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Nursing practices in the family health strategy in Brazil: interfaces with illness

Práticas da enfermagem na estratégia saúde da família no Brasil: interfaces no adoecimento

Prácticas de enfermería en la estrategia de salud familiar en Brasil: interfaces con la enfermedad

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ABSTRACT

Objective: To identify Nursing practices in the Family Health Strategy in Brazil and interfaces in the illness of these professionals.

Method: Qualitative research, carried out in the five Regions of Brazil, with 79 nursing professionals from 20 health units. Data were collected from 2015 to 2017, using interviews, observation and documentary study. The analysis with the aid of the software ATLAS.ti 8.0, guided by the theorization of the Work Process and Workloads.

Results: The practices of the care dimension prevailed, followed by the administrative-managerial and educational dimensions. The illness resulting from workloads, predominantly psychic, was related to care practices, potentiated by overload and poor working conditions.

Conclusion: The centrality of nursing practices in the dimension of care and administrative management characterized the professional work in Primary Care. The findings indicate that improved working conditions may minimize the wear and tear of these professionals in this scenario.

Keywords: Professional practice. Nursing care. Nurse practitioners. Occupational health. Family health strategy. Primary health care.

RESUMO

Objetivo: Identificar as práticas da Enfermagem na Estratégia Saúde da Família no Brasil e as interfaces no adoecimento destes profissionais.

Método: Pesquisa qualitativa, realizada nas cinco regiões do Brasil, com 79 profissionais de enfermagem de 20 unidades de saúde. Os dados foram coletados no período de 2015 a 2017, utilizando-se de entrevistas, observação e estudo documental. A análise, com auxílio do software ATLAS.ti 8.0, foi orientada pela teorização do Processo de Trabalho e de Cargas de Trabalho.

Resultados: Prevaleceram as práticas da dimensão do cuidado, seguidas das dimensões administrativo-gerencial e educativa. O adoecimento decorrente das cargas de trabalho, predominantemente psíquicas, esteve relacionado às práticas de cuidado, potencializado pela sobrecarga e más condições de trabalho.

Conclusão: A centralidade das práticas de Enfermagem na dimensão do cuidado e administrativo-gerenciais caracterizou o trabalho profissional na Atenção Primária. Os achados indicam que a melhoria das condições de trabalho pode minimizar o desgaste destes profissionais nesse cenário.

Palavras-chave: Prática profissional. Cuidados de enfermagem. Profissionais de enfermagem. Saúde do trabalhador. Estratégia saúde da família. Atenção primária à saúde.

RESUMEN

Objetivo: Identificar las prácticas de enfermería en la estrategia de salud familiar en Brasil y las posibles interfaces en la enfermedad de estos profesionales.

Método: Investigación cualitativa, realizada en las cinco Regiones de Brasil, con 79 profesionales de enfermería de 20 unidades de salud. Los datos se recopilaron de 2015 a 2017, mediante entrevistas, observación y estudio documental. El análisis con la ayuda del software ATLAS.ti 8.0, guiado por la teorización del proceso de trabajo y las cargas de trabajo.

Resultados: Prevalecieron las prácticas de la dimensión asistencial, seguidas de las dimensiones administrativo-gerencial y educativa. La enfermedad resultante de la carga de trabajo, predominantemente psíquica, estaba relacionada con prácticas de cuidado, potenciadas por sobrecarga y malas condiciones de trabajo.

Conclusión: La centralidad de las prácticas de enfermería en la dimensión de atención y gestión administrativa caracterizou el trabajo profesional en Atención Primaria. Los resultados indican que la mejora de las condiciones de trabajo puede minimizar el desgaste de los trabajadores en este escenario.

Palabras clave: Práctica profesional. Atención de enfermería. Enfermeras practicantes. Salud laboral. Estrategia de salud familiar. Atención primaria de salud.

