Abstract  This study was multicenter with a qualitative approach, which sought to identify the elements that can increase or reduce the workloads of the Family Health nurse. Forty nurses were interviewed, from 36 teams from five regions of Brazil, considered successful according to the requirements of the National Policy of Primary Care and with good evaluation in the National Program for Improvement in Primary Care Access and Quality. Data collection was performed by instrument triangulation, using a semi-structured interview, observation and documentary study, from 2013 to September 2016. The findings were analyzed based on the Thematic Content Analysis and categorized with the help of Atlas.ti software. It was identified that the elements that most influence the increase of the workloads are the precariousness and deficits in the work environment, materials and equipment, added to the numerical deficit of the workforce and the excess of health care demand. However, teamwork, recognition for the performed work, bonding with users and good interpersonal relationships, all contribute to reduce the workloads. We highlight the dialectic present in the elements of the work process. They can increase or decrease workloads influenced by objective conditions, the moment and way they are handled.

Key words  Nurses, Work conditions, Work, Primary Health Care, Family Health Strategy
Introduction

Health is a priority in people's lives and is part of the international agenda for sustainable development formulated by the United Nations, but its guarantee as a universal right is a major challenge.

In this scenario, the debate on health systems becomes relevant, especially regarding the access and improvement of quality of care, with emphasis on public funding and the role played by the workforce in the effectiveness of the health care provided to the population. The World Health Organization (WHO) recognizes that "there is no health without the workforce".

With regard to who performs the health work, there is a recognition of the role played by nursing, both due to the number of workers, as well as by their presence in almost all health institutions and the responsibilities assumed at the institutional level, including care, management and administrative actions and education, with a strong impact on the quality of the provided services.

Currently the profession includes 19.3 million nurses worldwide. In Brazil, nursing represents half of the health workforce and has more than 2 million professionals, 24% of which are nurses, 56% technicians and 20% nursing aides. Regarding the health work market, nurses constitute the second most significant category working in higher-level jobs. Regarding the middle level, nursing technicians and aides represent more than 70% of the positions in the health care system.

Since the Alma-Ata International Conference of 1978, Primary Health Care (PHC) has been reaffirmed as a promising strategy to face the serious health problems that affect the planet's population. In Brazil, PHC was created as a government policy integrating the National Primary Care Policy (PNAB, Política Nacional de Atendimento Básico), specially concerning the Family Health Strategy (FHS). Nursing is part of the minimum team recommended by the Ministry of Health and its presence has potential to influence the quality of care provided to the population.

The FHS proposes to expand the access to health services, based on the principles of the Brazilian Unified Health System (SUS, Sistema Único de Saúde). However, even in the presence of the promising proposal and the several investments, many challenges stills remain. These are regarding the system effectiveness, the public-private association in the provision of health services, the underfunding of SUS, the magnitude of the country and the intense regional inequalities.

Just like other jobs found in today's society, nursing is influenced by the conditions and concrete working relationships established in the daily practice settings. This scenario has implications in the workloads (WL) to which nurses are exposed daily. A study by Trindade & Pires shows that working conditions and relationships can negatively affect FHS professionals and also the care outcome.

The WL are constituted by elements found in the work process that interact with each other and with the body of the worker, which can cause burnouts or illness. These elements are determined by factors that are often not clearly identified by the professionals themselves. To know the elements that contribute to the increase and reduction of workloads contributes to the strengthening of the positive aspects of work and to minimize the negative aspects.

Therefore, this study aims to identify the elements that contribute to the reduction and increase of workloads of nurses working in Brazilian PHC.

Method

This is a qualitative study, with data collection carried out through triangulation techniques (interview, observation and documentary study).

