

Primary Health Care nurses' identification of workloads

Identificação de cargas de trabalho de enfermeiros da Atenção Primária à Saúde

Identificación de las cargas de trabajo de los enfermeros de la Atención Primaria de Salud

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Abstract

Objective: to identify the workloads to which these professionals are exposed to manage the health problems and illnesses caused by exposure. **Method:** descriptive study with a quantitative cross-sectional design, demonstrating the degree of agreement of 90 nurses related to the workloads: psychological, biological, physiological, chemical and physical, in addition to the institutional conducts of the cities of Curitiba and Almirante Tamandaré, between April and August 2024. **Results:** psychological workloads showed a high level of agreement, followed by biological and physiological workloads; the use and provision of Personal Protective Equipment also showed a high level of agreement among participants; on the other hand, psychological and emotional support programs proved to be unsatisfactory on the part of public entities. **Conclusions:** identifying the degree of agreement on workloads becomes necessary for the implementation of improvements related to the promotion and prevention of health problems for workers, increasing quality and professional satisfaction.

Descriptors: Primary Health Care; Work; Nursing; Worker health.

Resumo

Objetivo: identificar as cargas que estes profissionais estão expostos para manejo dos agravos e adoecimentos da exposição. **Método:** estudo do tipo descritivo com a abordagem quantitativa de delineamento transversal, demonstrando o grau de concordância dos 90 enfermeiros relacionados com as cargas de trabalho: psíquicas, biológicas, fisiológicas, químicas e físicas, além das condutas institucionais dos municípios de Curitiba e Almirante Tamandaré, entre abril e agosto de 2024. **Resultados:** as cargas psíquicas demonstrou um alto índice de concordância, seguindo as cargas biológicas e fisiológicas, o uso e fornecimento de Equipamento de Proteção Individual também expôs uma alta concordância entre participantes, em contrapartida, programas de apoio psíquico e emocional demonstraram-se insatisfatórios por parte dos entes públicos. **Conclusões:** a identificação do grau de concordância das cargas de trabalho se torna necessário para a implementação de melhorias relacionadas à promoção e prevenção de agravos da saúde do trabalhador, aumentando a qualidade e a satisfação profissional.

Descritores: Atenção Primária à Saúde; Trabalho; Enfermagem; Saúde do trabalhador.

Resumen

Objetivo: identificar las cargas a las que están expuestos estos profesionales para gestionar las lesiones y enfermedades resultantes de la exposición. **Método:** estudio descriptivo con diseño transversal cuantitativo, demostrando el grado de concordancia de 90 enfermeros relacionados con las cargas de trabajo: psíquica, biológica, fisiológica, química y física, además de las conductas institucionales de las ciudades de Curitiba y Almirante Tamandaré, entre abril y agosto de 2024. **Resultados:** las cargas psíquicas demostraron un alto nivel de concordancia, seguidas de las cargas biológicas y fisiológicas, el uso y suministro de Equipos de Protección Individual también mostraron una alta concordancia entre los participantes, por otro lado, los programas de apoyo psíquico y emocional se mostraron insatisfactorios por parte de las entidades públicas. **Conclusiones:** identificar el grado de concordancia entre cargas de trabajo se hace necesario para implementar mejoras relacionadas con la promoción y prevención de problemas de salud de los trabajadores, aumentando la calidad y la satisfacción profesional.

Descriptores: Atención Primaria de Salud; Trabajar; Enfermería; Salud del trabajador.



INTRODUCTION

The work process of nurses in primary health care (PHC) has its practices established by specific legislation supported by the Law. No. 7,498/86 and by regulatory ordinances of the Federal Nursing Council, as well as by the National Primary Care Policy (PNAB), defining the managerial and care competencies of the nurse's work.^{1,2}

Nurses play an important role in primary health care (PHC), encompassing various branches of the profession, from management and assistance to care for the population—characteristics inherent to being a nurse. The profession is also influenced by the characteristics of the PHC work environment, which is subject to political, community, individual, and global changes. Therefore, changes and transformations in the work process are directly influenced and can generate increased workloads.^{3,4}

Furthermore, nursing is considered part of a collective that interacts with other multidisciplinary categories working as a team within the socio-political context of primary care in the country.⁵

According to study⁶, workloads are the elements of the work environment and activities that interact with the worker's body and mind, causing wear and tear that

can lead to illness. The authors divide these loads into several categories: physical (such as noise, temperature, and physical exertion), chemical (exposure to toxic substances), biological (contact with infectious agents), physiological (resulting from physical demands, such as inadequate postures), psychological (related to stress, psychological pressures, and interpersonal conflicts), and mechanical (associated with the use of tools and accident risks). These loads affect the worker's physical and mental health, especially when the work environment is intensive and conditions are adverse, generating impacts on well-being and professional performance.

