

Mental disorders common among nursing residents: an analysis based on the Self-Reporting Questionnaire

Transtornos mentais comuns em residentes de enfermagem: uma análise a partir do Self Reporting Questionnaire

Trastornos mentales comunes en residentes de enfermería: un análisis a partir del Self Reporting Questionnaire

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ABSTRACT

Objective: to detect suspected common mental disorders (CMDs) in nursing residents, and identify related predictive factors.

Method: this cross-sectional study examined a sample of 130 residents at a Rio de Janeiro city university hospital who answered the Self Reporting Questionnaire (SRQ-20) and sociodemographic questions, in 2018. The resulting data were analyzed using descriptive statistics. The study was approved by the research ethics committee. **Results:** the results revealed suspected CMDs in 52% of the sample, which was mainly young, single and female. Of the frequent predictors, 87.53% said they *felt nervous, tense and worried*, 60.7% *felt tired all the time*, and 57.7% *slept poorly*. **Conclusion:** the level of suspected CMDs in the sample was well above those found in studies of professionals of the health and related fields, and the predictors revealed psychological distress and risk of evolution to severe psychiatric conditions.

Descriptors: Nursing; mental health; worker's health; specialization.

RESUMO

Objetivo: verificar a suspeição de transtornos mentais comuns (TMC) em residentes de enfermagem e analisar os fatores preditores. **Método:** estudo transversal com uma amostra de 130 residentes de um hospital universitário, situado no município do Rio de Janeiro, que responderam ao *Self Reporting Questionnaire* (SRQ-20) e questões sociodemográficas, em 2018. Os dados foram analisados por meio da estatística descritiva. Estudo aprovado por Comitê de Ética em Pesquisa. **Resultados:** a amostra foi composta, em sua maioria, por jovens, solteiros e do sexo feminino, cuja suspeição de transtornos mentais comuns atingiu 52%. Dos fatores preditores mais frequentes, 87,53% afirmaram *sentirem-se nervosos, tensos e preocupados*, 60,7%, *cansados o tempo todo* e 57,7% *dormem mal*. **Conclusão:** a suspeição de TMC na amostra encontra-se bem acima de estudos realizados com profissionais da saúde e áreas afins, cujos fatores preditores evidenciam sofrimento psíquico e risco de evolução para quadros psiquiátricos severos.

Descritores: Enfermagem; saúde mental; saúde do trabalhador; especialização.

RESUMEN

Objetivo: verificar la sospecha de trastornos mentales comunes (TMC) en residentes de enfermería y analizar los factores predictores. **Método:** estudio transversal con una muestra de 130 residentes de un hospital universitario, situado en el municipio de Río de Janeiro, que contestaron al *Self Reporting Questionnaire* (SRQ-20) y cuestiones sociodemográficas, en 2018. Los datos fueron analizados por medio de la estadística descriptiva. El estudio fue aprobado por el Comité de Ética en Investigación. **Resultados:** la muestra estaba compuesta, en su mayoría, por jóvenes, solteros y del sexo femenino, siendo que del 52% se sospechaba trastornos mentales comunes. En cuanto a los factores predictores más frecuentes, un 87,53% afirmó *sentirse nervioso, tenso y preocupado*, el 60,7% *sentirse cansado todo el tiempo* y el 57,7% *dormir mal*. **Conclusión:** la sospecha de TMC en la muestra está muy por encima de los estudios realizados junto a profesionales de la salud y áreas relacionadas cuyos predictores evidencian sufrimiento psicológico y riesgo de evolución hacia cuadros psiquiátricos severos

Descritores: Enfermería; salud mental; salud del trabajador; especialización.

INTRODUCTION

For the World Health Organization (WHO) there is a significant number of workers with common mental disorders (CMDs) in the services area, including health professionals. This is due to changes in work processes, to decreasing employment numbers and to the use of new technologies that have substantially altered production systems due to the demand for speed, work intensification and polyvalence¹. In the health area, nursing represents the second largest workforce, whose professionals mostly act in curative care, especially in the hospital sector. In addition to living along with human suffering day and night, these professionals face problems such as double working hours, low wages, outsourcing with loss of job stability, devaluation and inadequate working conditions; together, these factors cause damage to the physical and mental health of the category².