Participants were included according to the intentionality criterion: nurses in full exercise of their function and who had been working for at least one year in the FHS; nurses that were part of Family Health Teams (FHT) considered as reference (through indications of managers and the results of the evaluation of the first cycle of the National Program for Improvement in Primary Care Access and Quality – Programa Nacional de Melhoria do Acesso e da Qualidade da Atenção Básica – PMAQ-AB, published in 2013); nurses working in at least one city in each of the geographic regions of Brazil (Florianópolis-SC, South region; Rio de Janeiro-RJ, Southeast region; Natal-RN, Northeast region; Belém-PA, North region and Brasília-DF, Midwest region); and nurses who were available at the Health Unit (HU) to be interviewed at the time of data collection.

Forty nurses from 22 HU who provide care in the FHS modality participated in the study, from five Regions of Brazil: nine in the South, nine in the Southeast, seven in the Northeast, six in the North and nine in the Midwest.
Figure 1 shows the profile of the research participants according to sociodemographic characteristics.

Figure 2 shows the characterization of the participants regarding employment bond and working hours.

Data collection took place from March 2013 to September 2016. For the interviews, a semi-structured script was constructed based on Karl Marx\textsuperscript{11} work process theories and Laurel and Noriega\textsuperscript{14} theories on workloads. In addition to the interview script, scripts were used for the documentary and observational study, aiming a better understanding of the studied work environment.

Observations were recorded in a field diary. The analyzed documents included: worksheets and information system data, production sheets, minutes, record books, panels, and posters. At the end there were approximately 40 hours of interviews, 196 hours of observation and more than 300 assessed documents.

The data were analyzed following the principles of content analysis, considering pre-analysis, material examination and interpretation and by associating resources of the Atlas.ti software\textsuperscript{15}. The text files were inserted into the software, selecting significant quotations and assigning codes. The codes with thematic convergence to the research object were aggregated in code groups and associated in analysis categories, presented in visualization networks.

The research project followed the requirements of Resolutions 466/2012 and 510/2016 of the National Health Council\textsuperscript{16,17}, and was approved by the Ethics Committee on Research with Human Beings of the Federal University of Santa Catarina (UFSC) and by the Ethics Committee on Research with Human Beings of Universidade do Estado de Santa Catarina (UDESC).

The participants agreed to be part of the data collection and signed the Free and Informed Consent Form (FICF). To guarantee the anonymity of the participants, they are coded according to the region where they worked, being named by the letter N for nurse, region where they worked (S-South; N-North, SE-Southeast; NE-Northeast and MW-Midwest) and ordinal number of the sequence of the performed interviews. In turn, to preserve the identification of the observed HUs, the acronym OBS was used, followed by the identification.

### Results

The results were structured into two macro categories: elements present in the work process that contribute to the increase and reduction of workloads.

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**Figure 1.** Profile of nurses regarding gender, age, schooling, length of professional and FHS experience, 2013 to 2016.
Elements present in the work process in the FHS that contribute to the increase of nurses’ WL

The main elements that generate WLs for nurses working in the FHS are summarized in Figure 3.

Among all the elements present in the work process that contribute to increase the WL, the precariouslyness of the work environment stood out.

It’s exhausting [...]. When I got here, some things annoyed me a lot [...] “there is no office”. One vacates and you say, “can I see a patient here?” Then you go in and another one is waiting (NSE1).

The listening to users carried out by professionals happens at the reception, in the corridors or in the office, if available, and depending on the content of the information (OBS Northeast).

The physical structure is very poor, we have nowhere to put many things. And you can see that here, it was supposed to be an auditorium, in the
end it became an office. They just multiplied the teams and did not think of setting up an adequate physical structure (NMW7).

The lack or precariousness of materials and instruments can negatively influence care, generate rework, as well as affect the worker-user relationship.

Some people had to send patients away. I had four slides, the first ones that arrive, I will collect the material, the others will have to leave and reschedule it for another day because you have no materials to do them [...]. I think the first thing is the lack of resources [...], it greatly increase both the emotional and even the workloads (NMW4).

I have an autoclave that has been out of order for more than 1 year and to get this autoclave to be replaced takes a long time, because it depends on bidding to buy a new one, which makes me have to wait for the solution (NS2).