Thus, considering the relevance of appropriating knowledge about the health work process of nurses in primary health care and its relationship with existing workloads, the importance of identifying the workloads to which these professionals are exposed is highlighted for better management of the health problems and illnesses that may arise from this exposure. Therefore, this study aims to answer the following question: what workloads are primary health care nurses exposed to?

METHOD



This is a descriptive study with a quantitative, cross-sectional design. It refers to the application of an instrument to identify the workloads of primary health care nurses, constructed and evaluated in four stages through a methodological study. In the content assessment, the instrument obtained a global index (GI) of 0.55 and 0.34, considering inverse proportion, that is, the lower the GI, the greater the presence of workload, following Cronbach's Alpha of 0.74 and 0.99, respectively.⁷

The application was carried out in the municipalities of Curitiba and Almirante Tamandaré, belonging to the metropolitan region of Curitiba in Paraná. These municipalities are located in Health Region 2, called Metropolitan, situated in the Eastern Macroregion.⁸

The instrument consists of 62 structured questions on a Likert-type scale and 14 Open-ended questions were included in the final instrument, consisting of 76 questions. The Likert scale items are represented by “1” strongly agree, “2” agree, “3” neither agree nor disagree, “4” disagree, and finally, “5” strongly disagree. On the website, in the format of an online form creator called “Google Forms”, the instrument was structured in four sections and shared via QR code with the participant.

The first section corresponds to the informed consent form (ICF), which requires the participant's signature to proceed to the remaining sections. Next, closed and open-ended questions are presented, going beyond what was stated in the questions in order to explore the workload in primary health care.

To organize the implementation of the instrument, the researcher approached the participants in person, who were selected individually by convenience at their professional workplaces. Those who agreed were presented with the research project and then invited to voluntarily answer the questionnaire in a virtual environment, and were instructed on how to guarantee the confidentiality and privacy of the data.

Data collection took place between April and August 2024, conducted solely by the first author, a nurse and doctoral student in the Postgraduate Program in Nursing at the Federal University of Paraná, located in Curitiba. To avoid potential biases, the researcher received training in orientation meetings for research activities.

The participants are 90 primary care nurses who have been professionally active for at least one year. Those on vacation or medical leave for health treatment were excluded from the sample; given the latter

situation, it is considered that the professionals included in this sample may be exposed to potential risks of illness, to the detriment of workers who are already ill.

The data processing involved dividing the questions from the instrument into blocks in spreadsheets, according to their similarities in light of the concepts of study workloads.⁶ For data analysis, descriptive statistics were used with the BioEstat software (version 5.3, Mamirauá Sustainable Development Institute, Belém, Pará, Brazil) and Microsoft Office Excel®, version 2016, to obtain the absolute values and respective percentages.⁹

The interpretation developed with an emphasis on the relationship between health and work, understood from a theoretical-methodological-technical

dimension, which proposes broadening the analysis to occupational health, incorporating an understanding of the health-disease process within a complex dynamic of interaction with the social process, based on the conception of historical materialism.⁶

The study adheres to ethical precepts and has been approved by the Ethics Committee of the Federal University of Paraná and the Health Department of Curitiba, following resolutions 466/12, 510/16 and 580/18 of the National Health Council, under number CAAE 62690622.0.0000.0102.

RESULTS

Table 1 below presents the profile of the participating nurses in primary health care.

Table 1. Profile of nurses working in primary health care in the municipalities of Curitiba and Almirante Tamandaré, 2024.

Features	Percentage (%)	Number of Participants (n)
Cisgender female	82.22%	74
Transgender worker	1.11%	1
Predominant age range (40-49 years)	40%	36

Academic background (Postgraduate specialization)	71.11%	64
40-hour work week	61.11%	55
Type of employment relationship (Statutory)	86.67%	78
Length of service (> 4 years in the primary care unit)	53.33%	48

Source: author.