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INTRODUCTION

Since the Alma-Ata Conference, primary health care (PHC) is considered fundamental for universal access to care, which is a global demand and achievement to be fulfilled. PHC should be the first contact of users with the health system and, therefore, ensures the principles of universality, comprehensiveness, and equity established by the Brazilian Unified Health System ("SUS") by means of collaborative practices that aim to solve the health problems of populations[1–2].

In Brazil, the SUS seeks to strengthen PHC through various mechanisms. One of these mechanisms, and the most representative, is the family health strategy (FHS), created in 1994, which aims to expand access to health care at the locations where people live and work[3]. The FHS was integrated into the national primary care policy ("PNAB")[3] as a central health care unit and has expanded nationwide since its implementation, reaching 62.6% of the population or 131.2 million people in 2019[2].

The FHS is operationalized by family health teams composed mostly of nursing professionals who develop highly relevant practices to the effectiveness and quality of care provided to users[3]. Nursing work is regulated by the Law on Professional Practice #7498/1986, and nurses are responsible for carrying out all professional nursing activities, including the design and management of the work process. Nursing technicians, assistants, and aides, on the other hand, must perform partial activities under the supervision of nurses[4].

Care is the purpose of the nursing practice, which involves four dimensions: care for individuals or groups from conception to death; education, including permanent and continued education for nursing teams and health education for users; administration-management, including the coordination and organization of nursing work and the administration of care and institutional space; and investigation/research, including the production of knowledge needed for qualified practice[5].

The protagonist role of nursing in health is recognized internationally[6], and nursing professionals have been encouraged worldwide to create new horizons and reflect on their professional practice. The recent campaign Nursing Now aims to improve the health of people by strengthening the profile and status of nursing globally, empowering nurses when confronting care-related challenges, and maximizing their contribution to achieving universal access to care[6].

However, studies[7–9] on the work of FHS professionals reveals the numerous challenges they must confront, such as burnout, illness, and dissatisfaction, worsened by the accumulation of activities, bad working conditions, lack of planning before execution, and the provision of care itself, which depends on the multiple and complex needs of users.

In this regard and to identify the extent to which nursing practices in PHC cause illnesses in nursing professionals, a multicenter study was conducted on nursing practices in the Brazilian FHS and the interfaces in the illness of these professionals.

METHOD

This is a qualitative study based on the theorization of the work process and workloads[10].

The research scenario was selected intentionally and consisted of seven municipalities in the five regions of Brazil (Araranguá and Florianópolis, South; Brasília, Central-West; Rio de Janeiro – Capital, Southeast; Manaus and Nova Olinda, North; and Natal, Northeast) at 20 primary care units that operated exclusively with the FHS care model. Of these units, seven are in the South, five in the Central-West, two in the Southeast, two in the North, and four in the Northeast region of Brazil.

The participants were nurses, nursing technicians, and nursing assistants who worked in the FHS. The inclusion criteria were all nursing professionals who had been working in the FHS for at least one year. Nursing professionals who were absent due to vacation or leave of any kind were excluded. In all, 79 nursing professionals participated, of which 45 were nurses, 30 were nursing technicians and four were nursing assistants. It is noteworthy that the hiring of nursing assistants in the FHS is not mandatory, which explains the lower availability of these professionals in the scenarios and, consequently, lower representativeness in the research.

For data collection, standardized instruments were used by the researchers for each stage of collection, including, interviews, observation, and document analysis. The interviews were conducted to identify/characterize the process and division of nursing work and its sources of illness and burnout, with guiding questions in these topics. Different aspects of the work process, practice descriptions, and implications on worker health were addressed. The interviews were conducted in the workplace, recorded, and transcribed in full.

The non-participant observation and document analysis were carried out on the day of the interview or the following day to identify the standards and routines of the teams; documents and protocols created by the nursing

professionals; division, forms of organization, and management of work; and how planning of the FHS takes place. These procedures occurred concomitantly, on average during two work shifts (eight hours), and recorded in a specific instrument. Data collection was interrupted with the information was repeated and did not add new aspects with potential theoretical saturation[11].

