35% (n = 150) of female nurses suffering from mild to moderate depressive symptoms. Participants unable to sleep 7-8 hours four nights a week were more likely to be depressed. The authors comment that shift work could be the biggest negative factor for the quality and quantity of sleep, and still affects formal and informal social participation, family relationships and routines, and engagement in solitary activities (for example, entertainment and hobbies).

Given the frustrations of their work, nurses may be especially in need of these forms of recreation and relaxation. Through hobbies and entertainment, nurses can regain a sense of mastery and self-control, increase their self-esteem, strengthen their relationships, and experience periods of happiness before returning to work. Depression is still demotivating and can make it difficult for sufferers to stay active or make healthier lifestyle choices.

Bad, wang, *et al.* (2020) – **Factors associated with mental health outcomes among health care workers exposed to Coronavirus Disease 2019**

The aim of the present study was to assess mental health outcomes among healthcare professionals treating patients with COVID-19 in Wuhan and other cities in China, quantifying the magnitude of symptoms of depression, anxiety, insomnia and distress and analyzing potential risk factors. risk associated with these symptoms. Of the 1257 participants who responded, 493

(39.2%) were physicians, and 764 (60.8%) were nurses (90.8% of whom were female). A total of 522 participants (41.5%) were frontline healthcare professionals directly involved in the diagnosis, treatment, or care of patients with or suspected of having COVID-19.

A considerable proportion of participants had symptoms of depression (634 [50.4%]), anxiety (560 [44.6%]), insomnia (427 [34.0%]) and distress (899 [71.5%]). Nurses, women, frontline workers and those in Wuhan reported experiencing more severe symptom levels across all 4 scales: depression, anxiety, insomnia and distress. The study also indicated that being a woman and having an intermediate technical title was associated with experiencing severe depression, anxiety and distress.

According to the authors, sources of distress may include feelings of vulnerability or loss of control and concerns about one's own health, the spread of the virus, family and other health, changes at work and isolation. The fact that COVID-19 is transmissible between humans, associated with high morbidity and fatal potential, can intensify the perception of personal danger. In addition, the foreseeable shortage of supplies and the increased flow of suspected and real cases of COVID-19 contribute to the pressures and concerns of health professionals.

Windsor-Shellard, Gunnell (2019) - Occupation-specific suicide risk in England: 2011–2015

Using data maintained by the ONS (Office for National Statistics) on death records in England during the years 2011 to 2015, standardized death rates for suicides among people aged 20 to 64 years for each occupation were calculated. The results included 9 groups of occupations and over 350 individual occupations. Of the 18,998 suicide deaths among people aged 20 to 64 between 2011 and 2015, 13,232 (69.65%) had an occupation

recorded on their death certificate. The majority (10,688 or 80.77%) of suicides were among men. By occupation, male nurses did not have significantly higher rates than the general population. However, according to the authors, the high risk of suicide among women was largely explained by the high risk among nurses.

Six specific occupations among women were associated with high risk – artists, bartenders, caregivers, waitresses, nursery and primary education teachers, and nurses. However, in absolute numbers, the most incident professions were caregivers (hospital and domestic) and nurses, in numbers that are far from the other job categories, representing respectively 9.08% and 5.82% of total cases of suicide among women – including caregivers and nurses the suicide rate among nurses' totals 14.9%.

Davidson, Proudfoot, Lee, et al. (2020) -**A longitudinal analysis of nurse suicide in the United States (2005–2016) with recommendations for action**

The aim of this study was to investigate the longitudinal incidence of suicide among nurses in the United States. A total of 1,824 nurses and 152,495 non-nursing suicides were evaluated, totaling 154,319 suicides committed in the USA between 2005 and 2016. In all, there were 1469 female nurses and 355 male nurses, against 32,870 women from the general public and 119,980 men from the general public. general. Nurses' suicides were significantly higher (11.97 per 100,000 inhabitants) than in the female population (7.58/100,000); likewise, male nurses (39.8/100,000) compared to the male population (28.2/100,000).

The methods most used by female nurses were pharmacological poisoning (27.2% of cases among nurses versus 17.3 in the general public), followed by firearms (22.7% versus 26.9%), poisoning (17.3% versus 13.2%),

unknown methods, hanging/strangulation/suffocation (12.5% versus 20.4%), sharp instruments (2.2% versus 1.3%), falling (1.1 % versus 1.9%) and drowning (1.1% versus 1.5%). Opioids, antidepressants and benzodiazepines were the most used substances in clinical suicide. Male nurses more commonly used firearms (41.7% of cases among nurses versus 48.4% of the general public), followed by unknown methods, hanging/strangulation/suffocation (12.1% versus 22%)., poisoning (12.1% versus 5.4%), drug poisoning (9%).

A still unanswered question, according to the authors, is whether the use of drug intoxication is due to access to medications or knowledge of how to use them lethally, considering the fact that the most common medications used were those found at home.

Stelnicki, Jamshidi, Angehrn, et al. (2020)

SUICIDAL BEHAVIORS AMONG NURSES IN CANADA

This research, which aimed to provide estimates of the prevalence of suicidal behavior (namely: suicidal ideations, plans and attempts) among nurses, reached a total of 3969 participating nurses (94.3% women) from across Canada.

A sizable proportion of the overall sample reported lifetime suicidal ideation in the past year (10.5% in the past year, 33.0% lifetime for ideation), planning (4.6%, 17.0%) and attempts. (0.7%, 8.0%). These rates are vastly higher than those found in the general population of Canada (i.e. 2.5% in the past year, and 11.8% lifetime for ideation; 4.0% lifetime for plans; 3.1% lifetime for attempts). Married nurses were significantly less likely to report suicidal ideation. Nurses with more than 10 years of service were less likely to report suicidal ideations and attempts. Specifically, nurses over 40 years of age had significantly lower reports of suicidal ideation.

