# Work-related disorders and psychosocial risks in nursing professionals

## O adoecimento dos trabalhadores de enfermagem e os riscos psicossociais no trabalho

## Enfermedades de los trabajadores de enfermería y riesgos psicosociales en el trabajo

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## Abstract

**Objective:** To analyze the physical and psychosocial work-related disorders of nursing professionals working in the outpatient clinic of a university hospital, and its interrelationship with psychosocial risks.

**Methods:** An epidemiological and cross-sectional study was conducted with 388 nursing professionals from outpatient clinics of a university hospital in the city of Rio de Janeiro, RJ, Brazil. A questionnaire was used to characterize the participants and the Work-Related Physical and Psychosocial Disorder Scale (WRDS). Data collection occurred from July to December of 2018. Descriptive analysis of the variables and the risk classification of the disorder were performed. For the bivariate statistical analysis, the odds ratio association measure was obtained, using a 95% confidence interval, 5% significance level.

**Results:** The outpatient nursing work context jeopardizes the physical health of professionals at risk; however, it is also necessary to understand their profile, which, in addition to a long trajectory in nursing, points to their constant rotation among the sectors of the hospital, ending up in the outpatient setting. From this perspective, these professionals may already be physically unhealthy, when they are allocated to the outpatient clinics.

**Conclusion:** Physical disorders received the worst evaluations, data supported by national and international literature, which were associated with the outcomes investigated, highlighting the presence of chronic diseases and absence due to illness.

## Resumo

**Objetivo:** Analisar o adoecimento físico e psicossocial decorrente do trabalho do profissional de enfermagem que atua em ambulatório de hospital universitário e sua inter-relação com os riscos psicossociais.

**Métodos:** Estudo epidemiológico transversal, realizado com 388 profissionais de enfermagem de ambulatórios universitários, no município do Rio de Janeiro, RJ. Utilizou-se um questionário para caracterização dos participantes e a Escala de Danos Físicos e Psicossociais no Trabalho, a coleta de dados ocorreu de julho a dezembro de 2018. Realizou-se análise descritiva das variáveis e a classificação de risco dos danos. Para a análise estatística bivariada, utilizou-se a medida de associação razão de chances, com intervalo de confiança de 95%, nível de significância de 5%.

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**Conflicts of interest:** nothing to declare.

**Resultados:** O contexto de trabalho ambulatorial da enfermagem põe em risco a saúde física dos profissionais; porém, há de se considerar também o seu perfil, que, além de uma longa trajetória na enfermagem, aponta para a sua rotatividade pelos setores do hospital, finalizando no ambulatório. Partindo dessa perspectiva, esses profissionais podem já estar adoecidos fisicamente ao serem alocados nos ambulatórios, para desenvolverem suas atividades laborais.

**Conclusão:** Os danos físicos receberam as piores avaliações, dados corroborados pela literatura nacional e internacional, os quais estiveram associados aos desfechos investigados, destacando-se a presença de doenças crônicas e o absenteísmo por doenças.

## Resumen

**Objetivo:** Analizar las enfermedades físicas y psicosociales resultantes del trabajo de profesionales de enfermería que trabajan en el ambulatorio de un hospital universitario y su interrelación con los riesgos psicosociales.

**Métodos:** Estudio epidemiológico transversal, realizado con 388 profesionales de enfermería de ambulatorios universitarios en el municipio de Rio de Janeiro, estado de Rio de Janeiro. Se utilizó un cuestionario para la caracterización de los participantes y la Escala de Daños Físicos y Psicosociales en el Trabajo. La recopilación de datos se llevó a cabo de julio a diciembre de 2018. Se realizó el análisis descriptivo de las variables y la clasificación de riesgo de los daños. Para el análisis estadístico bivariado, se utilizó la medida de asociación razón de momios, con intervalo de confianza del 95 %, nivel de significancia del 5 %.