Data were collected from 2015 to 2017 and analyzed using ATLAS.ti software version 8.0. In this software the set of 79 interviews, observations, and documents composed a project based on the stages of thematic analysis[12], namely, pre-analysis, exploration of the material and treatment of results, inference, and interpretation. Subsequently, the documents were read in full and significant excerpts were selected and analyzed. Codes that composed structured analytical categories were used, according to the framework of work processes in health care: nursing practices in the FHS and interfaces of practices in the illness of nursing teams in the FHS.

The study was approved by the Research Ethics Committee of the State University of Santa Catarina (opinion #366.844/2010 and amendment opinion #1.933.348/2017). The data used in this study were obtained from a multicenter study funded by a funding agency and with the participation of researchers from seven universities in different regions.

Informed consent was obtained from the participants, who were identified with the initial letters of each category (N - nurse; NT - nursing technician; NA - nursing assistant); the work region (S - South; CW - Central-West; N - North; SE - Southeast; NE - Northeast); and the sequence number (for example EN1, EN2, NTS1, NTS2 ...). Data from the document analysis (DA) or observation (OBS) were defined by the abbreviation followed by the region, for example DA South, OBS North.

RESULTS

Most of the participants were nurses (57%), women (91%), aged from 20 to 40 years (53%), and with over five years of professional experience (76%). In relation to work experience with the FHS care model, most participants had also been working for more than five years (53%). Regarding contract type, most had taken a qualification exam for civil servants (64%) and worked exclusively in the FHS (70%). The weekly working day was predominantly 40 hours (58%).

Nursing practices in family health

Concerning nursing practices in the FHS, the results indicate three dimensions of nursing work with a predominance of the care dimension, followed by the administration-management dimension and, finally, the education dimension. The investigative dimension was not noted in the statements of the nursing team.

In the **care dimension**, the most frequent nursing activities are related to direct care to users, either individually or in priority groups, thus revealing the importance of the longitudinality of care. In terms of work, the workers highlighted nursing consultations, which the nurses have the autonomy to schedule. Among the activities performed, preventive collection, prenatal care, and hypertensive and diabetic patients were also highlighted.

> *We have an agenda to fulfill. This is a positive aspect, it is a more organized thing, [...] this afternoon, I have a prenatal appointment; I already prepare for prenatal. I know that this morning, there was a home visit, so I already talk to the agents who do the visits; I know that tomorrow morning, I will do preventive collection* (NNE5).

> *Yes, every day, we have a different routine; I will give you an example. I arrive on Monday and know that that day, I only take part in the team's nursing consultation demands. On Tuesday, my demand is different, as it's preventive collection day and gynecological consultations. On Wednesday, I collect blood* (NSE8).

> *Nurses divide the work routine into periods for specific groups, such as childcare, preventive (women's health), hypertensive and diabetic (chronic diseases), and prenatal (maternal and child's health). Nurses have autonomy to define their schedule and the activities of the nursing team* (DA South; OBS South).

Home visits are considered important although it is less common than the professionals consider necessary, which is associated with the shortage of workers and lack of structural resources, such as vehicle availability. Nurses make home visits when requested by the community health workers (CHWs) or by nursing technicians and assistants who identify the need in previous visits. Nursing technicians more frequently mentioned dissatisfaction when it is not possible to perform home care.

We work with health workers, with nursing technicians, with nurses, and with physicians, and they all make home visits. The CHWs perform wound dressing, in the case of visits to women in the puerperium or visits to older people. We, the nursing technicians, have limited visits because there is a lot of work to do in here also (NTN5).

The biggest dissatisfaction for me is not doing some activities. I get frustrated when I cannot do more visits; you get stuck at the unit, inside the unit (NTCW1).

At the unit, nursing technicians and assistants receive users, dress wounds and remove stitches, distribute and administer medication, apply vaccines, and wash and prepare material for sterilization.

