

Self-care of informal male workers during the COVID-19 pandemic in the light of Orem's theory

Autocuidado de homens trabalhadores informais durante pandemia de COVID-19 à luz da teoria de Orem

Autocuidado de hombres trabajadores informales durante la pandemia de COVID-19 a la luz de la teoría de Orem

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ABSTRACT

Objective: To understand the self-care requirements of informal male workers in carrying out their activities during the COVID-19 pandemic, in the light of Orem's theory.

Method: Qualitative approach, with an exploratory descriptive nature. Data collection was conducted through a closed questionnaire, with questions that refer to the self-care requirements and semi-structured interviews, both conducted in a virtual environment. Ten men working as delivery workers and app drivers participated. Data analysis was performed using thematic content analysis.

Results: The diagnosis of the self-care requirements performed by each of the interviewees was presented.

Final considerations: The work performed by the participants influences the self-care requirements of the population studied, and it is possible to infer that as specializations of these requirements occur, they are no longer performed or are practiced superficially.

Descriptors: Men's health. Self care. Work.

RESUMO

Objetivo: Compreender os requisitos de autocuidado de homens trabalhadores informais na realização de suas atividades durante a pandemia da COVID-19, à luz da teoria de Orem.

Método: Abordagem qualitativa, de cunho descritivo exploratório. Dados coletados por meio de questionário fechado, com perguntas que remetem aos requisitos de autocuidado e entrevistas semiestruturadas, ambos efetuados em ambiente virtual. Participaram dez homens atuantes no trabalho informal como entregadores e motoristas de aplicativos. A análise de dados foi realizada por meio da análise de conteúdo do tipo temática.

Resultados: Apresentou-se o diagnóstico dos requisitos de autocuidado executado por cada um dos entrevistados.

Considerações finais: O trabalho desenvolvido influencia os requisitos de autocuidado da população estudada, sendo possível inferir que na medida em que ocorrem as especializações destes requisitos, estes deixam de ser realizados ou são praticados de modo superficial.

Descritores: Saúde do homem. Autocuidado. Trabalho.

RESUMEN

Objetivo: Comprender los requerimientos de autocuidado de los trabajadores informales en el desempeño de sus actividades durante la pandemia de COVID-19, a la luz de la teoría de Orem.

Método: Enfoque cualitativo, de carácter descriptivo exploratorio, basado en la Teoría del Autocuidado. La recolección de datos se realizó a través de un cuestionario cerrado, con preguntas que se refieren a los requisitos de autocuidado abordados por Orem y entrevistas semiestruturadas, ambas realizadas en un ambiente virtual. Participaron diez hombres activos en el trabajo informal como repartidores y choferes de aplicaciones. Análisis de datos realizado a través del análisis de contenido temático.

Resultados: Se presenta el diagnóstico de los tipos de requerimientos de autocuidado descritos por Orem y realizados por cada uno de los entrevistados en su cotidiano.

Consideraciones finales: El trabajo desarrollado por los participantes influye mucho en los tipos de requerimientos de autocuidado de la población estudiada, y es posible inferir que a medida que ocurren especializaciones de esos requerimientos, ya no se realizan o se practican superficialmente.

Descritores: Salud del hombre. Autocuidado. Trabajo.

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■ INTRODUCTION

The delivery workers and app drivers have become essential occupations on the national scenario during the COVID-19 pandemic in Brazil in 2020. In a time of social isolation, aimed at seeking protection against the SARS-CoV-2 virus, these professionals went against self-care practices: they transited through numerous spaces and maintained contact with a multitude of people.

In 2022, 3,025 professionals in the field participated in a research conducted by the Brazilian Center of Analysis and Planning (CEBRAP) and the Brazilian Association of Mobility and Technology (AMOBITEC), allowing to profile these workers: regarding drivers, the average age was 39 years, with 60% of interviewees having completed high school, 62% of whom were black or brown, comprising 95% of males. Among app deliverers, 97% were men, comprising 68% black or brown, with 59% having completed high school, with an average age of 33 years⁽¹⁾.