Of the total number of nursing workers, the majority are female, with 82.22% (n=74), and 1.11% are transgender workers (n=1). The predominant age range is 40 to 49 years, at 40% (n=36). Regarding academic training, postgraduate specialization (*lato sensu*) stands out at 71.11% (n=64). In the context of professional practice, 61.11% (n=55) work a 40-hour week. Furthermore, the main type of employment is statutory, with 86.67% (n=78), and 53.33% (n=48) have worked in the primary care unit for more than four years.

The results regarding workloads will be discussed below. Among the aspects evaluated, psychological workload shows the highest level of agreement in the work process. This aspect was analyzed through the 16 questions observed in the intervals of "questions 29 to 39", "questions 42 to 45", and "question 62". This relevance is observed by the highest degree of agreement between questions 29 to 36, as shown in Figure 5. Furthermore, question 30, "Do I face interpersonal conflicts in my work environment?", showed a degree of agreement of 45.56%.

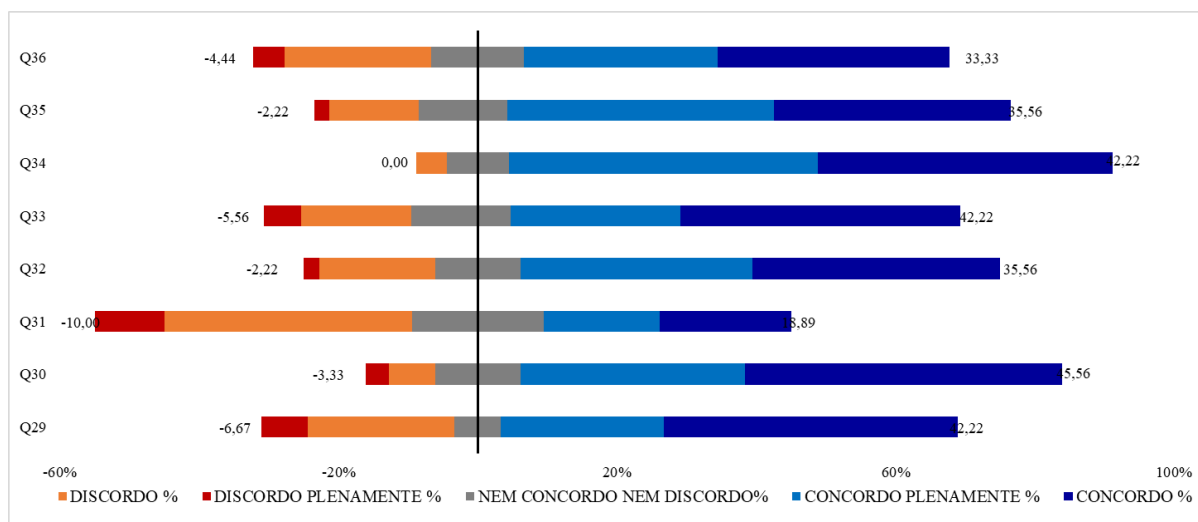


Figure 1. Degree of agreement of responses from participating primary health care nurses, related to psychological burdens, according to the Likert scale proposed by the instrument, Curitiba and Almirante Tamandaré, 2024.

Source: author. Graph representing the descriptive analysis of nurses' workloads. BioEstat, version 5.3, 2023.

The biological load is comprised of seven questions corresponding to questions 15 to 21 of the instrument. For the participants, this load obtained the second highest level of agreement among the routines of primary health care. The

medians for this block of questions are represented by the items "agree" (n=4), "strongly agree" (n=2), and "neither agree nor disagree" (n=1). The mode observed was that the item "agree" was repeated most frequently.