Another important element causing the increase in WL is the excessive demand in the HU, together with the complexity of health needs and the significant number of users living in socially vulnerable situations. Moreover, acting not only within the physical space of the HU, but also in the community, in order to meet one of the FHS prerogatives, also increases the WL. This scenario is associated with the existence of territories with underestimated populations.

The load increases a lot because the number of visits is so large, you just miss some other things you had to see, and so, we will not get any quality (NSE9).

One of the main problems is the amount of demand. A territory contains more than 40,000 inhabitants for a HU that has only 7 family health teams and 3 oral health teams. With several professionals absent due to vacation, medical leave, among others (OBS South).

The nurses report the numerical staff deficit as a generator of their WL increase. This is aggravated by the lack of commitment of some professionals who fail to perform their assigned work activities due to absence, neglect or demotivation, which leads some nurses to end up doing the work of coworkers and those tasks that are "nobody's work".

We will go for six, seven months without these professionals (a nurse and a dentist), because he (dentist) still has vacation or some special license. And then it becomes an overload for those working in the unit, since this area will not disappear because the professional is not here. On the contrary, [those who live in this area] they come, and we...
have to distribute between among those working in the unit (NS8).

I take a lot of work home, because here I have many duties, besides having to visit patients, provide prenatal care, have to collect preventive gynecological tests, treat the diabetics, hypertensives, perform collective health education, participate in the Brazilian program health at school, there is the population no scheduled looking for care, as well emergencies. I find it very complicated, so many duties (NMW2).

The excess of duties, including those that are not the nurse’s responsibility, such as, for example, bureaucratic activities in a BHU, even though the unit has a manager hired for this function, combined with care and educational activities, have an impact on both the work and health of nurses.

[...] so, making calls here, there, solving a problem there, plus nursing care issues. [...] I feel that nurses are very overloaded in primary care (NSE3).

In this context, professionals consider that the working hours are very high, due to the intensity of the workday, as explained by the participant:

The working hours are very heavy. And it increases my anxiety, I’ve had a peak of stress, I’ve had a peak of anxiety (NSE5).

Management failures, both at municipal and higher level of health system, are among the relevant reasons for the increase in WL. The failures are related to the lack of professionals in the teams, the work demands by managers, which are often considered unnecessary, but also the absent of decision making by managers.

The PHC coordination, I think it does not always make my job easier, which I can consider an overload, because it will overload me later. Some requests from the coordination and from PSAC [Planned and Scheduled Area Coordination], for me they do not collaborate with my work process here (NSE4).

You have to stop to solve something that a bad management creates [...] it should be just the opposite. I think the manager is there to help you and not to create a problem for you (NMW7).

The nurses reported feeling anxious while trying to perform all the necessary tasks and having difficulties in performing the requested ones and those they consider important.

My self-assessment is that I can’t handle it. I can’t handle the care, to fill and type eSUS forms [Electronic Forms of the Brazilian Health Care System – SUS], handle the demands that the nurse has to answer to the Sanitary District, make the worksheet of educational actions. So, I feel sad for not being able to perform all these tasks, this all generates suffering (NNE7).

The nurse’s work in FHS includes a lot of bureaucratic activity, the management of everything. As the volume of care is also very large, sometimes I feel that I am not fulfilling all the activities I need (NSE4).

**Elements present in the work process in the FHS that contribute to reduce nurses’ WL**

The work in the FHS can be a generator of stress and illness; however, there are elements that contribute to make this work less difficult, or even more pleasant, with a positive impact on WL. The synthesis of these findings is shown in Figure 4.

The nurses mentioned, with greater emphasis, teamwork as the main responsible for reducing WL. Collaborative teamwork, with the joint commitment of all participants and action planning, contributes to the adequate function of the work in the FHS, making it more effective and enjoyable.

Knowing that we have a team that works and really concerns about the user facilitates [...]. The commitment of all employees brings security even for the team works [...] (NSE7).

In my unit I have a very good team and we have a very nice interaction. So, it helps a lot to be able to accomplish everything (NN4).

