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Workload and psychosocial risks among nurses in mental health and psychiatry in Chile

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Abstract

The present study aims to explore and compare psychosocial risks and work overload among nursing professionals in the field mental health and psychiatry in Chile. Quantitative, observational and cross-sectional research was designed for this purpose. Nurses from community, ambulatory, hospital and emergency units in mental health and psychiatry in Chile were recruited between January and May 2022. Instruments of psychosocial variables and an occupational psychosocial risk scale based on the Copenhagen Psychosocial Questionnaire were used. Descriptive and correlational statistics were used, as well as independent samples *t*-tests, Factorial Anova and post-hoc analysis with Bonferroni correction. As a result, 174 nursing professionals were recruited, 79.3% female, average age 33.9 years. One-third belonged to the Metropolitan Region of Chile. The highest psychosocial risk was obtained by nurses over 30 years of age, from the Metropolitan Region, with more than 16 patients under their care, at the hospital or psychiatric emergency level. Significant differences were observed in work overload and psychosocial risks according to personal and work characteristics of the professionals, as well as of the users and health services. The levels of psychosocial risk and work overload of mental health and psychiatric nurses were reported, as well as the comparison of these according to personal, sociodemographic, and work characteristics. In order to improve the quality of work life of these professionals and the quality of these services, it is essential to develop interventions focused on the dimensions addressed, as well as to define norms and policies that ensure a workload in accordance with international standards.

KEYWORDS

health services, mental health, nursing professionals, psychosocial impact, psychosocial risks, workload

INTRODUCTION

Mental health problems are affecting an increasing number of individuals and families worldwide. According to data from the World Health Organisation [WHO], depression affects over 264 million people, with a prevalence of 2–3 times higher in women, resulting in various consequences for their lives, with suicide being the most serious (WHO, 2019).

In Chile, the lifetime prevalence of mental disorders is 36%, with agoraphobia (11.1%), major depression (9.0%), dysthymia (8.0%) and alcohol dependence (6.4%) being among the most frequent (Ministerio de Salud de Chile [MINSAL], 2017). According to the latest study of Disease Burden and Attributable Burden in Chile, 23.2% of the Years of Life Lost due to Disability [AVISA] are attributed to neuro-psychiatric conditions (MINSAL, 2008), affecting mostly people with lower educational level (Vicente et al., 2002), young people (Vicente et al., 2010), women (Vitriol et al., 2010) and indigenous peoples (Vicente et al., 2005). Suffering from a mental disorder leads to various consequences, including stigmatisation, discrimination and frequent violations of human, economic, social and cultural rights, resulting in an undermining of the right to health and recovery (WHO, 2013). The WHO emphasises that the efforts made are not sufficient. As a result, there is still a huge gap between the treatment

needs and the benefits provided for their recovery, including those provided by nursing professionals. This gap is described as close to 85% in low- and middle-income countries, and as high as 50% in high-income countries (WHO, 2013), a statistic that in Chile is in line with the low budget allocated to Mental Health [MH] (MINSAL, 2017), and the poor quality of care received by treated cases (WHO, 2014).

According to the Mental Health Thematic Network Management Model (MINSAL, 2018), MH and psychiatric nursing professionals are qualified to provide care across various levels of the Chilean Health Model. At the ambulatory/community level, their responsibilities encompass a range of functions, including vital signs assessment, dietary planning, weight monitoring, hygiene maintenance and examinations. Additionally, they are engaged in home visits as part of the psychosocial team, and they provide mental health consultations in both primary health care and secondary settings like health reference centres, diagnosis and treatment centres or family mental health community centres. In a 24-bed intensive care psychiatric hospitalisation unit (tertiary level) and emergency units, the daily nurse, working 44 h per week, can manage up to four admissions weekly. Their tasks include monitoring pharmacological treatment, comprehensive health care and initiate treatment of persons admitted to the unit for the compensation of their acute condition, among other functions.

Considering the national context, following the implementation of the psychiatric reform in Europe and the subsequent installation of the Family and Community Health Model (MINSAL, 2013) and the Mental Health Network (MINSAL, 2018), the units and services that provide care to people with MH and psychiatric problems have not been homogeneous, with significant gaps and inconsistencies in both the supply of services and their coherence with the proposed model (MINSAL, 2017). Regarding nursing professionals, the Mental Health Thematic Network has shown a significant increase between 2004 and 2012, reaching an increase of 63% in the span of 8 years. However, this increase has not been consistent across professions or regions. According to the same report (MINSAL, 2017), the lowest rates of professionals are those of MH nurses and occupational therapists, followed by psychiatrists. In addition, most professionals are concentrated in the capital, not only in absolute numbers but also in terms of rate per inhabitant.

BACKGROUND

In response to this disease burden, the professionalisation of psychiatric nursing in Chile began in 1928 (Quiroz & Rivas, 2019) due to the profession's deficient training in MH. Regarding the current work performed by MH and psychiatric nurses, a recent literature review (Chang et al., 2021) revealed that there are some factors that influence the intention to remain in the job, described as job satisfaction and work environment (Al-Hamdan et al., 2017).