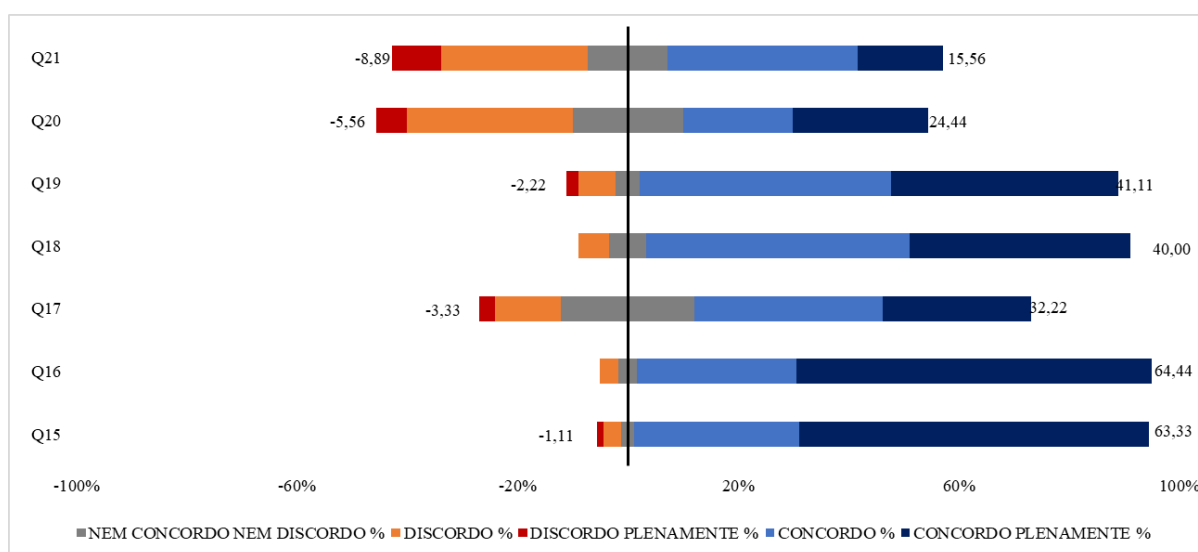


Figure 2. Degree of agreement of responses from primary health care nurse participants, related to biological loads, according to the Likert scale proposed by the instrument, Curitiba and Almirante Tamandaré, 2024.

Source: author. Graph representing the descriptive analysis of nurses' workloads. BioEstat, version 5.3, 2023.

Question 16, "Do you handle bodily secretions or biological fluids in your work?", resulted in the highest degree of agreement with 64.44%, followed by question 15, "In your work, do you come into contact with microorganisms that can cause disease?", with 63.33%.

In the context of physical workload, nine questions are represented by the range of "questions 1 to 7", "question 40" and "question 61". The questions showed a high

degree of disagreement regarding this workload in the routine. Question 4, "In the work environment, are you exposed to harmful radiation?", received the highest degree of disagreement, at 41.11%. Across all questions, the medians were represented by the Likert scale items "disagree" (n=5), followed by "agree" (n=3) and "neither agree nor disagree" (n=1). The mode was represented by the item "disagree" (n=6).