**Resultados:** El contexto de trabajo en un ambulatorio de enfermería pone en riesgo la salud física de los profesionales. Sin embargo, se debe considerar también su perfil, que, además de una larga trayectoria en enfermería, indica una rotación por los sectores del hospital, que termina en el ambulatorio. Partiendo de esa perspectiva, estos profesionales pueden ya estar enfermos físicamente al ser destinados a los ambulatorios para que desarrollen sus actividades laborales.

**Conclusión:** Los daños físicos recibieron las peores evaluaciones, datos corroborados por la literatura nacional e internacional, que estuvieron asociados a los desenlaces investigados, con énfasis en la presencia de enfermedades crónicas y ausentismo por enfermedad.

## Introduction

There is increasing evidence regarding the exposure to psychosocial work-related risks related to impacts on the individual's physical, psychological, and social health.[1] At the same time, such risks have been included in the governmental concerns of different countries and international agencies, focusing on interpersonal relationships, individual factors, and some elements of work organization.[2] However, the regulation and assessment of these risks are still lagging behind other occupational risks, considering their complexity.[3]

Psychosocial risks are present in the daily life of nursing personnel, as identified in a study conducted with nursing assistants in the United States,[4] and with nursing staff in Brazil.[5] Hazardous occupational exposures were identified. Labor violence, high workload, lack of personnel, high levels of responsibility, lack of awareness of exposures to harmful occupational risks, lack of professional recognition, conflicting relationships within the nursing team, long working hours, double shift work, and sexual harassment are among them. These risks result in absences caused by musculoskeletal system diseases, followed by mental and behavioral disorders.[6] Considering that interrelations between these outcomes are important, a study identified an increased risk of musculoskeletal disorders in healthcare workers with pre-existing anxiety and/or depression.[7]

From the perspective of nursing work contexts, outpatient services were indicated as the services with the highest number of sick leaves due to mental and behavioral disorders.[8] This nursing practice sector differs from other care facilities, as it serves patients who come to the clinic only for a medical appointment or treatment.[9] In the outpatient clinic, there are no rotating shifts, as the patient is usually stable. The appointments are scheduled and regulated by demand, which makes it different from other services; therefore, it is considered a less stressful service sector for the professional. However, the practical experience identifies a certain complexity of care provided at this level of care, and the absenteeism of these professionals due to physical and mental illnesses. Despite this, there are few studies focusing on the health of nursing professionals working in outpatient clinics. [10]

As nursing is the largest professional category in health services, the impact of illness on this professional must be considered, and studies that analyze the work contexts and associated risks are important. This study was developed from this perspective, and aimed to analyze the physical and psychosocial disorders associated with the work of nursing professionals who work in the outpatient clinic of a university hospital, and its interrelationship with psychosocial risks.

## Methods

This was an epidemiological, cross-sectional study, conducted in all the outpatient services of three public universities, in the city of Rio de Janeiro-RJ, Brazil, with four specialized outpatient units and seven hospital outpatient clinics.

The population consisted of the nursing team - nurses, nursing technicians, and nursing assistants. All individuals working in the nursing care team were included; excluded were those on vacation, on extended leave, away from work, or who could not be located during the data collection period. Among the 483 eligible professionals, 95 (20%) did not return the data collection instrument, totaling 388 (80%) participants, a quantitative representation of the population studied.

A questionnaire on sociodemographic, occupational, and health characteristics, and the Work-Related Physical and Psychosocial Disorder Scale (WRDS)[11] were used for data collection. The population was characterized according to the following variables: a) sociodemographic: date of birth, sex, marital status, skin color, number of children, level of education; b) occupational: number of work contracts, weekly working hours, professional category, time working in nursing, in the institution, and in the outpatient clinic; c) health-related: self-assessment of health, chronic diseases, and absenteeism.