Regarding the maintenance of a healthy work environment, the establishment of support networks positively improves the work environment, the quality of patient care and job satisfaction of nursing professionals (Farmakas et al., 2014). In contrast, a 2020 publication mentions that the factors influencing the intention to leave the profession include extended working hours, an authoritarian doctor-nurse relationship, feelings of burnout and the lack of support networks (Al-Hamdan et al., 2020). In terms of the type of work they engage in, a marked tendency towards job abandonment exists among mental health nurses due to prejudices, fear, harassment or mistreatment by psychiatric patients, consequently leading to high levels of burnout, job stress and, therefore, a decrease in the number of psychiatric nurses (Al-Hamdan et al., 2020; Baum & Kagan, 2015; Kagwe et al., 2019; Numminen et al., 2013).

The challenges within the work environment, characterised by the lack of personnel, emotional exhaustion, poor patient safety, long shifts, work demands and physical aggression by the patients, contribute to the lack of performance of nurses and an increase in burnout, leading to the intention to quit (Chang et al., 2021). On the other hand, it has been observed that the younger the age of the nursing professionals, the greater the probability of leaving the job, this can be linked to the low number of SM nurses in Chile, who are in the third-lowest position as health professionals (Al-Hamdan et al., 2020; Baum & Kagan, 2015; Kagwe et al., 2019; WHO, 2014). This underscores the significance of this research and the necessity to understand the workload and psychological risks experienced by mental health and psychiatric nurses in Chile. Job satisfaction is a crucial factor in improving the scarce services available in the country (Kouchaki et al., 2016).

The recently enacted Mental Health Law establishes that the State advocate for interdisciplinary care in MH, with nursing personnel appropriately trained and accredited by the competent health authority (MINSAL, 2021), in line with the identified population needs (MINSAL, 2018). In this sense, professionals who work in the different services and units report the existing differences in workload and patient assignment (Amiard et al., 2023), which in some cases are far from what is established in the regulation (MINSAL, 2018) and perpetuate the difference in resources between the public and private areas. For example, in a private clinic in the capital, there are 3 or 4 nurses for every 18–20 patients, as opposed to one nurse for every 35–40 patients in the public health sector.

Psychosocial risks in the workplace for mental health and psychiatric nurses are multifaceted, where the

evidence shows that the lack of social support and the absence of a supportive work environment, along with inadequate training and resources, may contribute to feelings of incompetence, frustration and increased stress, decrease job satisfaction and contribute to burnout and work overload in psychiatric and mental health nurses (Giménez-Espert et al., 2020; Rahmat et al., 2023).

In the same sense, the complex and demanding nature of psychiatric nursing, constant exposure to intense emotions, dealing with patients in crisis and managing challenging behaviours can lead to high job strain and emotional demands, which have been associated with increased burnout and lower job satisfaction, as well as a risk factor for mental health in nursing staff (Cranage & Foster, 2022; Delgado et al., 2022).

In addition, it has been observed that double-presence strain between work and family life can contribute to fatigue, negatively impact personal relationships in the workplace and contribute to nursing overload (Duchaine et al., 2020; García-Iglesias et al., 2021).

Despite this evidence, studies in this field are recent and limited, thus more contextual information is needed concerning psychosocial risks and the workload of mental health and psychiatric nurses.

The objective of this research is to know and compare psychosocial risks and work overload, according to different sociodemographic determinants and work characteristics of nursing professionals working in community/ambulatory and inpatient/urgent care units in mental health and psychiatry in Chile.

The research hypothesis is that there are statistically significant differences in the levels of psychosocial risks and work overload of professionals according to the different sociodemographic determinants and work characteristics.

METHODS

Participants

The sample is composed of 174 nursing professionals, 79.3% female, with an average age of 33.9 years (SD = 7.46). The 33.3% belongs to the capital of Chile. The sociodemographic characteristics of the participants are shown in Table 1.

TABLE 1 Sociodemographic characteristics of the participants.

Variable	*n*	%	*M*	SD	Range
Sex					
Female	138	79.3	0.79	0.41	0–1
Male	36	20.7			
Age	174		33.95	7.46	24–62
Geographic region					
RM	58	33.3	0.67	0.47	0–1
Others regions	116	66.7			

Note: $N = 174$.
Abbreviation: RM, metropolitan region.

Instruments

a. *Sociodemographic variables*

Gender, age and geographical location of employment in Chile were used in the analysis.

b. *Scale of Evaluation of Psychosocial Risks in the Workplace SUSESO/ISTAS-21*

This instrument is widely used to evaluate psychosocial risks and work overload that may affect workers' health. This was developed by a Chilean government agency and validated by Alvarado et al. (2012), which in turn is translated and validated by the Barcelona Trade Union Institute for Work, Environment and Health [ISTAS] of the Copenhagen Psychosocial Questionnaire [COPSOQ], developed by the Danish Institute for Occupational Health and Environment (Burr et al., 2019). The Chilean validation consists of 20 Likert-type items ranging from 0 to 4 points and evaluates 5 dimensions:

1. Psychological Demands: aims to identify if people are experiencing a high level of psychological strain and/or if they are facing very high emotional demands (e.g., "In general, do you consider that your work is emotionally draining?"),
2. Active Work and Skills Development: its focus is to determine whether people have the possibility of acquiring knowledge, learning and being autonomous in their work (e.g., "Does your job allow you to learn new things?"),
3. Social Support in the Company: mainly evaluates the quality of leadership that the person has and the level of support he/she has to carry out his/her tasks (e.g., "Among colleagues, do they help each other at work?"),
4. Compensation: aims to detect if people feel little recognition for their work and/or if their work is unstable (e.g., "Are you worried about being fired or not having your contract renewed?"),
5. Dual Presence: represents the simultaneous demands of the person's work and family environment (e.g., "When you are at work, do you think about domestic and family demands?").