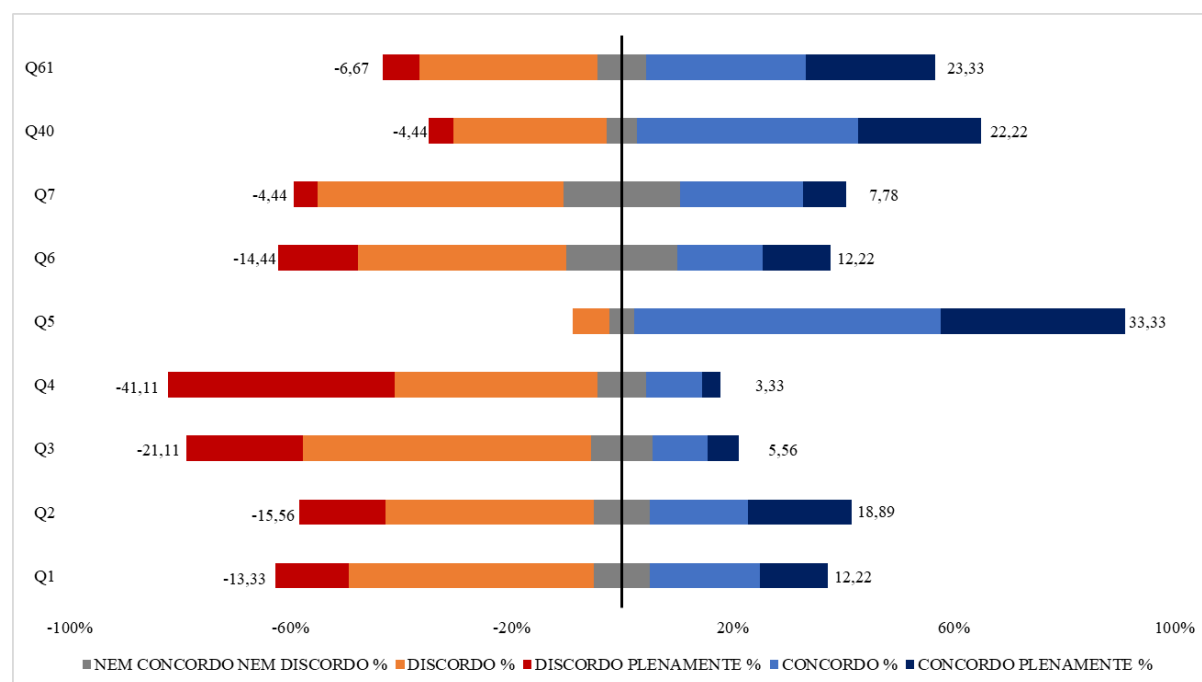


Figure 3. Degree of agreement of responses from primary health care nurse participants, related to physical workloads, according to the Likert scale proposed by the instrument, Curitiba and Almirante Tamandaré, 2024.

Source: author. Graph representing the descriptive analysis of nurses' workloads. BioEstat, version 5.3, 2023.

Regarding chemical hazards, professionals answered seven questions distributed in the instrument from "questions 8 to 14". The median responses

were "disagree" (n=4), "agree" (n=2), and "neither agree nor disagree" (n=1). The mode was significantly "disagree". Nurses indicated that the highest degree of

disagreement, at 27.78%, was for question 10, “In your workplace, are you exposed to dust, smoke, or airborne particles?”, and the highest degree of agreement, at 22.22%,

was for question 12, “Does the institution where you work provide appropriate Personal Protective Equipment to reduce exposure to chemical hazards?”.

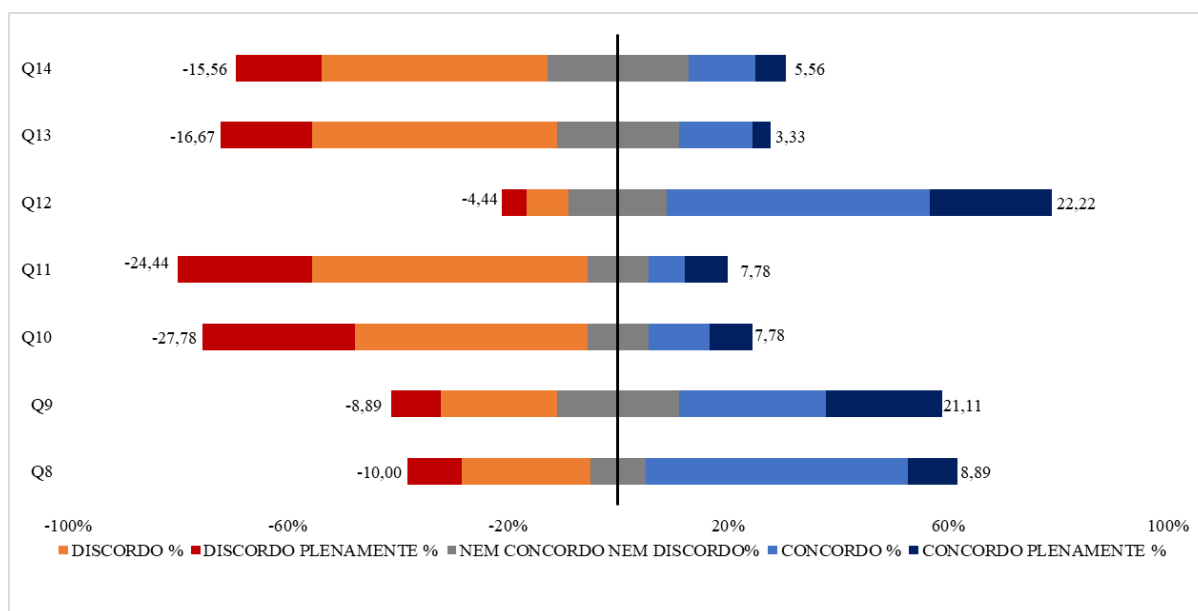


Figure 4. Degree of agreement of responses from primary health care nurse participants, related to chemical loads, according to the Likert scale proposed by the instrument, Curitiba and Almirante Tamandaré, 2024.

Source: author. Graph representing the descriptive analysis of nurses' workloads. BioEstat, version 5.3, 2023.

For the investigation of physiological workloads, the instrument has seven questions in the range of “questions 22 to 28”. The median and mode are represented by the item “agree” (n=6),

respectively. Professionals predominantly reported a high degree of agreement with question 26 “Do I feel there is an excess of demands for tasks and responsibilities in my role in primary health care?” at 42.22%.