The WRDS is part of the Protocol for assessment of work-related psychosocial risks (*Protocolo de Avaliação dos Riscos Psicossociais do Trabalho* - PROART),[11,12] which was validated for use with workers . The self-administered scale with 23 items is composed of three factors: psychological, social, and physical disorders generated by confrontation with the organization of the work environment, its respective management styles, and experiences of suffering. It is a five-point Likert type scale, whose interpretation is based on the overall mean and standard deviation of the factor, percentage of respondents in the mean intervals, and analysis of the three items of the factor analyzed with higher and lower means, in order to verify which situations influenced the overall results.[11,12]

Assuming the standard deviation relative to the midpoint, the parameters for assessment of the mean and frequencies of the WRDS factor are: a) 1.00 - 2.29: low risk (positive result represents low psychosocial risk); b) 2.30 - 3.69: medium risk (median result, represents an alert state/threshold situation for psychosocial risk at work, requires short and medium term interventions); and, c) 3.70 - 5.00: high risk (negative result, represents high psychosocial risk, requiring immediate interventions on the causes, aiming to eliminate and/or mitigate).[11,12]

Data collection occurred between July and December of 2018, during the professionals' working hours, by a team of previously prepared research assistants. The nursing professionals were invited to participate in the study. After explanation of the objectives and the professionals' acceptance, the data collection instrument and two copies of the Terms of Free and Informed Consent form were provided, with the best day scheduled for return.

The data were organized, processed, and analyzed using the SPSS software, version 21.0.

The statistical analysis consisted initially of a descriptive analysis of the sociodemographic, occupational, and health variables. Subsequently, the mean and standard deviation of each WRDS item were obtained, grouped in sequence for the formation of factors and risk classification.

As for the bivariate statistical analysis, understanding that the low risk classification is the only one that indicates a positive result for the worker's health, the medium and high risks were combined and considered dependent variables. The independent variables were the sociodemographic, labor, and health characteristics of the nursing professionals in the outpatient services, which were dichotomized for insertion into the statistical model, except for the health self-assessment variable. Therefore, the odds ratio (OR) was used as a measure of association, with a 95% confidence interval, and a significance level of 5%.

Cronbach's alpha technique was used for WRDS internal consistency analysis. It showed good internal consistency of the subscales used, resulting in 0.899 for the psychological factors, 0.860 for the social factors, and 0.898 for the physical factors.

Ethical and legal aspects for research with human beings were complied, and the study was approved by the Research Ethics Committees of the proponent institution and the seven co-participating institutions, responsible for the 11 services included in the study. The research was performed assuring the anonymity of the professionals who agreed to participate in the study, after signing the Terms of Free and Informed Consent form

## Results

The participants were female (88.6%, n=344), with a mean age of 48 years (SD±11); married or in a stable relationship (52.6%, n=204); with children (69.8%, n=271); mixed skin color (61.6%, n=239); and with higher education (68.3%, n=265). Although the majority were nursing technicians or auxiliaries (69.6%, n=270), they had permanent employment (90.7%, n=352), with only one job contract (52.1%, n=202); working more than 30 hours a week (61.6%, n=239). A median of 25 years working in nursing, 18 years in the institution, and 5.5 years in the outpatient clinic was stated. Most respondents evaluated their own health as good/very good (n=246, 63.4%), suffering from chronic diseases 91.5% (n=355), especially four or more diseases (48.5%, n=188), and 33% (n=128) had taken a work leave due to illness in the last 12 months. Table 1 shows the distribution of nursing professionals according to risk classification for each WRDS factor.

**Table 1.** Distribution of nursing professionals according to risk classification for each factor of the Work-Related Physical and Psychosocial Disorder Scale (WRDS) (n=388)

| WRDS factors | Scale assessment parameters | |
|---|---|---|
| | Low risk n(%) | Medium/high risk n(%) |
| Physical and psychosocial disorders at work | | |
| Physical | 138(35,6) | 250(64,4) |
| Psychological | 313(80,7) | 75(19,3) |
| Social* | 319(82,5) | 68(17,5) |

*n=387, this variation in "n" occurred due to the lack of response of one participant for all items related to social disorders in the WRDS

Table 2 presents the assessment of work-related disorders according to mean, standard deviation, and risk classification for each item of the WRDS factors. It is possible to verify that all items presented, on mean, a low risk for the development of psychological and social disorders. As for physical disorders, a medium risk was identified in all items, with the exception of digestive disorders and appetite alterations.