A higher score in each dimension and total score indicates a higher psychosocial risk and work overload. It is important to highlight that the scores of the items of the dimension of social support in the company and of active work and skills development are inverted, and it should be interpreted inversely (lack of social support and lack

of active work and skills development, respectively). In the present study the scale presented an adequate internal consistency index ($\alpha = 0.77$).

c. *Variables and factors associated with work overload*

The variables used in the analyses were: the age group of the patients, years of work in the psychiatric health service, level of the healthcare network (secondary/tertiary) and the number of patients per shift.

The instruments and questionnaire used in the present study are available in Appendix A.

Procedure

Through convenience sampling (Ñaupas et al., 2018), nursing professionals working in community, outpatient, inpatient and emergency mental health and psychiatry units in Chile were invited to participate by sending an e-mail distributed by a government agency.

Participants met the following inclusion criteria: (a) be a nursing professional with a degree from a Chilean or foreign university; (b) be currently working in the area of MH and psychiatry, in the public or private sector; (c) carry out their professional work in the outpatient, inpatient community or emergency area; and (d) have the possibility of entering the Google electronic questionnaire with an e-mail account. Exclusion criteria were: (a) working in an area other than MH and psychiatry and (b) being a nursing student or intern.

The data were collected during the months of January to May 2022, through Google Forms, after signing the digital informed consent form (Rodríguez, 2004). The application of the instruments contemplated a total time of approximately 30 min. This study was approved by the scientific ethical committee of a Chilean university and was conducted in accordance with universal ethical principles (Emanuel, 2003; Universidad de Barcelona, 2003).

Data analysis

The present study is a cross-sectional observational study. To answer the research question, descriptive and correlational statistics were used to determine the levels of psychosocial risk and work overload of nursing professionals. On the other hand, independent samples *t*-tests and Factorial Anova and post-hoc analysis with Bonferroni correction were used to compare by groups. Comparison groups for variables of a numerical nature (e.g., age) were classified to generate groups with equivalent sample sizes. The descriptive results of the variables after categorization are available in Appendix B. Analyses were performed in SPSS v27.0 software (Armonk, 2020).

RESULTS

Descriptive and correlational statistics

The frequencies of the groups generated for the analyses are shown in Table 2. Specifically, most of the professionals were over 29 years of age (70.7%), came from different sectors of the capital of Chile (66.7%) and attended patients in the adult age group (83.3%). Most of the professionals worked in the tertiary care sector (71.8%) and attended between 6 to 15 patients per shift (43.7%), while 54% had been working in the service for less than 5 years and had a high average satisfaction rating with the number of patients assigned (42%).

In relation to psychosocial risk and work overload (Table 3), the analysis revealed that health professionals obtained an average total score of 1.95 (SD = 0.44), on a scale of 0 to 4. The dimensions that showed the highest risk were psychological demands ($M = 2.83$, SD = 0.50) and dual presence ($M = 1.94$, SD = 0.91). On the other hand, the dimension that represented the lowest risk was the lack of social support in the company ($M = 1.47$, SD = 0.64). In addition, there was a positive and

TABLE 2 Frequencies and categories of variables for group analysis.

Variable	*n*	%
Age		
Up to 29 years old	51	29.3
30–34 years old	65	37.4
35–62 years old	58	33.3
Region		
Santiago de Chile	58	33.3
Other regions	116	66.7
Patient age group		
Children and adolescents	29	16.7
Adults	145	83.3
Years working		
Less than 5 years	94	54
5 years or more	80	46
Level of the healthcare network		
Secondary	49	28.2
Tertiary	125	71.8
Number of patients per nursing shift		
1–5	49	28.2
6–15	76	43.7
16 or more	49	28.2
Satisfaction rating		
Low (1–3)	49	28.2
Medium (4)	52	29.9
High (5–7)	73	42

Note: $N = 174$.

TABLE 3 Descriptive statistics and correlations of the psychosocial risks and work overload scale.

Variable	*M*	SD	1	2	3	4	5	6
1. Psychological demands	2.83	0.50	1					
2. Active work and skills development	1.63	0.59	0.07	1				
3. Social support in the company	1.47	0.64	0.27**	0.40**	1			
4. Compensation	1.88	0.91	0.34**	0.30**	0.51**	1		
5. Dual presence	1.94	0.91	0.22**	-0,05	0.08	0.15	1	
6. Total score work overload	1.95	0.44	0.56**	0.50**	0.70**	0.78**	0.53**	1

Note: Pearson's bivariate correlation; *$p<0.05$. **$p<0.001$; $N=174$; Factors social support in the company and active work and skills development = inverted scores, so it should be interpreted inversely.

significant correlation between most of the dimensions, except for dual presence, which is expected given the structure and characteristics of the scale. The descriptive results of these variables are available in Appendix B.