We always bring everything to share at the team meeting. It is very important that everyone participate in all decisions. All of them are discussed [...] to see the best way to do (NSE9).

In this context, it is also clear that only the minimum staff prescribed by the National Policy of Primary Care (PNAB) is not sufficient to conciliate all prescribed tasks.

We have the NASF [Núcleo de Apoio à Saúde da Família], which is a special professional group to support the Family Health Teams. [From the NASF] the psychologist participates a lot in our conversations, the nutritionist also gets involved in some cases. So, participating in the comprehensive care of the patient is nice (NSE8).

For all workers to be able to work in a health care team and perform their tasks adequately are necessary good interpersonal relationships and good communication.

We have a good relationship; we exchange things. The relationship is very good (NNE7).

Everyone’s commitment here motivates me. Everyone knows their own responsibilities and each one of us cares for the good of others, in putting
themselves in the other’s shoes. This motivates me to continue here (NMW2).

Positive bonding with the users contributes for them to feel part of the process, facilitating the therapeutic action and responding better to treatments and guidelines.

The bonding is very good, knowing the patients helps a lot. You know who the patient is, which patient can wait [...] you can ask him or her to come back in the afternoon or not (NMW7).

[...] It’s a population that understands if we say no, we hardly have a bigger problem, and this is due to the bond (NS8).

The adequate function of care networks and the resolutivity in the actions positively influence the quality of care provided and the satisfaction of users and professionals, contributing to the reduction of WL.

A pregnant woman needs an assessment with the nutritionist, I can arrange it here, I do not need to refer her. So, I make it easier for me, easier for the user, who doesn’t have to go somewhere else (NSE7).

Being able to solve [...] perceiving that, in fact, we did it. Our greatest goal, which is actually the patient. Help the patient get better (NMW8).

When nurses feel part of the work process and “like what they do”, daily work becomes “lighter” and, apparently, simpler.

I really like what I do, I study every day (NS4).

I enjoy being in the unit. I miss it. When I’m not here, I call, I check my email, I follow via WhatsApp (NSE7).

In order to nurses perform a good quality work, the support from colleagues, users and managers from all governmental levels is necessary, and these types of support are important to reduce the WL. The manager should be the one who facilitates the process and contributes to the planning and organization of work.

We can talk and readjust our care consultations with what we have. This gives us some relief, the fact that we have management support to be able to do so. Having the freedom to implement our services according to what we have. That brings comfort (NMW9).

And the support from the management in general, they support us a lot. This is very good for us [...] knowing that we have this support from the administration (NSE5).

In addition to the elements associated with the workforce, the work object and the relationships that permeate the work process, there are elements related to the instruments. These, when present at adequate amounts and of good quality, become allies and contribute to facilitate the care and management process.

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Figure 4. Elements of work in the FHS that contribute to reduce the nurses’ workloads. Brazil, 2013-2016.

Support from extra professionals

Good interpersonal relationship

Adequate operation of care network

Bond

Management support

Presence of physical and material resources

Enjoy working at FHS

Teamwork

More teams in one HUT

NASF

Resolutivity in the actions performed

Reduces WL

Figure 4. Elements of work in the FHS that contribute to reduce the nurses’ workloads. Brazil, 2013-2016.
I think the structure of the unit, although we have increased the number of teams and do not have enough offices for everyone, I think we can handle it. And regarding the material, we have enough as much as possible, so we have not gone without something that we needed to work, and so it is important to have material to work with (NS7).

Discussion

Currently in Brazil, the FHS is an important labor market for nurses18, and the study of the work of these professionals, especially the aspects/elements present in their work process that can positively or negatively influence their workloads, assumes significant relevance.

Regarding the sociodemographic profile of the nurses participating in this study, there was a predominance of women, young adults, with significant experience (82.5% over 5 years) and good qualification, with 82.5% having completed residency or specialization courses.