These are recognized as self-employed because of their flexibility in the organization of their work schedules, allowing planning tasks according to availability, but on the other hand, they must remain connected as long as possible to the application so that they conquer more delivery offers and better yields on the platforms. This issue contributes to precariousness, since working conditions are deficient, associated with the lack of public policies aimed at this population, which could ensure physical and mental support, constituting a determining factor in guaranteeing basic rights for this category of workers⁽²⁻⁴⁾.

Existing works either deal with the male self-care deficit^(2,3) or the precarious working conditions of this population^(4,5), and it is not possible to identify a study in the scientific literature that focused on looking at the self-care reality of these professionals.

Therefore, this study focuses on the self-care practices of these workers in their work environment. For this purpose, it employs concepts from Dorothea Orem's theory of self-care⁽⁶⁾.

In the 1950s the theorist developed a model of self-care that consists of three theories: the theory of nursing systems, the theory of self-care deficit and the theory of self-care. In the theory of self-care, it can be described as the adoption and practice of behaviors favorable to the health of those who perform it, with the objective of preventing and ensuring the maintenance of life as they are instructed to do so⁽⁷⁾. On the other hand, when self-care, despite basic, is no longer adopted or performed, what Orem's theory calls self-care deficit may arise⁽⁸⁾. When there is a self-care deficit, a nursing

system is activated, that is, a set of actions and interactions between nurses and patients.

This study will only use the theory of self-care and, among the fundamental elements in the theory, three types of requirements or demands can be identified for the assessment of self-care. These requirements are considered one of the pillars of the theory, and must be achieved to obtain self-care, namely: universal requirement of self-care related to basic actions for maintaining health, performed daily and at all stages of life; development requirements, understood as special requirements that occur in a specific phase of the life cycle; and the health deviation requirements, which are requirements in situations of diseases and injuries, where there are changes in health situations⁽⁶⁾.

Looking at the self-care of delivery workers and app drivers from the perspective of a nursing theory will allow to give visibility to vulnerabilities to which this public is exposed at the time of the COVID-19 pandemic, shedding light on the problems faced. Moreover, recognizing these behaviors will help nursing professionals in proposing interventions to support their recovery.

Thus, this study aims to understand the self-care requirements of informal male workers in carrying out their activities during the COVID-19 pandemic, based on Dorothea Orem's theory of self-care.

■ METHOD

This is a qualitative research study with a descriptive-exploratory approach, based on Orem's Theory of Self-Care^(6,7,9). The study setting was the cities of the metropolitan region of Cuiabá, capital of Mato Grosso, whose context is similar to that of Brazil, where there is no legal framework regulating the work of these informal workers and their relationships with the app companies. Regarding their protection, there is Law 14.297 of 06/01/2022, which establishes measures to support delivery app workers during the COVID-19 public health emergency⁽¹⁰⁾.

Inclusion criteria were defined as follows: men who are in the informal labor market, working as a driver or delivery workers, who had a job mediated by digital platforms and who carried out the activity for at least 6 months, aged between 20 and 59 years old. According to the 2021 census, the total number of men in the country was 103.9 million, and the age group represented in this research accounted for 48.9% of the total Brazilian male population⁽¹¹⁾. This age range was chosen because it comprises the largest percentage of the male population in Brazil and represents the largest workforce among Brazilian men.

Regarding the exclusion criteria, we adopted men who did not act as drivers and app delivery workers, even if linked to informal work, and also those who acted as delivery men and drivers, but who did not have their work mediated by an app.

Data collection was conducted through a closed questionnaire and semi-structured interview. The closed instrument consists of two parts. The first part consisted of questions that aimed to characterize the research participants based on questions about age, race, marital status, education, nationality, number of children, type of access to health care services, length of time engaged in informal work and type of relationship with the delivery application company.