Group-mean differences

In relation to the results according to mean differences, it was observed that the dimensions psychological demands and active work and skills development had greater significant differences in the different categories. On the one hand, in the psychological demands dimension, significant differences were observed depending on the network in which the health professionals worked, where those in tertiary care (intensive care psychiatric hospitalisation unit and psychiatric emergency services; $M=2.88$, SD = 0.50) reported significantly greater perception of psychological demands than those in secondary care (family mental health community centres, diagnosis and treatment centres, health reference centres; $M=2.69$, SD = 0.48; $t(172)=-2.27$, $p=0.025$). According to the number of patients attended by the health professionals, significant differences were also observed ($F(2,173)=4.53$, $p=0.012$). Specifically, those who attended between 1 and 5 patients per shift ($M=2.68$, SD = 0.53) indicated lower psychological demands than those who attended 16 or more ($M=2.99$, SD = 0.46; $p=0.008$). In addition, differences were observed according to the satisfaction possessed by the professionals according to the number of patients they attended ($F(2,173)=10.05$, $p<0.001$). Specifically, those with low satisfaction ($M=3.07$, SD = 0.42) reported greater psychological demands than those with medium satisfaction ($M=2.83$, SD = 0.41; $p=0.041$), and with high satisfaction ($M=2.67$, SD = 0.67; $p<0.001$).

In the active work and skills development dimension, differences were observed according to geographical area, specifically, professionals from the capital ($M=1.75$, SD = 0.58) reported a greater lack of active work and skills development than professionals from other regions of Chile ($M=1.57$, SD = 0.59; $t(172)=1.98$, $p=0.049$). In addition, professionals attending tertiary care ($M=1.68$, SD = 0.58) reported higher levels of lack of active work and skill development than those attending in secondary care ($M=1.48$, SD = 1.60; $t(172)=-2.06$, $p=0.041$).

Furthermore, significant differences were observed according to the number of patients attended by the professionals ($F(1,173)=5.45$, $p=0.010$). Particularly professionals who attended between 1 to 5 patients ($M=1.40$, SD = 0.56) reported lower levels of lack of active work and skill development than those who attended between 6 and 15 patients ($M=1.75$, SD = 0.58; $p=0.004$), but there were no significant differences with those who attended 16 or more patients ($M=1.67$, SD = 0.59; $p=0.078$). In the other dimensions, differences were only observed in the category of company social support perceived by the professionals. Those who cared for children and adolescents ($M=1.68$, SD = 0.55) reported a greater lack of social support from the company than those who cared for adults ($M=1.42$, SD = 0.65; $t(172)=2.01$, $p=0.046$). In the compensation dimension, significant differences were observed according to the age of the professionals ($F(2,173)=4.53$, $p=0.012$). Specifically, professionals under 30 years of age ($M=2.20$, SD = 0.85) reported higher levels of compensation than professionals between 30 and 34 years of age ($M=1.75$, SD = 0.93; $p=0.027$) and professionals between 35 and 62 years of age ($M=1.74$, SD = 0.89; $p=0.027$). In the dual presence dimension, professionals who had been working for less than 5 years ($M=1.72$, SD = 0.91) reported lower family-work inference than those who had been working for more than 5 years ($M=2.20$, SD = 0.84; $t(172)=-3.61$, $p<0.001$).

Lastly, in the total psychosocial risk score, significant differences were observed according to the level of satisfaction with the number of assigned patients to the health personnel ($F(2,173)=5.60$, $p=0.004$), where professionals who had a low satisfaction with the number of patients ($M=2.11$, SD = 0.47) presented a higher total score on the psychosocial risk scale than those who perceived a high satisfaction with the number of patients they attended ($M=1.84$, SD = 0.42; $p=0.003$).

DISCUSSION

Regarding the impact of the results obtained, there are statistically significant differences in the levels of psychosocial risks and work overload of the professionals depending on the different sociodemographic determinants and work characteristics of nursing professionals

working in mental health and psychiatry. Similar to some international studies on the same topic (Baum & Kagan, 2015; Farmakas et al., 2014), most of the nurses belonged to the tertiary sector attending on average 10.5 patients per shift. More than half of them had experience of less than 5 years with high satisfaction with the number of patients assigned, a situation that differs from what is reported in the literature, which assigns a low level of satisfaction to younger professionals (Baum & Kagan, 2015; MINSAL, 2021).

As in other research conducted on nursing and health professionals working in highly demanding environments (Ceballos-Vásquez et al., 2015, 2020; Orozco-Vásquez et al., 2019; Ramos Guajardo & Ceballos Vasquez, 2018), in the present research, the analysis showed that nurses obtained a high total score of psychosocial risk and work overload, with psychological demands and dual presence the most at risk. The lowest risk was the dimension of lack of social support in the company, a result consistent with research on health professionals in clinical management areas (Morales et al., 2020).