**Table 2.** Work-Related Physical and Psychosocial Disorder Scale (WRDS) factors (psychological, social, and physical), according to mean, standard deviation (SD), and risk classification for nursing professionals from outpatient clinics of the university hospital (n = 388)

| WRDS factors | Mean | SD | Risk |
|---|---|---|---|
| Psychological disorders | 1.75 | 0.8 | Low |
| Sadness | 2.00 | 1.1 | Low |
| Bad mood | 2.00 | 1.0 | Low |
| Willingness to give up on everything | 1.76 | 1.1 | Low |
| Feelings of emptiness | 1.72 | 1.0 | Low |
| Bitterness | 1.62 | 1.0 | Low |
| Loneliness | 1.58 | 0.9 | Low |
| Loss of self-confidence | 1.55 | 0.8 | Low |
| Social disorders | 1.75 | 0.7 | Low |
| Willingness to be alone | 2.02 | 1.1 | Low |
| Impatience with people, in general | 1.95 | 0.9 | Low |
| Conflicts in family relationships | 1.91 | 1.0 | Low |
| Difficulties in relationships outside of work | 1.64 | 0.9 | Low |
| Aggressiveness towards others | 1.61 | 0.9 | Low |
| Lack of sensitivity toward colleagues | 1.57 | 0.8 | Low |
| Difficulty with friends | 1.54 | 0.8 | Low |
| Physical disorders | 2.63 | 0.9 | Medium |
| Leg pain | 3.05 | 1.3 | Medium |
| Back pain | 2.98 | 1.3 | Medium |
| Body pain | 2.89 | 1.3 | Medium |
| Sleep alterations | 2.75 | 1.3 | Medium |
| Headache | 2.62 | 1.2 | Medium |
| Arm pain | 2.61 | 1.3 | Medium |
| Circulatory conditions | 2.31 | 1.3 | Medium |
| Digestive conditions | 2.29 | 1.2 | Low |
| Changes in appetite | 2.22 | 1.2 | Low |

Table 3 presents the association of sociodemographic, occupational, and health-related characteristics of nursing professionals who showed medium or high risk in the WRDS factors

Sociodemographic variables, in general, showed no significant association with psychosocial disorders. However, a higher proportion of disorders were found among females, especially physical disorders (66% female and 48.8% male). Those with a medium level of education were less likely to have medium or high risk for social disorders (OR=0.52 [0.28-0.98]).

The professionals with a non-permanent employment contract with the institution presented

**Table 3.** Association between the sociodemographic, occupational, and health-related variables for nursing professionals of a university hospital outpatient service, in the city of Rio de Janeiro, who presented medium or high risk on factors of the Work-Related Physical and Psychosocial Disorder Scale (WRDS)