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Research with nursing workers at a university hospital showed that these professionals have a high level of illness and sick leave for musculoskeletal diseases, followed by mental disorders, being imperative to intensify along with them protective measures to promote mental health and to improve working conditions³. Among occupational diseases, mental disorders are unknown and underestimated by employers and workers, which characterizes a significant difficulty in their effective confrontation. There is a need for greater visibility of these disorders in order to properly investigate and prevent them, focusing on the worker's mental health, which has been daily destabilized in the contemporary world of work⁴.

With regard to nursing residents, especially those who work in a hospital environment, as they are part – temporarily or not – of the workers contingent, they also suffer from the reflexes of the limitations imposed by the neoliberal model and the flexibility of labor relations. Thus, the health and the performance of the residents in the practice fields are affected due to the absence of preceptors and to the precarious working conditions. It is a group of young workers, recently graduated, with limited or no familiarity with the work process, whose psychological distress may be intensified due to the lack of autonomy and the low control over the work process⁵.

In order to assist the study on CMD in nursing residents, a state of the art survey was conducted in the Virtual Health Library (*Biblioteca Virtual de Saúde*, BVS), in an integrated manner with the Nursing Database (*Base de Dados de Enfermagem*, BDENF), the Latin American and Caribbean Literature in Health Sciences (*Literatura Latino-Americana e do Caribe em Ciências da Saúde*, LILACS), the *Medical Literature Analysis and Retrieval System Online* (MEDLINE) and the *Cumulative Index to Nursing and Allied Health Literature* (CINAHL). The selected articles were published primarily in the country, and their time frame covered the period from 2014 to 2018. It was found that, despite the production of knowledge about CMD in nursing and other health areas, there is a lack of studies with nursing residents.

From the exposed, the following assumption was made: there is a suspicion of CMDs in nursing residents as they are mostly female, young, inexperienced and have not developed adaptive mechanisms in view of the training requirements. In order to contribute to the discussion and reflection on the importance of minimizing psychological distress in these workers, this study aimed to: verify the suspicion of common mental disorders in hospital nursing residents and analyze the most frequent predictor factors in the group.

LITERATURE REVIEW

CMDs or minor psychiatric disorders (MPDs) are pathologies of intense psychological distress with important repercussions for the individual's health and impairments in diverse aspects of life in terms of performance of roles involving work, studies and other daily activities. The expression CMD was coined by Goldeber and Huxley (1990); its concept was developed in the 1970s through research studies on mental illness in primary health care and is characterized by non-psychotic symptomatology through complaints of anxiety, irritability, somatization, decreased vital energy and depressive mood¹.

Since the 1970s, concerned with the increase in the number of individuals with severe mental disorders, especially in low-income communities living in socially vulnerable situations, the WHO started a screening program for CMDs in primary care through the *Self Report Questionnaire* (SRQ-20). The purpose of the screening was to identify individuals in psychological distress, in order to offer them some kind of mental health care, aiming to minimize the evolution to severe psychiatric conditions and the indiscriminate use of diazepam⁶.

Although CMDs are not a specific clinical entity expressed at the collective level, they result from genetic, behavioral and environmental determinants associated with factors such as gender, age, marital status, living and working conditions. International studies show a prevalence of CMDs between 24.6% and 45.3% in the general population; in samples from Brazilian municipalities the rates vary from 17 to 35%⁷.

A recent integrative review of the national and international literature on mental disorders in nursing workers in a 10-year time frame showed that the production of knowledge in the research period covered topics such as stress, *burnout* and depression. Despite the increase in the number of publications on aspects related to the mental health of nursing workers since 2009, there was no reference to the CMDs⁸ in the 31 articles selected and analyzed.

METHODOLOGY

A cross-sectional study with a quantitative approach was conducted in a university hospital in Rio de Janeiro, with 130 nursing residents, after signing the Free Informed Consent Form. The objectives of the study and the importance of the residents' participation were clarified, anonymity was guaranteed and it was informed that participants could

withdraw their consent at any phase of the research. The Nursing Residency course of the institution which served as the study field is structured according to Resolution No. 259/2001 of the Nursing Federal Council (*Conselho Federal de Enfermagem*, COFEN), which regulates residency programs nationwide as a *lato sensu* post-graduation modality⁹.

For convenience or spontaneous demand, the sample was composed of all residents, 66 from the first year and 64 from the second. The following were adopted as inclusion criteria: residents who were effectively enrolled and performing the practical and theoretical activities provided in the program. The ethical standards in research involving human beings were met; the project was approved by the Research Ethics Committee of the Pedro Ernesto University Hospital (*Comitê de Ética em Pesquisa, CEP/Hospital Universitário Pedro Ernesto, HUPE* - Opinion number 1.687.061).