The greatest significant differences in the different categories were observed in the dimensions of psychological demands, active work and skill development. Nurses in psychiatric intensive care inpatient units and psychiatric emergency departments (tertiary level) reported a significantly higher level of psychological demands than those in community family mental health centres, diagnostic and treatment centres and health referral centres (secondary care), a result similar to that reported in the literature about this nursing specialty, in which the relational and emotional component of the professional is the central helping tool (Baum & Kagan, 2015; Farmakas et al., 2014).

The lowest psychological demands were reported by the group of nurses who attended a lower number of patients, differences that were statistically significant, as in other research that evaluated work overload and psychosocial risk (Baum & Kagan, 2015; Canales-Vergara et al., 2016; García-Rodríguez et al., 2015). It is interesting to mention that the findings are also consistent with the literature in relation to satisfaction according to the number of patients, in which a greater psychological demand was observed in nurses with low satisfaction (Baum & Kagan, 2015; Ceballos-Vásquez et al., 2020; García-Rodríguez et al., 2015; Morales et al., 2020).

Possibly the workload assigned to nurses in highly populated urban areas (Farmakas et al., 2014; García-Rodríguez et al., 2015) and the way in which the Chilean Mental Health Network is organised (MINSAL, 2018) are some of the elements that determine the differences found according to the geographical area of origin, since professionals from the capital, who worked in tertiary care, reported a greater lack of active work and skills development. The above may be related to what is reported in the literature, which alludes to the high degree of complexity of hospitalised patients (Hilton et al., 2022; Jang et al., 2022; Papathanasiou & Stylianidis, 2022), a fact that would not allow the nursing professional to contemplate other activities outside those included in the direct care work, for example, the design of educational activities, health promotion and activities aimed at the recovery of hospitalised people (Baum & Kagan, 2015; Camann, 2010; Kagwe et al., 2019; Kouchaki et al., 2016).

The significant differences observed in relation to the number of patients attended by the professionals and the high levels of lack of active work and skill development with up to 15 patients may be related to different elements of the administrative management assigned to the nursing staff (Canales-Vergara et al., 2016). The large number of records and compliance with established protocols prevent each professional from completing each patient's psychiatric assessment, medication records, mobility restriction records, feeding records, etc., so when the threshold of a certain number of assigned patients is exceeded, the nursing professional makes the decision to prioritise essential activities and leave aside non-crucial activities (Amiard et al., 2023; Canales-Vergara et al., 2016). An example of this is experienced by professionals in psychiatric intensive care hospitalisation units in the private health sector in Chile, where each nurse is usually in charge of an average of 12–18 patients, versus public psychiatric intensive care hospitalisation units, where patient assignment can reach more than 50 patients in a 12-h shift far from international standards and recommendations (Moyo et al., 2020; Park et al., 2020).

The significant differences observed in the dimension of compensation at work, in which nurses over 30 years of age reported lower levels, may be due to different phenomena, among them the possibility that those of lower ages have to change jobs easily (Baum & Kagan, 2015), or to the explanation given by Patricia Benner (2001), in which young professionals maintain their desire to change what is established, innovate at work, and "save the world", daring to make a greater amount of changes for their well-being. In the dual presence dimension, professionals with less work experience reported less family-work inference, which may be related to economic stability and family formation in Chile (MINSAL, 2022).

Finally, it is interesting to highlight the high total score on the psychosocial risks scale in professionals who had low satisfaction with the number of patients, a result that, unfortunately, reinforces the fact that psychosocial risks have become the main cause of occupational health problems experienced by nursing professionals in Chile (Canales-Vergara et al., 2016) and in the world (Rahmat et al., 2023). The workload and psychosocial risks of mental health and psychiatric nursing professionals in Chile possibly impact people passing through outpatient, inpatient and community units, with some consequences that need to be investigated, including the incidence of adverse effects in patients (Frigola-Capell et al., 2022) and the level of user satisfaction (Bolados-Ávila et al., 2023), among others, aspects that are important to analyse

from a global health perspective in a journal of international scope with a view to the development of quality mental health and psychiatric nursing.

Limitations

The limitations of the present study are related. First, due to the cross-sectional nature of the measurement of the study, future research should include longitudinal analyses of psychosocial risks and work overload in nursing professionals. Second, there is the limitation associated with the sample size and non-randomised sampling of participants, which may limit the generalizability and introduce bias to the results. Lastly, based on the online distribution of the questionnaire, it is inferred that only professionals with a device with Internet access and an e-mail account participated, which may limit the representativeness of the study sample.

CONCLUSIONS AND RELEVANCE FOR CLINICAL PRACTICE

In relation to the results of the present study, it is concluded that nursing professionals experiencing the greatest psychosocial risk are those over 30 years old, working in the capital, responsible of more than 16 patients in a workday, employed at the tertiary level (intensive care psychiatric hospitalisation unit or psychiatric emergency services), and who express low satisfaction with the number of patients assigned. In global terms, the dimensions of psychological demands and dual presence stand out as particularly at risk, in contrast to the dimension of lack of social support in the company, which presented the lowest risk. In specific terms, nurses in intensive care psychiatric hospitalisation unit and psychiatric emergency services reported a greater perception of psychological demands than those in secondary care (family mental health community centres, diagnosis and treatment centres, health reference centres), a difference that was statistically significant. The same result was observed with the number of patients attended (significant difference with greater psychological demands in those who attended a greater number of patients).