| Variables | Psychological disorders (n=75) | | Social disorders (n=68) | | Physical disorders (n=250) | |
|---|---|---|---|---|---|---|
| | Medium/high risk n(%) | Odds ratio (IC95%) | Medium/high risk n(%) | Odds ratio (IC95%*) | Medium/high risk n(%) | Odds ratio (IC95%*) |
| Sociodemographic | | | | | | |
| Age | | | | | | |
| Up to 59 years | 62(19.3) | 1.0 | 58(18.1) | 1.0 | 207(64.3) | 1.0 |
| More than 60 years | 11(19.6) | 1.02 (0.50-2.09) | 7(12.5) | 0.65 (0.28-1.50) | 36(64.3) | 1.00 (0.55-1.80) |
| Sex | | | | | | |
| Male | 5(12.2) | 1.0 | 5(12.2) | 1.0 | 20(48.8) | 1.0 |
| Female | 69(20.1) | 1.81 (0.68-4.77) | 62(18.1) | 1.59 (0.59-4.21) | 227(66.0) | 2.0 (1.00-3.90) |
| Living with a partner | | | | | | |
| No | 34(16.7) | 1.0 | 33(16.2) | 1.0 | 116(63.4) | 1.0 |
| Yes | 40(21.9) | 1.40 (0.84-2.32) | 34(18.7) | 1.19 (0.70-2.01) | 133(65.2) | 0.92 (0.60-1.40) |
| Skin color | | | | | | |
| White | 29(19.7) | 1.0 | 27(18.4) | 1.0 | 98(66.7) | 1.0 |
| Mixed color | 45(18.8) | 0.94 (0.56-1.58) | 40(16.8) | 0.90 (0.52-1.54) | 150(62.8) | 0.84 (0.55-1.30) |
| Children | | | | | | |
| No | 28(24.1) | 1.0 | 23(19.8) | 1.0 | 77(66.4) | 1.0 |
| Yes | 46(17.0) | 0.64 (0.38-1.09) | 44(16.3) | 1.79 (0.45-1.38) | 172(63.5) | 0.88 (0.56-1.40) |
| Level of education | | | | | | |
| High level | 55(20.8) | 1.0 | 53(20) | 1.0 | 173(65.3) | 1.0 |
| Medium degree | 19(15.6) | 0.70 (0.39-1.24) | 14(11.6) | 0.52 (0.28-0.98) | 76(62.3) | 0.88 (0.56-1.37) |
| Occupational | | | | | | |
| Type of employment contract | | | | | | |
| Permanent | 66(18.8) | 1.0 | 60(17.1) | 1.0 | 232(65.9) | 1.0 |
| Not permanent | 8(22.9) | 1.28 (0.56-2.95) | 7(20.0) | 1.21 (0.50-2.90) | 17(48.6) | 0.48 (0.24-0.98) |
| Number of employment contracts | | | | | | |
| 1 job | 37(18.3) | 1.0 | 29(14.4) | 1.0 | 118(58.4) | 1.0 |
| 2 or more jobs | 37(20.0) | 1.11 (0.67-1.85) | 38(20.5) | 1.53 (0.90-2.60) | 131(70.8) | 1.72 (1.13-2.63) |
| Workload | | | | | | |
| Up to 30 hours | 27(18.2) | 1.0 | 20(13.5) | 1.0 | 92(62.2) | 1.0 |
| More than 31 hours | 47(19.7) | 1.09 (0.65-1.85) | 47(19.7) | 1.57 (0.89-2.78) | 157(65.7) | 1.16 (0.76-1.78) |
| Professional category | | | | | | |
| Nurse | 29(24.8) | 1.0 | 29(24.8) | 1.0 | 77(65.8) | 1.0 |
| Nursing technician/auxiliaries | 45(16.7) | 0.61 (0.36-1.03) | 38(14.1) | 0.49 (0.29-0.86) | 172(63.7) | 0.91 (0.58-1.44) |
| Working time in nursing | | | | | | |
| Up to 25 years | 43(22.4) | 1.0 | 41(21.4) | 1.0 | 125(65.1) | 1.0 |
| More than 26 years | 30(15.7) | 0.64 (0.38-1.08) | 25(13.2) | 0.56 (0.32-0.96) | 121(63.4) | 0.93 (0.61-1.40) |
| Working time at the institution | | | | | | |
| Up to 18 years | 41(21.5) | 1.0 | 39(20.4) | 1.0 | 121(63.4) | 1.0 |
| More than19 years | 31(16.2) | 0.71 (0.42-1.19) | 26(13.7) | 0.62 (0.36-1.06) | 125(65.4) | 1.09 (0.72-1.66) |
| Working time in the outpatient service | | | | | | |
| Up to 5.5 Years | 39(20.9) | 1.0 | 38(20.3) | 1.0 | 122(65.2) | 1.0 |
| More than 5.6 years | 30(16.1) | 0.73 (0.43-1.23) | 24(13.0) | 0.58 (0.33-1.02) | 120(64.5) | 0.97 (0.63-1.48) |
| Health-related | | | | | | |
| Health self-assessment | | | | | | |
| Good/very good | 36(14.6) | 1.0 | 35(14.2) | 1.0 | 130(52.8) | 1.0 |
| Regular | 30(24.8) | 4.24 (1.60-11.26) | 23(19.2) | 1.43 (0.80-2.55) | 101(83.5) | 4.50 (2.62-7.74) |
| Bad/very bad | 8(42.1) | 1.92 (1.12-3.31) | 9(47.4) | 5.42 (2.06-14.30) | 18(94.7) | 16.06 (2.11-22.20) |
| Self-reported chronic diseases | | | | | | |
| No | 5(15.2) | 1.0 | 4(12.1) | 1.0 | 10(30.3) | 1.0 |
| Yes | 70(19.7) | 1.37(0.51-3.69) | 64(18.1) | 1.60(0.54-4.71) | 240(67.6) | 4.80(2.21-10.41) |
| Absence due to illness | | | | | | |
| No | 31(12.4) | 1.0 | 35(14.1) | 1.0 | 146(58.6) | 1.0 |
| Yes | 44(31.7) | 3.26 (1.94-5.47) | 33(23.7) | 1.89 (1.11-3.21) | 104(74.8) | 2.09 (1.32-3.31) |