Results highlighted a variety of mental health disorders and associated conditions (eg, depression, stress, substance use, trauma exposure, anxiety) as factors significantly associated with increased likelihood of suicidal behavior. The authors also point out that individuals with high emotional perception, low self-esteem and increased anxiety are associated with an increased risk of behaviors, in addition to several occupational stressors, including shift work, family social interruption, team conflict, work demands, working hours. variable workload, interpersonal conflicts, heavy workload, work-family conflicts, fear of making mistakes at work, burnout, and workplace aggression by patients and colleagues are associated with increased stress. Olibamoyo, Coker, Adewuya, et al. (2020) –

Frequency of suicide attempts and attitudes toward suicidal behavior among doctors and nurses in Lagos, Nigeria

This study, conducted at a university hospital in Lagos, Nigeria, sought to identify the frequency of suicide attempts among health professionals, and had a sample of 226 professionals, 111 physicians and 115 nurses. 17 participants (7.5%) reported having at least one suicide attempt during their lifetime. Among respondents with past suicide attempts, 11 (64.7%) were nurses, 13 (76.5%) were female (between nurses and doctors) and 11 (64.7%) were aged between 30 and 39 years. The 7.5% observed in this group represents a marked increase when compared to the general population, estimated at 2.7% by the WHO.

It is important, however, to bring the information that, according to Nigeria's penal code, chapter 27, section 327, "any person who attempts to kill himself is guilty of an offence, and is liable to imprisonment for one year". Therefore, the authors caution that data on attempted rates are likely to be highly unreliable and possibly under-reported due to

fear of prosecution in the general population. As for the hospital work environment, the authors warn of the reality of suppression and self-accusation of a cultural and professional context where it is not always possible to verbalize and communicate problems related to suicidal behavior. (Freire, Marcon, Espinosa, et al. - 2020) .

FACTORS ASSOCIATED WITH SUICIDE RISK AMONG NURSES AND PHYSICIANS: CROSS-SECTIONAL STUDY

The aim of this study was to estimate the prevalence and factors associated with the risk of suicide among nurses and physicians at a university hospital in Cuiabá, Brazil, and 216 professionals (85 nurses and 131 physicians) participated in the survey. The results showed that 9.41% of nurses reported having attempted suicide throughout their lives, while the rate among physicians was 2.29%. Regarding depressive, anxiety and stress symptoms among nurses, prevalences of 27.05%, 29.45% and 28.23% were observed, respectively. Among physicians, there was a prevalence of 11.45%, 14.50% and 16.03% for depressive, anxious and stress symptoms.

It is evident that the risk of suicide obtained a statistically significant difference with sexual orientation, with the highest proportion among homosexuals (55.55%) when compared to heterosexuals (14.01%), and marital status without a partner, with the highest proportion in this category (28.07%). Also, the presence of suicide risk among nurses was 21.18% and among physicians, 12.21%.

The results indicated that the absence of a partner, history of suicide attempts and variables related to the deterioration of the psychic condition were factors associated with the increased prevalence of suicide risk among nurses and physicians working in the hospital context.

Cheung, Yip (2016) – Suicidality among Hong Kong nurses: prevalence and correlates

This research, carried out with 850 nurses from Hong Kong, sought to identify the prevalence of suicide ideation and attempts from a sample of 850 nurses from Hong Kong. About 25% of nurses had some level of suicidal ideation or behavior. The prevalence of suicidal ideation and behavior last year was 14.9% (ideation), 5.5% (planning), 2.9% (attempt) and 1.2% (tharmful engagement that required medical attention) in 2013. More nurses reported suicidal ideation, plans, attempts, and injuries than men.

Suicide is multifaceted and is closely associated with individual risk factors (personality, religious belief, debt, alcohol consumption, drug use and not seeking help, for example), factors related to physical and mental health, interpersonal relationship factors (including death and illness of close relatives and friends) and work-related factors. Some variables (being a woman, being married, being a ward coordinator or an advanced practice nurse, marital disturbance, patients' experience of self-injury, alcohol use, depressive symptoms and poor physical and mental health) were more correlated with suicidal ideation. Those who attempted suicide were more likely to have a religion, be chronically ill, in debt, self-harm, have difficulties with shift work, and experience symptoms of anxiety.

CONCLUSIONS

Approaches to depression and other mental disorders and suicide or suicidal behavior are multifaceted and, in the case of the population of nurses and other health professionals, are closely associated with individual/personal risk factors, factors related to physical health and mental health, interpersonal relationship factors, and work-related factors. In this particular review, not only occupational

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factors were raised, but also factors related to personality, habits and lifestyle, adversities (such as the case of COVID-19), and even the access and knowledge of professionals to lethal means as facilitators of suicide attempts and acts, among others.

This review compiled data from studies of different developed, underdeveloped and developing countries (namely: Brazil, Canada, China, Spain, United States, England, Hong Kong, Nigeria, Pakistan and Vietnam), coming from the five continents, and, despite the different factors mentioned above, the different social, cultural, economic and work political realities, the results always convey the same reality: nurses are more likely to develop mental disorders and more susceptible to suicide risks than the general population. These results always point to the emerging need for intervention policies and support programs for this class of people.

Similar to all the authors brought to this analysis, this work reaffirms the need for intervention policies and support programs for this class of people, in addition to an appeal to the class of researchers in the field of Nursing for a greater contribution of research that evokes the theme and develop projects that will minimize the suffering of nurses, starting with occupational factors in the workplace.

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