The findings are close to those of the Brazilian Nursing Profile7, regarding female hegemony and the predominance of young individuals in the profession7,8. Similarly, regarding qualification, previous studies conducted in the Midwest, North and Southeast regions of Brazil obtained the percentages of 53.1%, 80% and 93.8%, respectively, of nurses working in the FHS with postgraduate studies19-21.

FHS teams that have nurses with more experience and higher level of schooling have more satisfactory results in relation to the requirements of the care model, such as accessibility, longitudinality, coordination capacity and comprehensive care to families and communities21,22. Based on what is prescribed in the PNAB10, the professional nurse is required to perform comprehensive care, which includes health promotion and protection, disease prevention, treatment, rehabilitation and health maintenance of individuals and families. Better training contributes to achieving the desired efficiency and effectiveness in attaining comprehensive care.

Among the elements that increase the workloads in the FHS, the precariousness of the work environment stands out, related to deficiencies in the physical structure and lack of materials, that means deficits and deficiencies in the work instruments. The literature also shows that the lack of equipment and inputs is present in most HU in Brazil, restricting the scope and resolutivity of actions and limiting the capacity to meet the population’s health problems23. Instruments of work, in a broader sense11, include what is placed between the worker and what will be transformed by them, and also the environment where the work takes place. Deficits and precariousness of these instruments make difficult to perform one’s work and generate increased loads. This is a problem of which resolution is beyond the scope of professional governance, and when the performance is limited, it brings feelings of sadness and powerlessness, generating discouragement and dissatisfaction, as disclosed by the nurses in this study.

The nurse assumes the coordination of the nursing work and, often, the coordination of the HU. Thus, they expand their performance by adding attributions beyond their professional core. Despite the relevance of HU management to health care4, the duplication of activities generates increased workloads. The excessive number of activities performed by nurses can trigger a series of processes involving frustration and stress, and stressed workers are more susceptible to work-related accidents and occupational diseases related to psychological disorders, such as depression, anxiety and altered sleep patterns, which result in reduced productivity and high absenteeism rates25. Excessive demands constitute a stressor factor that makes workers more demotivated25. In addition to this picture, there are possible consequences for the quality of care provided to users, including patient safety26.

Management problems also generated increased workloads. These problems interfere in the resolutivity of care, in the organization modes and work management and in aspects of working conditions, such as excessive working hours. The PNAB10 establishes a mandatory 40-hours work week for nurses and other members of the FHT, which corresponded to what was found in the
survey: a significant majority of the nurses participating in the study work 40 hours per week or more.

In the recent health care scenario in Brazil, there are other “shadows”, with possible consequences on the market and working conditions of nurses and other workers and a negative impact on PHC/FHS. Noteworthy is the Constitutional Amendment N. 95, approved in 2016\textsuperscript{27}, which froze public spending for 20 years, greatly affecting the historically underfunded SUS. The consequence of this normative may be cutbacks in employment contracts, and professionals will have to treat a growing population with the same resources. In this scenario, the demands for increased productivity grow, leading to the imposition of rhythms and ruptures that deviate from the time of human life, requiring adaptability and flexibility\textsuperscript{28}. The context of scarcity of resources can lead to the intensification of demands by managers, contributing to the increase in the WL.

Another “shadow” against the effectiveness of PHC lies in the constant changes in the PNAB as the change approved in 2017\textsuperscript{10}, which alter fundamental aspects in PHC attributes, such as the longitudinality of care.

On the other hand, elements in the nurses’ work process that reduce workloads were identified, with teamwork being one of the most significant. The cooperation, collaboration and division of responsibilities in teamwork contribute considerably to the improvement of the work process and stimulate professionals to face their difficulties based on the specificities of each one, while respecting the different ways of dealing with challenges. This finding refers to the recognition that the organization and relationship modes have an impact on the workforce\textsuperscript{11}, especially on the workers’ health\textsuperscript{14}.

In the teamwork, the obtained results are greater than the sum of individual results, increasing the effectiveness and efficiency of care provided to the population\textsuperscript{29}. Teamwork does not always mean working in a harmonious way; the differential lies in transforming conflicts into growth, knowing how to work with differences of ideas or behaviors and, therefore, acting professionally in the presence of conflicts\textsuperscript{30}. Thus, a good relationship emerged as a workload reducer and a mediator of the participants’ work difficulties.