Note: The values of n change according to the variable analyzed, due to the lack of information as a result of not completing the entire questionnaire.
*CI95% - Confidence interval of 95%.

a lower chance of developing physical disorders (OR=0.48 [0.24-0.98]), while those with two or more jobs showed a higher risk of developing this type of disorder (OR=1.72 [1.13-2.63]).

Technicians or nursing auxiliaries professionals showed a lower chance of medium or high risk for social disorders than nurses (OR=0.49 [0.29-0.86]). Those who had worked longer in nursing (more than 26 years) had a lower chance of medium or high risk for social disorders (OR=0.56 [0.32-0.96]) when compared to those who had worked for 25 years or less.

The variables related to individuals' health were most associated with the three factors of the WRDS scale. Those who rated their health as bad/very bad were more likely to have medium or high risk for psychological disorders (OR=1.92 [1.12-3.31]), compared to those who rated it as good or very good, for social disorders (OR=5.42 [2.06-14.30]) and physical disorders (OR=16.06 [2.11-22.20]).

The professionals who reported chronic diseases were more likely to have a medium or high risk for physical disorders (OR=4.80 [2.21-10.41]). Staying away from work due to a health problem was associated with a higher chance of experiencing all three types of disorders, especially the psychological ones (OR=3.26 [1.94-5.47]).

## Discussion

The work-related social and psychological disorders of nursing professionals, who worked in outpatient services, were rated as low by most participants in this study. Nevertheless, they were classified as medium and high risk by 17.5% and 19.3% of the respondents, respectively, which indicates the importance of these risks in the population studied, focusing on the items that received the worst evaluation.

Some items were evaluated with the highest mean scores in the psychological risk factor, and therefore were at higher potential risk, such as sadness, bad mood, and the desire to give up everything. These feelings have implications on the health of these professionals, and on the care they provide, which can be associated with material and relational conditions of the work environment.

Feelings of sadness, irritation, stress, and disillusionment among the nursing team were related to poor working conditions, such as lack of structure and of material and human resources.[13] Corroborating the analysis that these are feelings that emerge from unfavorable nursing work environments, they can result in physical or psychological disorders. A study found that professionals who reported feeling bad-humored, fatigued, and overloaded at the end of the workday had an increased chance of experiencing lower back pain,[14] suggesting an interrelationship between psychological and physical disorders, and the impact on the individual's health.