I perform several tasks at the same time, I am screening, then I have to attend at the pharmacy, then a patient comes for a dressing, remove stitches, and we rush to finish one procedure and start the other (NTCW3).

In the vaccine room, it's just me and another girl who apply vaccines, but I help in everything: visits, dressings, screening, reception, washing material (NAS1).

Nursing professionals often perform fragmented tasks, bordering partial division of labor, in which the work process is configured by the worker in poorly integrated actions merely to supply the immediate demand.

In **the administration-management dimension**, the activities predominantly conducted by nurses include supervising technicians, aides, and CHWs, coordinating programs, holding team meetings, defining schedules and organizing the work process of the nursing team and, sometimes, other professionals. This dimension occupies a good part of the working time of nurses and many of them, in addition to their care work, manage primary care, which includes coordinating the work carried out by the FHS.

We have no one to solve administrative issues. That task is ultimately conducted by me, as a coordinator. I often have to interrupt care because of administrative issues. I see that the biggest obstacle to a continuous workflow is having this added role of administration (ECO2).

In addition to unit coordination, I am also the unit nurse; sometimes, I am not 100% there to coordinate. And another thing I have difficulty with as a nurse here in the strategy is the number of accumulated activities, because there are several programs within PHC and at the health unit. What I see here, all these programs, nurses are responsible for coordination [...] then I see that the programs are all coordinated by one person, who also has to coordinate the unit. And this is one of the difficulties I have (NN4).

Nurses work a lot in both areas [management and assistance] because we, as management, have to organize the work related to assistance and take care of the people, the team and I find it quite tiring, dealing with employee conflicts; it's always the nurse who has to do the work and solve the issues. When something happens in the office, who do they call? For nurses, even if the problem is not directly related to nursing, if the problem is with the physician, they call us so we can talk to the physician (NS10).

With regard to coordination, we also have this overload, because in addition to attending, we coordinate the team and also the programs [...] And it helps until you get sick (NN8).

Nursing technicians and assistants also perform administrative activities, especially when the unit does not have a worker to perform these tasks.

I think nursing technicians are very limited to these assignments [...] *often getting overloaded with administrative work* (NTCW4).

We, technicians, are not only technicians, we are doormen, telephone operators, typists, pharmacists (NTN6).

At the moment, there are two nursing technicians working in the team, working in different shifts, applying vaccines, performing procedures at the primary care unit and home care, typing production of the e-SUS (OBS North).

The work of nurses includes FHS management simultaneously with care, with the necessary participation of technicians and assistants in administrative activities, indicating the absence of administrative assistants and transfer of this work to nursing.

The **education dimension** was identified from two perspectives aimed at users and members of the FHS. The participants mentioned the provision of guidelines with/to users, which mainly occurs through communication

between subjects involved in individual or group care, as well as participation in collective spaces, such as schools and churches.

> *You realize you did a good job with a prenatal appointment and follow-up of the child, got the mother to breastfeed until the sixth month, and realize that it was due to your guidance that this happened. You also realize this happens with other patients, such as diabetics, who are often unwilling to use medication, do not take care of their feet, but you manage to guide them and you notice changes. In the follow-up, you realize that they are protecting their feet, taking the medication correctly, that the tests already show improvements in blood glucose rates* (NCW3).

> *And we work a lot with groups* [...]*, there is a group for pregnant women,* [...] *a group for children,* [...] *for high blood pressure and diabetic patients,* [...] *and a smoker's group, which is also very interesting* (NSE9).

> *Sometimes, I do grandmother and grandfather day at schools and they participate, we teach the grandchildren to respect them. We have a huge partnership with our school; it really works, the health care at schools program really works [...]; it is the best thing we do for a better future, we do walks, we talk to them about throwing garbage in the middle of the street, about (the use of) water. It is very rewarding to work with them* (NTN6).