The study included the following dependent variables: gender; age group, marital status, if they have children, family income, sleeping pattern, occurrence of migratory processes, regular use of medications, disease diagnosis and the independent variables according to the *Self Reporting Questionnaire* (SRQ-20). The suspicion of CMDs was verified through the *Self Reporting Questionnaire* (SRQ-20) validated for the Brazilian context¹⁰ in 1986, consisting of 20 items with alternatives of *yes* or *no* dichotomous answers. The cut-off point used in the suspicion of CMDs was 8 positive responses for females and 6 for males^{1,11}.

The data were stored in the *Microsoft Excel for Windows* software, and submitted to statistical analysis, with calculations of the absolute and percentage frequencies of the dependent variables. Regarding the predictors of CMDs in the sample, work also concentrated on the absolute and relative frequencies of the responses, highlighting the affirmatives for each factor. The results were discussed in the light of the studies on CMDs in nursing and in health residents, and they were correlated with the worker's health, since no article on the topic in nursing residents was found.

RESULTS AND DISCUSSION

The sociodemographic and clinical characteristics of the sample are described below.

Characteristics of the study participants

From a population of 130 residents working at the university hospital at the time data were collected, all first-year (50.7%) and second-year (49.3%) residents responded the SRQ-20. They are female (92.3%), aged between 20 and 25 years old (40.7%), single 86 (66.1%), have children (20.7%), have a family income between 3 and 6 minimum wages (70.7%), sleep approximately 4 to 6 hours (56.9%), have migrated (19.2%), regularly use medications (50%), and have a medical diagnosis (39.2%), according to Table 1.

Suspicion of CMDs in the sample

According to the established cut-off points, the overall suspicion of CMDs in the sample was 52.1% for males and females, 21.4% in first year (R1) and 30.7% in second year residents (R2). Although the sociodemographic profiles of R1s and R2s do not have statistically significant differences, it is inferred that even if R2s have more experience in relation to the training process, they are more exposed to occupational stressors because they work in specialized sectors, taking care of patients with greater complexity and at risk of complications and death¹².

There were more affirmative responses to the SRQ-20 in residents who worked in closed sectors with high technological density, among them, the operating room, nephrology and intensive care. These data reinforce the need for special attention to the health of those specialized in these fields, since they work in unhealthy environments that present health risks due to numerous psychological and motor demands.¹³ A cross-sectional study which evaluated 178 medicine and multi-professional residents in order to detect CMDs and verified a global prevalence of 51.1%, a high magnitude when compared to the general population. The prevalence of CMDs in this category was 39% higher than in non-medicine residents, which can be partly explained by the particularities of the activities inherent to the medical category and by the number of women in the profession¹⁴.

The suspicion of CMDs in a sample of undergraduate Nursing and Psychology students was 35.7% and, among the most frequent complaints, *tension, nervousness, having feelings of sadness, unpleasant feelings in the stomach and tiredness all the time* were expressed. These data highlight the need for also investigating the isolated complaints of the CMDs, as they are potentially disabling¹⁵.

Studies on CMDs have been highlighting the importance of social networking in preventing this kind of disorder. The family has a relevant role with the residents in the transition from the university setting to the training/work environment, due to the student's overload in terms of commitments, extensive workload and other academic activities.

In this sense, it was identified in the study that 19.2% of the residents had moved from their families and migrated from other states and/or cities in order to attend the residency. The geographical distribution of migratory movements of the nursing staff indicates the concentration of these professionals in the capitals and areas of greater economic development. This process can generate some imbalance, as high levels of migration can cause increased unemployment, conflicts among migrants and natives, and a reduced workforce in migration areas.¹⁶

TABLE 1: Sociodemographic and clinical characteristics in the sample. Rio de Janeiro, Brazil, 2018.