The NASF proposal strengthens teamwork, as it also involves co-responsibility and integrated care management with the Family Health Team (FHT) professionals. Care and therapeutic projects are shared and contribute to improve the actions’ resolutivity. This matrix support was also mentioned as a positive aspect in another study\textsuperscript{31}, considering it as a support for teams to solve problems, assisting users and minimizing the demand for specialized care.

Work affinity and bonding contribute to reducing workloads. Affinity makes it possible to look at the work and see oneself as an integral and important part of result achievement, which contributes to the reduction of WL. The importance of bonding in Family Health has been recorded in recent literature\textsuperscript{32}. This enables nurses to become a reference in user assistance, creating bonds of complicity between the professional and the user, and it has been considered as a facilitator of FHS practices, contributing to the production of more effective care\textsuperscript{33}.

Good working conditions, including the adequate function of the care network, the resolutivity of care and managerial support, have also been mentioned as significant for the reduction of nurses’ WL. Working conditions, organization and relations, as mentioned in the theory of work process\textsuperscript{11} and of workloads\textsuperscript{14}, dialectically, generate an increase in WL when deficient and a reduction when satisfactory.

Besides being facilitators of the work, the adequate function of the care networks and provide resolutive care positively influence the bonding with the users. To rely with other health care services and know that they will perform their role effectively and safely, contributes to the consolidation of trust between professionals and users and ensures the quality and continuity of care.

In summary, the findings of this study are similar to those found by other researchers on this subject\textsuperscript{12,13}, when studying the group of professionals working in PHC/FHS. These studies describe that the main elements that generate WL increase in the FHS multidisciplinary teams are associated with working conditions, such as: work overload; excess demand; deficits in physical structure; insufficient workforce availability; insufficient wages and excessive working hours. All of these elements have a strong relationship with service management. The authors\textsuperscript{12,13} also report that teamwork, bonding with users and affinity with the work performed, are factors that reduce the loads, constituting protective aspects for the work.
Final considerations

The study identified the elements of the work process of FHS nurses that contribute to decrease and increase workloads. Regarding the work process, the elements related to working conditions and relationships, work management and the work object of PHC nurses (service users) stands out. The study identified problems in working conditions in the FHS in the five Brazilian regions, interfering with the nurses’ professional practice.

The workloads are intensified by the still existing deficits in physical structure and human and material resources, by the high work demand and the problems related to the management of units and municipalities. The increase in WL can lead to the professionals’ dissatisfaction, burnout and even illness.

If there are shadows, there are also lights, and in this sense, nurses take shelter in the light of teamwork, in enjoying what they do, getting support from the NASF teams, and living good relationships with users and co-workers. Thus, they are motivated to perform their daily functions, aiming at attaining continuity and quality of care.

This study emphasizes the dialectic present in the elements of the work process that can increase or decrease workloads. The positive or negative influence of this relationship depends on concrete, objective conditions, but also on the moment and the way these elements manifest themselves and how they are managed by nurses.

The study results provide insights to understand how workloads are currently expressed in this important nursing work market in Brazil. However, it is noteworthy that the research involved only Family Health teams considered as reference for local managers and that, in the majority, had a good evaluation in the PMAQ-AB. Therefore, further investigations in different scenarios should be carried out, contributing to the increase in knowledge about the workloads present in PHC, as well as providing subsidies to public policy makers, aiming to rethink the work process in this context, to the benefit of SUS guidelines and principles and universal access.
Collaborations

D Biff, DEP Pires and ECN Forte worked in the study conception and design, data analysis and interpretation. D Biff, MDA Scherer and J Soratto participated in data collection. D Biff, DEP Pires, ECN Forte, LL Trindade, RR Machado, FR Amadigi, MDA Scherer and J Soratto contributed to the writing and critical review of the manuscript.

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