Outside of the national capital, there was less lack of active work and skill development, as well as a significant difference in this dimension, with tertiary level nurses reporting higher levels than secondary level nurses. In this same dimension there was also a significant difference in the number of patients assigned, with higher risk over 16 patients. Nurses in child and youth units reported a greater lack of social support from the company than those in adult units, a difference that was statistically significant, as well as in the compensation dimension, in which nurses under 30 years of age reported higher levels than older professionals. Furthermore, the dual presence dimension showed significant differences, with nurses with less than 5 years of work experience reporting lower family-work inference (compared to professionals with more than 5 years of work experience).

In conclusion, the present study reported the different levels of psychosocial risks and work overload, as well as the comparison of these according to sociodemographic and work characteristics of psychiatric and mental health nurses in Chile. It is essential to develop interventions and research in this area to increase the level of psychosocial well-being of nurses in the area, and thus improve the health outcomes and trajectory of people with psychiatric pathology. Finally, it is necessary to investigate the effect of overload and psychosocial risks at the psychological and health level of nursing professionals, as well as to investigate various protective and risk factors of these effects.

AUTHOR CONTRIBUTION

Substantial contributions to the conception or design of the work; or the acquisition, analysis, or interpretation of data for the work: Daniela Fuentes-Olavarría, Matías E. Rodríguez-Rivas and Javiera Romo-Neira. Drafting the work or reviewing it critically for important intellectual content: Daniela Fuentes-Olavarría, Matías E. Rodríguez-Rivas and Javiera Romo-Neira. Final approval of the version to be published: Daniela Fuentes-Olavarría and Matías E. Rodríguez-Rivas. Agreement to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved: Daniela Fuentes-Olavarría and Matías E. Rodríguez-Rivas.

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CONFLICT OF INTEREST STATEMENT

The authors have no conflict of interest to declare.

DATA AVAILABILITY STATEMENT

The data that supports the findings of this study are available in the supplementary material of this article.

ETHICS STATEMENT

The research was reviewed by the Scientific Ethical Committee of the German Clinical Medical School Of Santiago-University Of Development, which is recorded in the Approval Minutes 2021-101. According

to the postulates of the Declaration of Helsinski, the International Ethical Guidelines for Health-Related Research Involving Human Subjects CIOMS 2016, and the Good Clinical Practice Guidelines of ICH 1996, the research complies with Social Value, Scientific Validity, Risk/Benefit Assessment, Declaration of Conflicts of Interest, use of Informed Consent and Protection of Participants' Rights.

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APPENDIX A

SOCIODEMOGRAPHIC QUESTIONNAIRE

1. Are you a nursing professional with a degree from a Chilean or foreign university and are you currently working in the area of mental health and psychiatry, in the public or private sector?

   □ Yes □ No

2. How old are you? (Write the number in years) _____
3. In which geographic region of Chile do you work in Mental Health and Psychiatry?

   □ Arica y Parinacota
   □ Tarapacá
   □ Antofagasta
   □ Atacama
   □ Coquimbo
   □ Valparaíso
   □ Metropolitana de Santiago
   □ Libertador G. Bernardo O'Higgins
   □ Maule
   □ Ñuble
   □ Biobío
   □ La Araucanía
   □ Los Ríos
   □ Los Lagos
   □ Aysén del G. Carlos Ibáñez del C.
   □ Magallanes y la Antártica Chilena

4. Indicate the age group of patients with whom you work in Mental Health and Psychiatry:

   □ Childhood (up to 12 years old)
   □ Adolescents (12–18 years old)
   □ Adult (18–65 years)
   □ Elderly (Over 65 years old)

5. Indicate in which type of Mental Health or Psychiatric unit or service you work:

   □ Public Short Stay Unit
   □ Private Short Stay Unit
   □ Medium or Long Stay Public Unit
   □ Medium or Long Stay Private Unit
   □ Public Day Hospital
   □ Private Day Hospital
   □ Health Reference Center (CRS)
   □ Diagnostic and Treatment Center (CDT)
   □ Mental Health Center (CESAM/COSAM)
   □ Adjunct Specialty Clinic (CAE)
   □ Public Psychiatric Emergency Service
   □ Private Psychiatric Emergency Service
   □ Other…

6. How many years have you been working in Mental Health or Psychiatry units or services (in total)?:

   □ Less than 1 year
   □ Between 1 and 5 years

☐ Between 6 and 10 years
☐ Between 11 and 15 years
☐ Between 16 and 20 years
☐ Between 21 and 25 years old
☐ Between 26 and 30 years old
☐ More than 30 years old
☐ Other…

7. Please indicate at which level of the Mental Health and Psychiatry Network you are currently working (regardless of whether it is public or private):