The feeling reported by respondents as a desire to give up on everything, may be related to the intention of leaving the nursing profession, which has numerous intervening factors directly correlated to the workplace organization and to the professional's health situation, as reported in a study conducted with nursing staff in France.[15] Lack of resources, poor socio-professional relationships, lack of job security, aggressions, and psychological suffering were identified as factors associated with the intention to leave the profession.[15]

The most poorly rated items in the social disorders - that is, those with the highest mean scores - were those related to the desire to be alone, impatience with people in general, and conflict in family relationships. Conflict in family relationships is an issue that deserves to be highlighted. Research indicated that dissatisfaction with the balance between work and family life can result in psychological distress, and increase the risk of depression.[16]

Unlike social and psychological, the physical disorders received a medium and high risk rating, requiring short and medium term actions, especially, among the items with the worst scores: leg, back, and body pain.

One research that focused on nursing professionals, in a hospital in southern Brazil, showed the occurrence of musculoskeletal symptoms in 85% of the professionals, mainly with the following types of pain: low back, shoulder, neck, and hip.[14] In support of these findings, a study with nursing staff working in surgical clinic units identified a critical

classification for physical disorders - especially leg and back pain - relating these results to the work process and organization in surgical clinics.[17] These data are similar to those identified in this study, which allows us to reflect on the similarities of nursing work in different contexts.

One study conducted with healthcare professionals in a tertiary hospital in China, found a high prevalence of musculoskeletal diseases, which were associated with workload, ergonomic factors, psychosocial factors, and temporary employment. Health professionals who experienced a high level of psychological fatigue were more likely to have musculoskeletal issues,[18] suggesting the interrelation between physical and psychosocial disorders. A southeastern Brazilian study, with nursing professionals, identified inadequate physical and psychosocial working environment, affecting their ability to work and their intention to leave the nursing profession.[19]

Regarding the association analyses, data show a higher chance of psychological and physical issues in women, with twice as high the chance of physical disorders. This data is worrisome, considering that nursing is a typically female profession.[20] Such aspects may be related to the social role of women and the overload resulting from multiple functions and conciliation with work activities. A study that addressed the penalty for maternity found that, although there have been changes in the integration of women into the labor market, they are still responsible for childcare and domestic activities.[21]

Regarding social disorders, nursing professionals with a higher level of education, as well as those who identified as nurses, presented a higher chance of psychosocial risk when compared to those with a medium level of education and who were nursing auxiliaries and technicians, respectively. This aspect may be related to the good relationships established among the nursing team in the studied context, especially for technical and auxiliary professionals, who have a greater interaction within the team itself, while nurses are responsible for establishing broader relationships, which include professionals from other categories.

A study conducted with health professionals reported that the perceived quality of interprofessional teamwork and greater ethical environment were associated with the quality of care. The same research also identified that, for nursing professionals, the chances of turnover intention are lower in the presence of higher scores for interprofessional teamwork, thus reiterating the importance of good relationships and their impact on the quality of care.[22]

As for work characteristics, there was a greater chance of social and psychological disorders among those with less time of service. This aspect shows that the time spent together in the work environment can strengthen friendship relationships, while having less time at work can cause social issues.

These data also demonstrate the importance of accumulated experience as a protective factor for social and psychological disorders, which is in agreement with a longitudinal study that monitored newly graduated nursing professionals, showing that their outcomes followed a trajectory of decreased levels of occupational stress during the first years of nursing practice.[23] A similar study with nurses from geriatric units in Belgium, which identified a higher probability of turnover among younger professionals than among the older ones in the team, confirmed these data. Furthermore, regardless of age, a significantly lower probability of turnover intention was identified among team members with more than 25 years of professional experience compared to those with less time.[22] The possibility of physical issues was higher among those with a permanent contract, and who reported having two or more jobs. This type of employment relationship, as a more stable one, allows the professional to remain in the institution for a longer period of time, compared to those who have temporary work contracts. On the other hand, this permanence may expose them to working conditions and organization that are not always favorable. From this perspective, a study with Polish nurses identified a decrease in labor capacity with increasing length of service in their jobs.[20] For those professionals who have two or more jobs, this exposure occurs even more intensely, due to the extension of their workload.