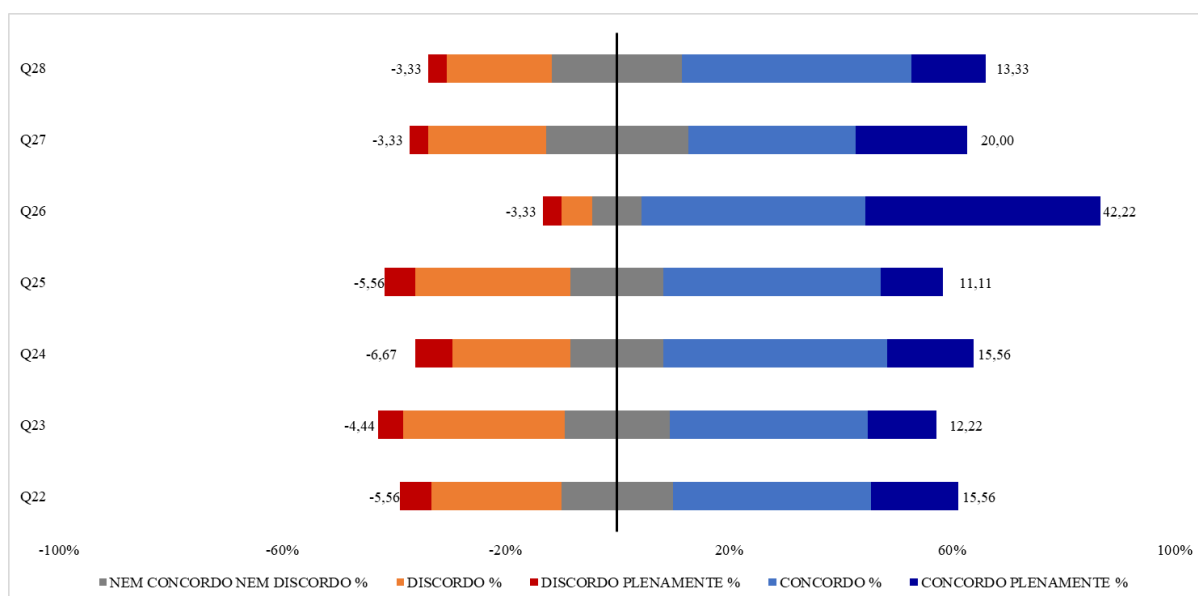


Figure 5. Degree of agreement of responses from primary health care nurse participants, related to physiological loads, according to the Likert scale proposed by the instrument, Curitiba and Almirante Tamandaré, 2024.

Source: author. Graph representing the descriptive analysis of nurses' workloads. BioEstat, version 5.3, 2023.

The instrument presents seven questions, in “question 41” and “questions 55 to 60”, regarding institutional conduct related to workloads in order to reduce potential risks to worker health. In this set,

the predominance of disagreement at its highest level is observed in question 56: “Are there workplace wellness policies designed to support employees in the face of high work demands?”