☐ Outpatient/community
☐ Hospital/emergency

Hospital/emergency level work

1. How much is the assignments of patients under your direct care in a full 12-hour shift?

☐ Between 1 and 5 patients
☐ Between 6 and 10 patients
☐ Between 11 and 15 patients
☐ Between 16 and 20 patients
☐ Between 21 and 25 patients
☐ Between 26 and 30 patients
☐ Between 31 and 35 patients
☐ Between 36 and 40 patients
☐ Between 41 and 45 patients
☐ Between 45 and 50 patients
☐ More than 50 patients
☐ Other…

2. How many patients are under your direct care in a full 12-hour shift (including spontaneous care)?

☐ Between 1 and 5 patients
☐ Between 6 and 10 patients
☐ Between 11 and 15 patients
☐ Between 16 and 20 patients
☐ Between 21 and 25 patients
☐ Between 26 and 30 patients
☐ Between 31 and 35 patients
☐ Between 36 and 40 patients
☐ Between 41 and 45 patients
☐ Between 45 and 50 patients
☐ More than 50 patients
☐ Other…

3. Check the alternatives that most closely represent your duties in a full 12-hour shift (hospital or emergency):

☐ Nursing Care Process (and record keeping) for each assigned patient (Assessment, Diagnosis, Planning, Implementation and Evaluation)
☐ Administration of VO, IM, IV, SL medications for each patient.
☐ Performing nursing procedures such as examinations, phlebotherapy, cures, installation of probes, among others.
☐ Supervision of Nursing Technician team procedures (comfort, CSV, bathing, etc.).
☐ Preparation of scales for each patient (risk, symptom intensity, etc.).
☐ Continuous supervision and direct observation of patients with complex requirements (patients with eating disorders, personality disorder, etc.).

☐ Management of psychiatric emergencies: verbal, environmental, pharmacological, or physical containment (psychomotor agitation, escape, suicide attempt, heteroaggression, lithium intoxication, neuroleptic malignant syndrome, etc.).
☐ Emotional containment of the patient's family in psychiatric emergency situations.
☐ Discharge care instructions: medication management, dangerous elements, activity level, next check-ups, etc.
☐ Preparation of daily statistics of patient care in the unit.
☐ Coordination of inter-consultations or exams in other services.
☐ Transfer of patients to other units or services.
☐ Establishment of a Therapeutic Assistance Relationship (Peplau) with each patient.
☐ Coordination of the continuity of interventions and/or care of other professionals of the team.
☐ Coordination of the work of the nursing staff in charge (assignment of activities, scheduling of shifts, vacations, etc.).
☐ Accounting of controlled medications
☐ Request for medications to the pharmacy
☐ Request for supplies to warehouse or supply
☐ Home visits
☐ Telephone follow-up
☐ Patient and family education
☐ Other administrative functions
☐ Other…

4. How would you rate the patient assignment in a 12-hour shift with respect to the level of activities and responsibilities assigned to you (Time/Responsibilities Ratio)?

1	2	3	4	5	6	7	
It is very inadequate: I fail to plan and execute all necessary care for all patients. Care becomes deficient and unsafe. I fail to meet the administrative demands of the position.							It is very adequate: I am able to plan and execute all necessary care for all patients in an efficient and safe manner and to meet the administrative demands of the position.

5. According to your criteria, what is the ideal number of patients that should be under your direct care in a full 12-hour shift? You may add a comment under "Other":

☐ Between 1 and 5 patients
☐ Between 6 and 10 patients
☐ Between 11 and 15 patients
☐ Between 16 and 20 patients
☐ Between 21 and 25 patients
☐ Between 26 and 30 patients
☐ Between 31 and 35 patients
☐ Between 36 and 40 patients
☐ Between 41 and 45 patients
☐ Between 45 and 50 patients
☐ More than 50 patients
☐ Other…
☐ I don't know

Outpatient/community level work

1. What is the total patient population in 1 month under your care in programs, procedures, direct care, etc. (approximate number)?

☐ Between 1 and 25 patients per month
☐ Between 26 and 50 patients per month
☐ Between 51 and 75 patients per month

☐ Between 76 and 100 patients per month
☐ More than 100 patients per month
☐ Other…

2. How much is the patient throughput in 1 hour of work in programs, procedures, direct care, etc. (approximate value)?

☐ 1 patient
☐ 2 patients
☐ 3 patients
☐ 4 patients
☐ 5 or more patients
☐ Other…

3. Check the alternatives that most closely represent your work in an outpatient/community workday:

☐ Nursing Care Process (and record keeping) for each assigned patient (Assessment, Diagnosis, Planning, Implementation and Evaluation)
☐ Administration of VO, IM, IV, SL medications for each patient.
☐ Performing nursing procedures such as examinations, phlebotherapy, cures, installation of probes, among others.
☐ Supervision of Nursing Technician team procedures (comfort, CSV, bathing, etc.).
☐ Preparation of scales for each patient (risk, symptom intensity, etc.).
☐ Continuous supervision and direct observation of patients with complex requirements (patients with eating disorders, personality disorder, etc.).
☐ Management of psychiatric emergencies: verbal, environmental, pharmacological, or physical containment (psychomotor agitation, escape, suicide attempt, heteroaggression, lithium intoxication, neuroleptic malignant syndrome, etc.).
☐ Emotional containment of the patient's family in psychiatric emergency situations.
☐ Discharge care instructions: medication management, dangerous elements, activity level, next check-ups, etc.
☐ Preparation of daily statistics of patient care in the unit.
☐ Coordination of inter-consultations or exams in other services.
☐ Transfer of patients to other units or services.
☐ Establishment of a Therapeutic Assistance Relationship (Peplau) with each patient.
☐ Coordination of the continuity of interventions and/or care of other professionals of the team.
☐ Coordination of the work of the nursing staff in charge (assignment of activities, scheduling of shifts, vacations, etc.).
☐ Accounting of controlled medications
☐ Request for medications to the pharmacy
☐ Request for supplies to warehouse or supply
☐ Home visits
☐ Telephone follow-up
☐ Patient and family education
☐ Other administrative functions
☐ Other…