> *We do some that is in school, the health program in schools, the health care at schools program, then all year we do the follow-up, we take their weight, vaccinate at the school; the physician goes and does skin tests, eye tests,* [...] *we do lectures; joint work with the school, dentists, nurses, and the physician* (NTN5).

> *It motivates me to do the awareness activities, do the waiting room, talk to the patients about diabetes. You know, one simple thing: place a mirror here and teaching patients how to do the self-examination, and know that this patient can be a multiplier in her house, in the neighbor* (NNE6).

Also in the education dimension, the team meeting is considered important for sharing experiences and discussing cases, thus characterizing areas of permanent education and interprofessional exchange. The meetings are usually conducted by nurses and focus on discussing routines, monitoring users, planning and standardization of activities, and questions inherent to the work process.

> *When we work in the community, when we are going to talk about a patient who has stopped treatment, we talk about all of this in the team meeting, how to get to that patient* [...] *everything is organized in the team meeting* (NTSE1).

> *Every Friday, a meeting with the teams is held to discuss problems related to the care of users and to listen to workers regarding the improvement of the health service, even in interpersonal relationships and teamwork so that the service is improved* (OBS North).

Nursing plays a fundamental educational role in the FHS. Outside the walls of the units, it is also critical in homes, schools, on the street, among other locations, especially for priority groups, to ensure a greater number of people is reached. Moreover, nursing has become fundamental in permanent and continuing education at the FHS.

Interfaces of practices in the illness of the nursing teams in the family health strategy

Data collection allowed the identification of 19 types of illnesses related to the practices and dimensions of nursing work in the FHS. The illnesses were grouped according to workloads (mental, physiological, physical, biological, and mechanical), categorized in the practices and illustrated by statements of the participants, as shown in Chart 1.

Nursing practices at the FHS have interfaces in the illness of health workers, especially mental, which are related to working conditions.

DISCUSSION

Although most of the nursing professionals have stable employment, there is a high number of temporary employment contracts. The temporary contracts and lack of salary incentive for training, associated with structural and managerial deficiencies, have prompted diseases and disorders at the FHS, especially mental, as well as increases the turnover of professionals and hinder stable employment, which is fundamental for the longitudinality of care in the FHS[7,13], as also revealed in this study.

In the care dimension, the nursing professionals perform several activities to assist users, either individually or collectively. In carrying out these activities, the practice environments influence the professional work and lead to the mental suffering identified in this study, which chiefly arises from the accumulation of activities, shortage of workers,

MENTAL LOADS		
Occupational illness	**Nursing practices in the FHS (work dimension/s)**	**Excerpts on interfaces of practices on the illness of nurses**
Stress Insomnia Headache Burnout syndrome Anxiety Depression	Perform administrative and care work simultaneously **(care and administration-management dimensions)**; Working with shortage of supplies and equipment **(care dimension)**; Meeting excessive demands and users who do not understand the FHS model **(care and education dimensions)**; Not making home visits **(care dimension)**.	*I, in particular, have not had burnout, which is quite common with primary care or health care workers, but I have several friends, acquaintances, and professionals who have already had burnout. Because you deal with your limitations of a system, with a demand you can't meet and everything else* (NSE4). *I get anxious. Sometimes, the stress at work causes some anxiety. Sometimes, I want to tend to my work, but I cannot and then it is 4.30 p.m. and I have to leave it for tomorrow* (NTS8). *Working in a health program like this one, looking from a personal perspective, it is bad; it only causes stress, discouragement, the stress is huge. The workload is huge, the population demands a lot from us, because through the program, you have a lot to offer, but how can you offer anything without resources?* (NTCW5). *Some days, you get here and you already want to leave. Seriously. You are tired of everything, tired of work, of not being able to see results [...] sometimes, you are tired of working toward something and not getting any return from it* (NTSE2).
PHYSIOLOGICAL, PHYSICAL, AND BIOLOGICAL LOADS		
Occupational illness	**Nursing practices in the FHS (work dimension/s)**	**Excerpts on interfaces of practices on the illness of nurses**
Allergy Flu Respiratory problems Throat problems Hypotension Hypertension Urinary tract infection Obesity	Providing care in hot and humid places with poor ventilation **(care dimension)**; Administering medications and vaccines **(care dimension)**; Attending to patients with infectious diseases, with contact with secretions, body fluids, and microorganisms **(care dimension)**. Meeting excessive demands **(care dimension)**.	*This is a rented house, adapted* [...] *with a lot of infiltrations, a lot of mold, a lot of dripping; when it rained, we could not stay in the unit because of the dripping. At a certain point, when the workers started to have [health problems], 50% of workers felt itching in their bodies* (NNE6). *The risk is mostly because of the bacilli in the air; this week, in fact, I treated a flu and I am sure I got it here at the unit* (NN2). *The heavy workload has affected me a lot; sometimes, I do not drink water, go to the toilet, or sit for a few minutes to rest, sometimes, I have to treat urinary infection, last week, in fact, I had to treat one (NTCW5)* *Here, the volume of people is huge; it is not normal for me to be here now, talking to you, because I do not even have time to go to the bathroom, I do not have time to drink coffee, to pee, I only go to the bathroom when I can no longer hold it* (NTS2). *I, for example, became hypertensive, gained twenty kilos, I have insomnia, I have already had to use Diazepam a few times to sleep [...] and so, it was clear that my work was affecting me* (NSE3).