Variables	R1		R2		Total (N=130)	
	f	%	f	%	f	%
Gender						
Female	62	47.7	58	44.6	120	92.3
Male	4	3.07	6	4.6	-	7.7
Age group						
20 to 25 years old	23	17.7	30	23.07	53	40.7
26 to 33 years old	28	21.5	25	19.2	53	40.7
Over 33 years old	15	11.5	9	6.9	24	18.6
Marital status						
Single	44	33.9	42	32.3	86	66.1
Married/Stable union	20	15.4	20	15.4	40	30.3
Divorced	2	1.5	2	1.5	4	3.6
Have children						
Yes	16	12.3	11	8.4	27	20.7
No	50	38.5	53	40.7	103	79.3
Family income						
3 to 6 minimum wages	47	36.1	45	34.6	92	70.7
7 to 10 minimum wages	11	8.4	16	12.3	27	20.7
> 10 minimum wages	7	5.4	03	2.3	10	7.7
Did not answer	1	0.8	-	-	1	0.9
Daily sleep hours						
Less than 4h	3	2.3	8	6.15	11	8.5
4h to 5h59	36	27.7	38	29.2	74	56.9
6h to 8h	25	19.2	18	13.8	43	33.0
More than 8h	1	0.8	-	-	1	0.8
Not answered	1	0.8	-	-	1	0.8
Was there a migratory process?						
Yes	10	7.7	15	11.5	25	19.2
No	55	42.3	48	36.9	103	79.2
Not answered	1	0.8	1	0.8	2	1.6
Regular use of medications						
Yes	27	20.8	38	29.2	65	50
No	39	60.0	26	40.0	65	50
Has a medical diagnosis?						
Yes	21	16.1	30	23.0	51	39.2
No	45	34.6	34	26.1	79	60.8

Analysis of predictors of CMDs in the sample

The distribution of the sample responses to the SQR-20 questions is presented in Table 2.

In the statistical analysis of the prevalent factors of CMD suspicion, the following affirmative answers were verified: Factor I - Higher frequency of answers to the questions about *feeling nervous, tense or worried* and *feeling sad lately*. Factor II - *Feeling tired all the time, feeling tired easily* and *having difficulties in making decisions*. Factor III - *Sleeping poorly, having frequent headaches, feeling discomfort in the stomach*. Factor IV - *Having lost interest on things, feeling incapable of developing a useful role in life* and *feeling useless in life*. It was noticeable that four participants have said they *had thoughts of ending their lives*.

It was identified that the most frequent complaint in the sample was *feeling nervous, tense, worried* in 87.6% of the participants (Table 2). These results are similar to those found in a sample of 335 nursing workers who worked in a

large hospital. Depressive and anxious mood was the most prevalent complaint, followed by somatic symptoms (sleeping poorly and frequent headaches), with factor IV (depressive thoughts) being the least prevalent. These data should be problematized and their consequences discussed in the daily work process of the professionals, since headache and sleep deprivation may interfere in the attention required in the care process and may contribute to the occurrence of incidents that compromise the patient's and the worker's safety¹⁷.

TABLE 2: Answers to the questions of the *Self Reporting Questionnaire*. Rio de Janeiro, Brazil, 2018. (N=130)

SRQ's factors-20	Yes		No	
	f	%	f	%
Factor I - Depressive and anxious mood				
Do you feel nervous, tense or worried?	114	87.6	16	12.4
Do you get scared easily?	40	30.7	90	69.3
Have you been feeling sad lately?	53	40.7	77	59.3
Do you cry more than usual?	34	26.1	96	73.9
Factor II - Vital energy decrease				
Do you feel tired easily?	72	55.3	58	44.7
Do you have difficulties making decisions?	63	48.4	67	51.6
Do you have difficulties feeling pleasure in your activities?	54	41.5	76	58.5
Do you have difficulties thinking clearly?	50	38.5	80	61.5
Does your work cause you suffering?	34	26.1	96	73.9
Do you feel tired all the time?	79	60.7	51	39.3
Factor III - Somatic symptoms				
Do you feel discomfort in your stomach?	44	33.8	86	68.2
Do you have lack of appetite?	11	8.4	119	91.6
Do you have frequent headaches?	57	43.8	73	56.2
Do you sleep poorly?	75	57.7	55	42.3
Do you have indigestion?	36	27.7	94	72.3
Do your hands tremble?	22	16.9	108	83.1
Factor IV - Depressive feelings				
Have you been losing interest in things?	41	31.8	89	68.2
Are you incapable of developing a useful role in your life?	15	17.6	115	82.4
Do you feel useless in your life?	9	6.9	121	93.1
Have you been thinking about ending your life?	4	3.1	126	96.9

A study conducted with 59 nurses from the Family Health Strategy showed that the most frequent complaint in the sample was anxiety accompanied by accelerated thinking, delay in disconnecting from the service, tension, agitation, palpitations and trembling. Such symptoms were associated with lack of structure and with overwork, frustration for not doing all the requested tasks and feeling that the nurse is the only responsible for the team¹⁸.