4. How would you rate the patient assignment in a 12-hour shift with respect to the level of activities and responsibilities assigned to you (Time/Responsibilities Ratio)?

1	2	3	4	5	6	7	
It is very inadequate: I fail to plan and execute all necessary care for all patients. Care becomes deficient and unsafe. I fail to meet the administrative demands of the position.							It is very adequate: I am able to plan and execute all necessary care for all patients in an efficient and safe manner and to meet the administrative demands of the position.

5. According to your criteria, what is the ideal number of patients that should be under your care in 1 full month? You can add a comment in "Other":

☐ Between 1 and 25 patients per month
☐ Between 26 and 50 patients per month
☐ Between 51 and 75 patients per month
☐ Between 76 and 100 patients per month
☐ More than 100 patients per month
☐ I don't know
☐ Other…

SUSESO/ISTAS21 QUESTIONNAIRE, BRIEF VERSION

Psychological requirements dimension		Always	Most of the of the time	Sometimes	Only a few times	Never
1	Can you do your job with peace of mind and keep it up to date?					
2	In your job, do you have to make difficult decisions?					
3	In general, do you feel that your job is emotionally draining?					
4	In your job, do you have to keep your emotions bottled up and not express them?					
5	Does your job require constant attention?					
Active work and skills development dimension		**Always**	**Most of the of the time**	**Sometimes**	**Only a few times**	**Never**
6	Does it have an influence on the amount of work assigned to you?					
7	Can you leave your work for a moment to talk with a colleague?					
8	Does your job allow you to learn new things?					
9	Do the tasks you do seem important to you?					
10	Do you feel that your company or institution is of great importance to you?					
Social support dimension in the company		**Always**	**Most of the of the time**	**Sometimes**	**Only a few times**	**Never**
11	Do you know exactly what tasks are your responsibility?					
12	Do you have to do tasks that you think should be done differently?					
13	Do you receive help and support from your immediate superior?					
14	Do your coworkers help each other at work?					
15	Do your immediate bosses resolve conflicts well?					
Compensation dimension		**Always**	**Most of the of the time**	**Sometimes**	**Only a few times**	**Never**
16	Are you worried about being fired or not having your contract renewed?					
17	Are you worried about being moved against your will?					
18	My superiors give me the recognition I deserve					

	Double presence dimension	Always	Most of the of the time	Sometimes	Only a few times	Never
19	When you are at work, do you think about domestic and family demands?					
20	Are there situations in which you should be at work and at home at the same time (to care for a sick child, for a family member's accident, for the care of grandparents, etc.)?					

APPENDIX B

SOCIODEMOGRAPHIC, OCCUPATIONAL, AND PSYCHOSOCIAL CHARACTERISTICS OF THE PARTICIPANTS

Variable	*n*	%	*M*	SD	Range
Sex					
Female	138	79.3	0.79	0.41	0–1
Male	36	20.7			
Age	174		33.95	7.46	24–62
Geographic region					
RM	58	33.3	0.67	0.47	0–1
Others regions	116	66.7			
Patient age GROUP					
NNA	29	16.7			0–1
Adults	145	83.3			
Years of work	174				
Between 1 and 5 years old	78	44.8			
Between 11 and 15 years old	15	8.6			
Between 16 and 20 years old	3	1.7			
Between 21 and 25 years old	1	0.6			
Between 26 and 30 years old	1	0.6			
Between 6 and 10 years	60	34.5			
More than 30 years old	1	0.6			
Less than 1 year	15	8.6			
Health network level					
Secondary	49	28.2			0–1
Tertiary	125	71.8			
Patient assignments					
1	49	28.2	2.85	1.70	1–8
2	29	16.7			
3	47	27			
4	22	12.6			
5	12	6.9			
6	8	4.6			
7	4	2.3			
8	3	1.7			

(Continues)

APPENDIX B (Continued)

Variable	*n*	%	*M*	SD	Range
Rating no. of patients					
1	6	3.4	4.16	1.38	1–7
2	18	10.3			
3	25	14.4			
4	52	29.9			
5	46	26.4			
6	21	12.1			
7	6	3.4			
No Ideal patients					
1	68	39.1	1.75	7.28	1–4
2	79	45.4			
3	20	11.5			
4	3	1.7			

Note: $N = 174$.

Abbreviations: NNA, children and adolescents; RM, metropolitan region.