Chart 1 – Interfaces between nursing practices and illness, relating to type of workload

MENTAL LOADS		
Occupational illness	**Nursing practices in the FHS (work dimension/s)**	**Excerpts on interfaces of practices on the illness of nurses**
MECHANICAL LOADS		
Occupational illness	**Nursing practices in the FHS (work dimension/s)**	**Excerpts on interfaces of practices on the illness of nurses**
Repetitive strain injuries (RSI) Work-related musculoskeletal disorders (WMSD) Back problems and hernias Tendinitis Various physical pains (wrist, arms, legs, shoulder, knee, lower back)	Manual filling in papers throughout the workday **(care and administration-management dimensions)**; Dressings and procedures in uncomfortable positions (for example, dressings in the lower limbs, workers lean over for a long time) **(care dimension)**; Moving obese and/or dependent/bedridden users **(care dimension)**; Standing and/or walking for long periods **(care dimension)**.	*Today, I have two hernias and I have osteophytes. Before, it did not bother me, then I started doing dressings and I have lean too low, collecting blood, so it eventually caused severe back pain a couple of years ago. And one of these days, I helped a lady who was heavier than me, she was about to fall, I held her up and started feeling severe pain again* (NSE8). *The heavy workload is very hazardous to people's health, and it is not only my health; I have seen a lot of people get sick, the team's actual physician. Not to mention the injuries; a few days ago, I could not even lift my arms. I could not move my hand* (NTCW5). *We write too much, your wrist hurts; I think this will be a problem for me in the future because I feel pain. But we have to work; if it were computerized, it would solve many problems* (NTCW7). *It is actually physical, knee pain, physical tiredness, mental fatigue, and sometimes tendinitis* (NSE1).
Accidents	Performing invasive procedure with piercing-cutting instruments **(care dimension)**; Performing training and activities outside the primary care unit **(administration-management and educational dimensions)**.	*I have had co-workers who suffered work accidents with perforation, the sharps container was not being used correctly. And there was an accident* (NS4). *I have not had problems, but I had a co-worker, from the unit itself, who had an accident with a needle* (NCW1). *Another two or three nurses slipped during a home visit because they have to go over riprap, we have to climb a ladder that is about to fall, to go there, and see the bedridden elderly patient* (NN7). *Our technician went to a meeting and in external training, she suffered a motorcycle accident, underwent three surgeries, very serious complications, impaired some hand movements* (NN1).