The second part of the questionnaire dealt with questions related to the self-care routine based on the proposal by Orem^(6,7,9) and were grouped into blocks according to each requirement presented in the theory. Regarding universal requirements, the questions involved questioning about the simplest self-care habits such as sleep and rest patterns, eating habits related to the quality of meals and times, weight, immunization, fluid intake, elimination pattern, physical exercise, alcohol, and smoking habits.

Regarding health development requirements, the questions involved the existence of pain, its frequency, location, and intensity, as well as the participants' perception regarding mental health and its relationship with work.

Finally, the block of questions related to health deviation requirements was associated with diseases diagnosed by professionals and the actions taken by these individuals to treat the disease and recover their health. Thus, questions were asked about the diagnosis of diseases, the search for help spontaneously or encouraged by another person and the time elapsed between the suspicion of the disease and the diagnosis.

The semi-structured interviews were conducted based on a script of open questions that presented questioning related to self-care with a focus on the pandemic and related to the self-care requirements in the theory. These questions involved self-perception of health, knowledge about the concept of self-care, attitudes regarding self-care, a day's routine, working conditions related to the pre-pandemic and pandemic period, and their possible impacts on the development of work activities, as well as the support offered or not by app companies.

Before starting data collection, a pilot test was applied to test the instruments that would be used for data collection and to verify the need for their suitability.

For data collection process and definition of study participants, the "snowball" method was adopted due to the characteristics of the population, being considered difficult to approach, resulting from the premise that inactivity generates, as consequence, the lack of financial gain.

To capture the first participant or key informant of the study, the "iFood" application platform was used, through which the delivery of a meal was requested to establish the initial contact.

Upon receiving the delivery person's arrival signal, the researcher went to meet him, introduced herself and explained that she was developing research to understand aspects of self-care of men who worked as delivery workers and application drivers. The approach was carried out briefly, so that the man did not feel cornered or harmed due to the lost service time. Regarding informal workers who were application drivers, this approach took place during the car ride, after requesting the service offered through the application.

To ensure greater methodological rigor in the research, the application of the Coreq checklist was adopted, consisting of 32 items divided into 3 major domains that include: characterization and qualification of the research team; study design and analysis of data and results, which can be used in research whose data collection methods involve interviews⁽¹²⁾.

If there was manifested interest, a telephone contact was requested so that the details of the research could be forwarded and any doubts resolved, which were resolved through the WhatsApp® instant messaging application, the day after the initial contact.

Once the questionings were resolved by the worker, those who agreed to participate in the study were asked to access the Free and Informed Consent Form (FICF) through a link sent via WhatsApp®, which directed to the Google Forms® platform.

After reading, the electronic signature was inserted, consenting to participation, and directing the subject to fill in the closed questionnaire. It is noteworthy that the choice of platforms was made intentionally due to the greater familiarity of the researcher and easier access for the participants since its use is intuitive.

Given the absence of the possible interviewee to respond to the researcher and sign the FICF in up to two attempts, this was replaced to speed up the research. It should be noted that, among all the participants who signed the informed consent form, all completed the research until its ending, excluding only the pilot test participant.

After obtaining signatures and responses to the closed questionnaire, the next stage of the research began, the semi-structured interviews, which were scheduled according to the availability of each one, so as not to hinder the progress of their work. For this appointment, the WhatsApp® instant messaging application was also used.

The interviews were conducted by video call, through the WhatsApp® application. It should be noted that only the audios were recorded on a device suitable for recording the cell phone with the operating system IOS version 15.4.1 and stored in a folder that would be used only for this purpose.

At the end of each interview, the interviewee was asked to indicate a work colleague (application of the snowball technique) so that all the mentioned stages were used to capture him for the research. If the answer was negative, a new request was made within iFood as a new capture attempt. Then, the audios were fully transcribed to help the data analysis process.

The interviews were conducted by the main researcher, with a nursing degree, female, who had two previous experiences in data collection from semi-structured interviews. A total of 10 workers were interviewed and data collection took place between March and May 2021. During this process, 19 individuals refused to participate in the research due to schedule incompatibility and/or lack of interest. The interviews lasted an average of 52 minutes.