Regarding the decrease in vital energy (Factor II), a higher frequency of affirmative responses was identified to *feeling tired all the time, getting tired easily and having difficulties in making decisions*. These data are in agreement with a study with nursing workers of a university hospital that verified the occurrence of CMDs and an association with lower ability to work, the perception of health status as poor/worse (general and current) and being dissatisfied with sleep, especially among female workers¹⁹. Other factors should be considered for higher prevalence levels of the CMDs, among them not having time for leisure, presenting four or more diagnosed health problems and dissatisfaction with sleep²⁰.

Unhealthy work environments can generate biopsychosocial disorders and exacerbate tiredness, fatigue and psychological distress. In addition, there is the rigid hierarchical structure, long working hours, fast pace of production due to the overload of tasks, fragmented division of labor, automation by repetitive actions, scarcity of human and material resources and the complexities of actions performed, among others²¹. Overwork, especially in professionals working in shifts, implies restriction of hours for activities of major importance in quality of life such as diet, physical activity, health care, leisure, rest, sleep and greater participation in family activities; family being considered an important social support network²².

Regarding Factor III (somatization), there was a higher frequency of affirmative responses to *sleeping poorly, having headaches frequently and stomach discomfort*. It should be noted that the poor sleeping pattern was the third most frequent complaint in the sample and reported by 75 (57.7%) residents, according to Table 2. These data are in line with the sociodemographic characteristics listed in Table 1, where 56.9% indicated sleeping approximately 4 to 6 hours a day. Nursing workers who work in shifts, especially at night, have a higher prevalence of somatic symptoms, namely: changes in sleep quality, digestive disorders and fatigue symptoms²³, among others.

Regarding the complaint on *frequent headaches*, a study with nursing workers from three general hospitals found that of the 65 reports of diagnosed nervous system diseases, 39 were headache and 21 migraine. In addition to headache causing health problems to the individual, the financial charges should also be considered, since this condition is responsible for 20% of the absenteeism in health institutions in Brazil²⁴.

With regard to factor IV (depressive thoughts), 31.8% of the residents said *they had lost interest in things*, 17.6% indicated *they were unable to develop a useful role in life*, 6.9% reported *feeling useless in their lives* and 3.1% mentioned *having thought to end their lives*, (Table 2). These results are considerably worrying, especially when analyzing the profile of the sample, which is composed mostly of young, female, single individuals and whose characteristic of the profession is living along with the pain, death and suffering of people.

A study on depression in nursing workers showed the association with some sociodemographic characteristics (being single, young adult, higher schooling level and low family income); aspects related to work organization (night work, overload, interpersonal relationship conflicts, low autonomy and insecurity in the development of activities) and family conflicts. Depression alone is considered a risk for suicide, and is more likely in those individuals who already have depressive reactions and high levels of emotional exhaustion, high depersonalization and low professional achievement. In the genesis of depression, some external factors to the worker must also be considered, such as work overload, low income, excessive working hours, deterioration and concern with the development of work²⁵.

Therefore, workers should recognize the risk factors for mental illness in order to intervene in the perspective of health promotion, added to the institutions' investments in permanent education devices and periodic health assessments or examinations, maintenance of healthy work environments and support for actions to redirect behaviors and habits that favor well-being and quality of life¹⁹.

CONCLUSION

The high percentage of suspicion of CMDs in nursing residents, whose sample was mostly young, single and female individuals, is highly above the prevalence identified in other studies with health professionals, and other variables should be considered like the few hours of sleep, the use of medications and distancing from the training environment to treat health problems.

Most participants have reported *feeling nervous, tense and worried, tired all the time and sleeping poorly*. Such results should take into account some methodological limitations: the condition of being a cross-sectional research with no definition or establishment of the causal link; and the small sample restricted to a single institution, which hinders the generalization of the findings. These limitations may encourage further studies of this nature, in a representative sample of the universe, in order to estimate the prevalence of suspected CMDs, the association with sociodemographic and occupational variables, and their influence on mental health.