Chart 1 – Cont.
Source: Research data, 2017.

excessive demands, lack of supplies and equipment, and limited knowledge of users and management about the work process of the FHS, thus compromising the quality of the services provided.

Among the practices, the nursing consultation is considered specific of nursing[4] and is part of the scope of their duties prescribed by the national primary care policy[3], as well as being considered a potentiality for the clinical practice in the context of PHC[14]. For the nurses in this study, the nursing consultation was mainly related to the collection and preventive examination, childcare, and prenatal care and, therefore, considered a privileged moment for care.

However, the challenges that permeate nursing care practices in the FHS are also present with regard to nursing consultation, such as structural precariousness that limits the clinical practice of nurses, accumulation of care and administrative activities, and lack of professionals, which causes nurses to assume demands of those who are absent and reduces the time available for clinical care, among others[9,14].

The home visit targeted specific cases and was primarily performed by nursing technicians and assistants, who mentioned frustration and dissatisfaction at not performing more visits. For the nursing team, the practices are still highly centered on the unit, with few activities outside the physical scope of the primary care unit, usually due to the high workload associated with a shortage of workers[7].

In the administration-management dimension, in which the nurse becomes responsible for administrative and managerial activities of the primary care unit, mental illness is especially characterized by stress and anxiety expressed in the workers as headache, tachycardia, insomnia, and irritability. Nurses feel they are the "core" of the work process, which causes an accumulation of activities that affects the quality of the practice. The study[6] reveals that they become more mentally ill because they feel overwhelmed and because they assume care and administrative functions simultaneously that they are not always able to fully perform.

The national primary care policy created the position of manager and recognizes that this professional should not be a member of the minimum team due to the excessive workload. The manager must complete a 40-hour workweek, manage the teams and inputs, and monitor and analyze indicators, among other activities[3]. In this regard, the nurse of the team should meet care demands as a priority, which can potentially reduce the accumulation of activities and high workload.

Also in this dimension, mid-level nursing professionals increasingly deal with administrative work, such as controlling schedules, scheduling appointments, completing medical records, and filling out papers[5], which means they must modify their practice to add these activities to their daily routine. It was found that nursing assumes administrative demands, which restricts the time required to provide care mainly due to the lack of support workers to perform these tasks.

The education dimension in nursing practices in PHC was observed in the provision of individual or collective guidelines, outside or inside the primary care unit, and begins from the moment of the user reception until the end of the consultation with the nurse at the primary care unit, at home, or in other spaces such as schools and community centers. By going beyond the walls of the primary care unit, the FHS learn about the territory and strengthen the bond with the community, considered critical for strengthening the FHS as a gateway to the Unified Health System[2–3].

Nursing technicians play a fundamental role in this dimension by applying vaccines and providing guidelines on dressings during home visits and health education in community areas[15]. According to the nurses, education for individuals or in priority groups aims to improve the health condition of users, contribute to self-care, and promote health and is, therefore, considered fundamental in PHC[14].

The need for changes regarding the potential of educational actions for health promotion and disease prevention implies rethinking nursing practices in PHC and seeking other forms of creating awareness in users, as well as propose specific work tools, such as group activities and personalized care plans, in order to contribute to universal access to health services and consolidate care for health promotion and resolution[1,9].

In contrast, the investigative dimension of nursing practices, which was absent in this research, signals a lower qualification potential of the practices. The gap resulting from the absence of practices in this dimension reinforces the importance of including and giving visibility to evidence-based practices in the daily work of nurses, which can contribute to the qualification of the care provided and to the expansion of nurses' autonomy towards the precepts of PHC.

Regarding nursing practices in the FHS and interfaces in the illness of professionals, it was revealed that the lack/scarcity of material resources and excess of care demands, associated with the limited knowledge of users and managers about the FHS care model, are indicated as main causes of mental illness. The lack of means and tools of work, inadequate conditions and numbers for the practice, and the pursuit of users for immediate and curative assistance, are recognized by researchers[7–9] as causes of dissatisfaction and increased workloads in the FHS.