The regular, bad, or very bad health self-assessment indicator increased the chance of psycholog-

ical, social and physical disorders. Because of its reliability, national and international researchers have used the self-assessment as an indicator of the real health status of professionals in the several levels of health care. A recent study conducted with Brazilian professionals from the municipal health care network, showed that negative self-assessment was associated with sociodemographic and occupational factors.[24] In contrast, a Polish study showed that work overload is the factor that most negatively influences the self-assessment of mental health by nurses.[25] Another study[26] found that negative self-assessment of health in female nurses was associated with dissatisfaction with quality of life, morbidity indicators, and suspicion of common mental health issues.

The illness-related absence was also associated with impairment, increasing the chance of psychological, social, and physical disorders. The presence of chronic illness increased the chance of physical disorders, only. Data gathered in research conducted with nursing staff at a public hospital, in Southern Brazil, identified a significant association between physical and psychological illness and absence from work by these professionals, as well as health treatment and medication use.[27]

A study that compared nursing with other professions identified that nurses and auxiliaries had a higher mean number of absences due to illness, which in some periods was even twice as long as other occupations. In the analysis, the high demand for employment was associated with increased sick leave, as well as exposure to some harmful factors in the work environment. This indicates that improving the physical and psychosocial working environment of nurses, nursing auxiliaries and technicians, reduces illness-related absenteeism in these professions.[28]

In agreement with these findings, a recent systematic review using meta-analysis reported that exposure to psychosocial stressors at work was associated with increased risk of absence due to illness due to a diagnosed mental disorder, suggesting that reducing these psychosocial stressors at work would act favorably in reducing the risk of mental disorders among professionals, and their absence from work due to this diagnosis.[29]

This study has the potential to contribute to knowledge production in the nursing field, with a focus on workers' health, considering that it was conducted in a context rarely studied - the outpatient settings, and also because it deals with a complex theme that permeates the world of work: psychosocial risks.

The limitations of the study were the transversal design, which does not allow for inferring the temporality and directionality between the dependent and independent variables, only the associations between them. Another limitation is the "healthy worker effect", as only professionals who were active at the time of data collection participated in the investigation, and it was not possible to analyze who may have been absent because of the consequences of work-related psychosocial risks, may underestimate some findings.

The results presented allow us to estimate that the context of ambulatory nursing work represents a risk to the physical health of these professionals. However, one must also consider the profile of these workers, which, along with a long trajectory in nursing, suggests a turnover through the sectors of the hospital, ending in the outpatient clinic. From this perspective, these professionals may already be physically ill when they are allocated to the outpatient clinics to develop their work activities Thus, it demonstrates the need for interventions in the conditions and organization of nursing work, to reduce the psychosocial risks present in such contexts, focusing on the health of these professionals.

## Conclusion

This study analyzed the physical and psychosocial disorders resulting from the work of the nursing professional in the outpatient clinic of a university hospital and its interrelation with psychosocial risks. Most nursing professionals considered psychological and social disorders as low risk in the reality studied; in contrast, physical disorders received the worst evaluations, which confirm findings from national and international literature. Chronic diseases and absence due to illness should be observed,

since they were associated with the outcomes investigated, with emphasis also on physical disorders.

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## Collaborations

Santos KM, Tracera GMP, Nascimento FPB, Moreira JPL, Ruas CAS, Fonseca EC and Zeitoune RCG contributed to the study design, data and interpretation analysis, article writing, relevant critical review of the intellectual content, and approval of the final version to be published.

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