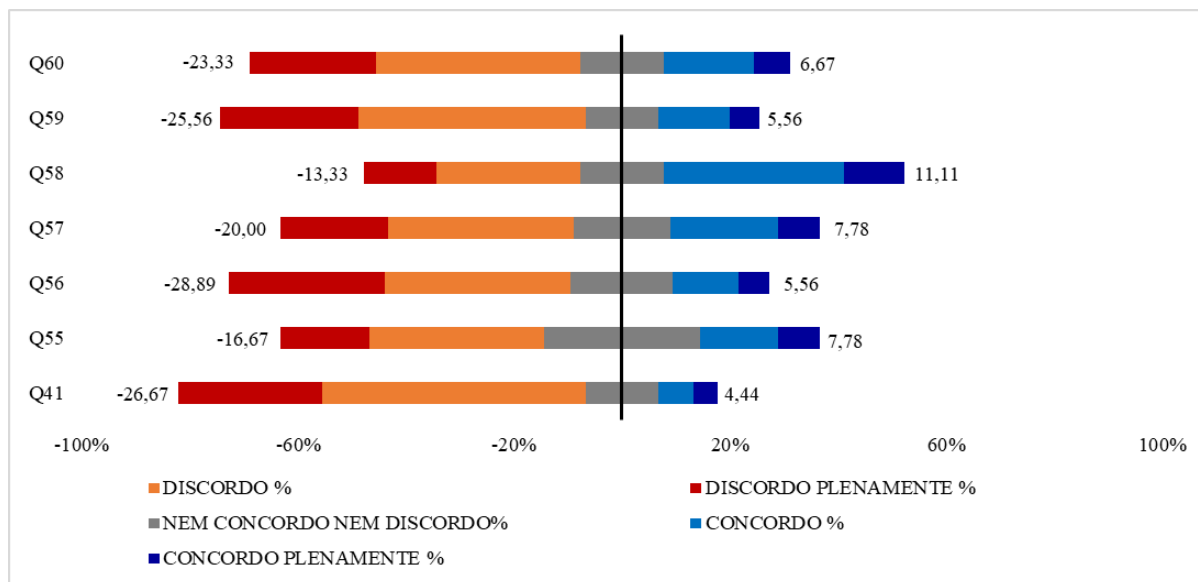


Figure 6. Degree of agreement of responses from primary health care nurse participants, related to institutional conduct according to the Likert scale proposed by the instrument, Curitiba and Almirante Tamandaré, 2024.

Source: author. Graph representing the descriptive analysis of nurses' workloads. BioEstat, version 5.3, 2023.

DISCUSSION

The study highlights that psychological burden is one of the main burdens faced by nurses, and it is evident that this was the one that obtained the greatest agreement among the participants, as well as in studies¹⁰, which highlights that psychological burden is one of the main burdens faced by nurses, influencing care and universal access to health. Another study that identified psychological burden as most prevalent³ was associated with excessive demands, pressure for results, and interpersonal conflicts. Furthermore, it also highlights that psychological burden is the most present in the daily lives of nurses.^{11,12,13}

Biological loads are also evident in a similar study¹², which showed that during the pandemic the biological load increased considerably due to exposure to the SARS-CoV-2 virus. Similarly, international studies¹⁴ highlight that nurses were significantly exposed to biological risks during the COVID-19 pandemic.

Physical workload showed a predominance of disagreement, mainly regarding exposure to harmful radiation, suggesting that, in the context of primary health care, nurses are less exposed to physical risks. A national study indicates that physical workloads are less evident.^{15,16} A recent study infers that in the context of primary health care, nurses face fewer physical risks related to radiation,

since this environment does not routinely involve procedures that use ionizing radiation.¹⁷

Regarding chemical loads, it is noted that there was low agreement, however, we can highlight a high level of agreement in the relationship between the use of PPE in the primary health care environment, indicating adequate preventive measures.^{18,19,5}

Physiological loads, especially excessive tasks and responsibilities, showed high agreement among participants. These loads are related to excessive demands and a lack of human resources for the work, considering an increase in the workload of those involved, thus generating physical and emotional strain. Similar studies point to this finding.^{10,11}

Regarding institutional conduct, how is public administration involved in promoting and preventing workload issues among nursing professionals? It was revealed that there is a high degree of disagreement, especially concerning supportive conduct related to high workload demands, reflecting on professional satisfaction, highlighting the challenges faced by professionals and the need for institutional policies that promote the well-being of healthcare professionals.^{11,20}

CONCLUSION

The identification of nurses' workloads in primary health care demonstrated that there are common weaknesses inherent in each workload involved. The work process of these nurses is not limited to simply achieving the goals established by institutions and professional councils, but also involves facing daily challenges to maintain their biological, physical, and mental health, as well as professional satisfaction and fulfillment.

Measures related to the implementation of public policies aimed at addressing the health of these workers become essential, as institutional support, for example, regarding psychological and occupational support measures, the implementation of mental and emotional support programs reflects an increase in quality of life, and consequently in the worker's productivity and performance, promoting a healthier environment in primary health care.

Another common point is related to the high workload that generates heavy workloads for professionals, mainly linked to the lack of professionals in primary health care. Once identified, continuous work is suggested to hire more professionals to serve the population, promoting a healthy and, above all, satisfactory work environment.



Conversely, a positive point regarding institutional conduct was the use of personal protective equipment (PPE). This finding suggests that protective measures are well established. However, it is crucial that infrastructure and working conditions continue to be monitored to ensure that safety is maintained.

These results can be used to argue for the importance of periodic reviews of workloads, work environments, and policies aimed at a balanced distribution of tasks, focused on improving the quality of health of primary health care nurses. Limitations of the study include the low participation of municipal health departments, as well as the socio-demographic, economic, and social peculiarities of each municipality or area where the instrument will be applied. There was no funding source for this study.

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