These results serve as a warning for teachers and tutors of teaching institutions with residency programs, due to the risk of developing severe psychological disorders, with negative repercussions for the training, the care process and the resident's quality of life. Preventive and therapeutic actions are needed to minimize psychological distress, considering that the health problems reported by the residents may negatively interfere with the provision of safe care and with interpersonal relations.

REFERENCES

1. Who MP. A user's guide to the self reporting questionnaire (SRQ). Geneva (SUI): Division of Mental Health Organization. 1994. [cited 2018 Jan 7]. Available from: http://apps.who.int/iris/bitstream/10665/61113/1/WHO_MNH_PSF_94.8.pdf
2. Machado MH, Oliveira E, Lemos W, Lacerda WF, Filho Wilson A, Wermelinger M et al. Mercado de trabalho da enfermagem: aspectos gerais. *Enferm. Foco* [internet] 2016 [cited 2018 Mar] 7(esp):35-62. Available from: <http://biblioteca.cofen.gov.br/wp-content/uploads/2016/07/Mercado-de-trabalho-da-enfermagem-aspectos-gerais.pdf>
3. Baptista ATP, Souza NVDO, Gallasch CH, Varella TCMML, Noronha IR, Noronha IR. Illness among nursing workers in the hospital contexto. *Rev. enferm. UERJ*. 2018 [cited 2019 Aug 14]; 26:e31170. DOI: <https://doi.org/10.12957/reuerj.2018.31170>