The predominance of illnesses related to mental suffering in nursing, evidenced by anxiety, insomnia, headache, depression, stress, and burnout syndrome, were also found in another study[13]. In a way, nursing faces a social trivialization of its potential for burnout since few specific actions and political strategies have been considered in Brazil, and advances are indeed necessary, as stressed by the Nursing Now campaign.

According to the nurses, illness is associated with the technical, care-related, and administrative-managerial responsibility for the work of the nursing team and other professionals, characterizing the nurse as the most responsible for the quality of care offered to users. The nursing technicians and assistants emphasized illnesses resulting

from direct contact with users, especially due to increased mechanical and physiological loads.

The illnesses and disorders resulting from physiological and mechanical processes were mostly related to the nature of the work performed by nursing professionals in the care dimension, in which the biological risks are intrinsically associated with exposure to microorganisms due to contact with the secretions of users and management of drugs or immunobiological agents. Furthermore, it relates to structural problems such as humid, hot or cold environments with poor ventilation (physical loads). To minimize the effects of biological risks in nursing practices, knowledge, attitudes, and perception of the importance of standard precautions, such as the use of personal protective equipment to protect both users and workers, is necessary[16].

In the case of illness related to mechanical loads, back problems and the worsening of existing alterations were mentioned, especially among nursing technicians, due to the characteristics of their work, and again reinforced by the partial division of labor, such as dressing wounds in uncomfortable and not very ergonomic positions, moving users with restricted mobility, and a shortage of workers to cooperate in the practice.

Pain in the legs, knees, and lower back were associated with the work routine and aggravated among those with double employment contracts. The lack of computerization also leads to the excessive filling in of documents and stresses the importance of devices that facilitate practices in PHC and improve nursing working conditions[9].

The increase in musculoskeletal injuries and musculoskeletal symptoms is related to work, its organization, and the way the work is divided, all of which reduce performance and cause various pains, especially in the lower back[17]. In this regard, regulating a 30-hour workweek and a wage floor for the category can help protect the health of these professionals.

In relation to accidents in the FHS, those related invasive procedures with piercing-cutting material were identified. The main causes of work-related accidents with piercing-cutting objects and contact with bodily fluids are the lack of attention of professionals and an excessive workload[18]. Road accidents were related to worker exposure to work outside the primary care unit and may cause injuries, serious illnesses, or totally or partially incapacitate the worker and should, therefore, be the constant focus of educational and preventive activities. The findings reveal a high risk of work-related illness and accidents among nursing professionals, which becomes even more evident with the pandemic caused by the coronavirus[19], albeit typical of nursing work in Brazilian PHC.

Moreover, authors[10] state that workloads interact with each other and one illness can also be related to another; for example, struggling to meet excessive care demands causes stress among workers and possible accidents with biological material due to fatigue. Given this finding, training, education, and research should be emphasized to suggest behaviors and ways of coping with the difficulties experienced in the daily routine of the FHS.

FINAL CONSIDERATIONS

It was identified that nursing practices in the FHS focus on the dimensions of care, and administration-management, and potentially have greater repercussions on the illness of these professionals, especially due to problems in organization and in the work environment. The shortage of educational practices and absence of the investigative dimension among the professionals participating in the research were also evidenced, which affects the visibility of the profession.

Mental illness was the most evident factor; however, those related to mechanical loads were also evident, potentiated by the exhaustive execution of activities, especially by technicians and nursing assistants. Work-related accidents were identified as arising from the way workers perform the work, in the handling of instruments, and due to the unavailability of protective equipment and instruments required for care, which reinforces the need for improvements in nursing work conditions.

The use of Atlas.ti software enhanced the analysis of the results and allowed the sharing of findings by researchers from different regions, suggesting this resource can be interesting for qualitative research. One limitation is the cross-sectional nature of this study, with specific scenarios and participants, thus indicating the need for further research in Brazilian PHC.

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