4. Rocha SH, Bussinger ECA. The invisibility of occupational mental diseases in the contemporary labor world. *Rev. pensar.* 2016 [cited 2018 Aug 12]; 21(3):1104-22 DOI: <http://dx.doi.org/10.5020/2317-2150.2016.v21n3p1104>
5. Oliveira EB, Carvalho RAC, Teixeira E, Zeitoun RCG, Saboia VM, Gallasch CH. Factors involved in the training of resident nurses: view of alumni from a residency program. *Rev. min. enferm.* 2017 [cited 2018 Nov 1];21(e-1064): 1-7. DOI: <http://dx.doi.org/10.5935/1415-2762.20170074>
6. Carvalho DB, Araujo TM, Bernardes KO. Common mental disorders in primary health care workers. *Rev. bras. saude. ocup.* 2016 [cited 2018 May 08]; 41e27. DOI: <http://dx.doi.org/10.1590/2317-6369000115915>
7. Fernandes MA, Soares LMD, Silva JS. Work-related mental disorders among nursing professionals: a brazilian integrative review. *rev. brasil. de med. do trab.* 2018 [cited 2018 Feb 14]; 27(3):38-5. DOI: <https://doi.org/10.5327/Z1679443520180228>.
8. Martins JT, Ribeiro RP, Remijo KP, Ribeiro PHV. Mental disorders linked to the nursing work. *Rev. enferm. UFPE on line.* 2014 [cited 2018 Feb 21]; 8(6):1746-56. Available from: DOI: <https://periodicos.ufpe.br/revistas/revistaenfermagem/article/view/13650>
9. Conselho Federal de Enfermagem. Resolução COFEN nº 259/2001 [site da Internet]. Estabelece padrões mínimos para registro de enfermeiro especialista, na modalidade de residência em enfermagem. Brasília (DF): COFEN, 2001. [cited 2018 Feb 20] Available from: <http://www.portalcofen.com.br/legislacao/resolucoes>
10. Mari JJ, Williams P. A validity study of a psychiatric screening questionnaire (SRQ-20) in primary care in the city of São Paulo. *Jornal bras. psiq.* 1986 [cited 2018 Mar 07]; 148:23-6. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/3955316>
11. Gonçalves DM, Stein AT, Kapczinski F. Performance of the Self-Reporting Questionnaire as a psychiatric screening questionnaire: a comparative study with Structured Clinical Interview for DSM-IV-TR. *Cad. Saúde Pública.* 2008 [cited 2018 Jan 21]; 24(2):380-90. DOI: <http://dx.doi.org/10.1590/S0102-311X2008000200017>
12. Lima LSV, Oliveira EB, Mauro MYC, Lisboa MTL, Assad LG, Carvalho RAC. Psychosocial risks in specialized units: implications for the training and health of nurse residents. *Rev. enferm. UERJ.* 2015 [cited 2018 Sep 17]; 23(2): 229-34. DOI: <http://doi.org/10.12957/reuerj.2015.16507>
13. Perez Junior EF, Oliveira EB. Technological innovations in intensive care unit: effects on nursing staff health. *Rev. enferm. atual.* 2016 [cited 2018 Oct 17]; 77:9-13. Available from: <https://www.revistaenfermagematual.com.br/index.php/revista/article/view/368/250>
14. Carvalho CN, Melo-Filho DA, Carvalho JAG, Amorim ACG. Prevalence and factors associated with common mental disorders in medical multiprofessional health residents. *Jornal bras. psiq.* 2013 [cited 2018 Jan 20]; 62(1):38-5. DOI: <http://dx.doi.org/10.1590/S0047-20852013000100006>.
15. Ansolin AGA, Rocha DLB, Santos RP, Pozzo VCD. Prevalence of common mental disorder between psychology and nursing students. *Arq. Ciênc. Saúde.* 2015 [cited 2018 Oct 21]; 22(1) 42-5. Available from: <http://www.cienciasdasaude.famerp.br/index.php/racs/article/view/83/103>
16. Silva KL, Sena RR, Tavares TS, Belga SMMF, Maas LW. Migrant nurses in Brazil: demographic characteristics, migration flow and relationship with the training process. *Rev. latinoam. enferm. (Online).* 2016 [cited 2018 Oct 15]; 24:e2686. DOI: <http://dx.doi.org/10.1590/1518-8345.0390.2686>
17. Urbaneto JS, Magalhães MCC, Maciel VO, Sant'Anna VM, Gustavo AS, Figueiredo CEP, et al Work-related stress according to the demand-control model and minor psychic disorders in nursing workers. *Esc. Enferm. USP.* 2013 [cited 2018 Feb 08]; 47(3):1186-93. DOI: <https://dx.doi.org/10.1590/S0080-623420130000500024>
18. Fernandes DM, Marcolan JF. Work and depression symptoms in family health strategy nurses. *SMAD. Revista eletrônica saúde mental álcool e drogas.* 2017 [cited 2018 Jul 24];13(1):37-4. DOI: <https://dx.doi.org/10.11606/issn.1806-6976.v13i1p37-44>
19. Magnago TSBS, Prochnow A, Urbaneto JS, Grecco PBT, Beltrame M, Mancio E, Luz. Relationship between work ability in nursing and minor psychological disorders. *Texto & contex enferm.* 2015 [cited 2018 Mar 12]; 24(2): 362-70. DOI: <http://dx.doi.org/10.1590/0104-07072015002580013>
20. Sousa KHJF, Lopes DP, Tracera GMP, Abreu AMM, Portela LF, Zeitoun RCG. Common mental disorders among nursing workers in a psychiatric hospital. *Acta Paul. Enferm. (Online).* 2019[cited 2019 Aug 14]; 32(1):1-10. DOI: <http://dx.doi.org/10.1590/1982-0194201900002>
21. Oliveira EB, Souza NVM, Chagas SCS, Lima LSV, Correa RA. Effort and reward in the work of nurse resident in specialized units. *Rev. enferm. UERJ.* 2013 [cited 2018 Oct 09]; 21(2): 173-8. Available from: <http://www.facenf.uerj.br/v21n2/v21n2a06.pdf>
22. Alvim CCE, Souza MMT, Gama LN, Passos JP. Relationship between the work process and mental illness nursing staff. *Revista Fluminense de Extensão Universitária.* 2017 [cited 2018 Sep 12]; 07 (1): 12-16. Available from: <http://editora.universidadedevasouras.edu.br/index.php/RFEU/article/view/918/717>
23. Souza APC, Passos JP. The disturbance of sleep disorders in nursing professionals. *Revista Iberoamericana de Saúde e Envelhecimento.* 2015 [cited 2018 Nov 30]; 1(2): 178-90. Available from: http://www.revistas.uevora.pt/index.php/saude_envelhecimento/article/view/61/86
24. Guimarães ALO, Felli VEA. Notification of health problems among nursing workers in university hospitals. *Rev. bras. enferm. (Online).* 2016 [cited 2018 Dec 21]; 69(3):507-14. DOI: <http://dx.doi.org/10.1590/0034-7167.2016690313j>
25. Silva DSD, Tavares NVS, Alexandre ARG, Freitas DA, Brêda MZ, Albuquerque MCS et al. Depression and risk of suicide in professional nursing: integrative review. *Esc. Enferm. USP.* 2015 [cited 2018 Apr 6]; 49(6):1027-36. DOI: <http://dx.doi.org/10.1590/S0080-623420150000600020>