The organization of the data collected by the form was made through the Google Forms® platform and analyzed according to relative and absolute frequency.

Once data saturation was reached, the interviews were closed, and once transcribed, they were submitted to exhaustive reading, passing through the three stages of thematic content analysis proposed by Bardin: the first is called pre-analysis; the second, exploration phase and, finally, the third phase, in which the treatment of results is carried out⁽¹³⁾.

This research is linked to the matrix project entitled "Technologies for nursing care in men's health: strategies for change", approved by the Research Ethics Committee, under Opinion No.2,728,071 and CAAE No. 83891318,2,0000,8124, respecting the ethical requirements established in Resolution No. 466/2012.

Interviewees were identified with the letter "W" (delivery worker) or "D" (driver) followed by a number corresponding to the order of entry in the research. In addition, as this is a research involving a virtual environment, the guidelines provided by Circular Letter No. 2/2021/CONEP/ SECNS/ MS⁽¹⁴⁾, were complied, which allows and organizes the execution of research conducted in this type of environment.

■ RESULTS AND DISCUSSION

Characterization of workers mediated by applications

The average age of the participants was 27.7 years old, in which the minimum age among them was 22 years and the maximum was 37 years old. Only one man had higher education, this being the respondent who invested the most time in taking care of his health, even mentioning that he went to the gym at least six times a week. Six men completed high school and three reported having a technical course.

Regarding education level, several authors^(15,16) correlate this variable with high or low adherence to self-care practices. According to these authors, the higher the educational level of a population, the greater the health literacy and, consequently, the more self-care actions that person or population will develop, resulting in better health conditions and greater self-perception of empowerment⁽¹⁷⁾.

Other research⁽¹⁸⁻²⁰⁾ show that the higher the individual's education level, the better the adherence to self-care activities, where people with higher health literacy can better understand the information provided and apply it in their daily lives to better manage their health⁽²¹⁾.

In the present study, the interviewee with higher education identifies himself black.

Regarding race, four men describe themselves as black, five as brown and only one identified himself as white, reaffirming the findings of the PNAD COVID-19, which attest that blacks and browns are the majority among workers on delivery and transport platforms, showing a percentage of 60% for drivers and 59.2% for delivery workers⁽²²⁾ and still under investigation by researchers⁽²³⁾ in the capital of Bahia, Salvador, where 57.69% of interviewees identified themselves black and 35.58% browns, reaffirming the relationship between social issues and the search for informality.

The World Health Organization admits that racism influences and even hinders the population's access to health, even favoring processes of illness and death, which places the group of black men at a more vulnerable level, especially if associated with racist structures⁽²⁴⁾.

For scholars linked to the Graduate Program at the National Faculty of Law at the *Universidade Federal do Rio de Janeiro* who conducted research between 2018 to 2020, which aimed to verify the working relationship of black people with digital platforms for passenger transport and delivery of goods, state that such places constitute spaces

where excessive workloads occur, as well as low wages, precariousness, mainly due to the lack of employment relationships, considering them self-employed⁽²⁵⁾. However, the reality presented to society is the opposite, since to obtain considerable gains, they need to work more than 60 hours a week, and may suffer penalties and sanctions if they do not act in accordance with the recommendations of the company and even for not receiving the amount total charged for the service⁽²⁵⁾.

The aforementioned research also states that the digital platforms where black workers act as drivers and app delivery people are overrepresented places, that is, they represent such a group in an exacerbated way, generating disproportionality in this population also showing the differences in earnings when compared to black and white races, where that group has less remuneration than whites when performing the same activity⁽²⁵⁾, even comparing such work developed with the slavery reality of the 19th century, when they held a small portion of their earnings when transporting sugar mill owners in wheelchairs transport⁽²⁶⁾.

Reiterating this research, studies^(27,28) that claim that blacks supposedly have less access to health services, as well as safe information that enables self-care, compared to white people, due to the distrust of doctors based on structural racism and mistreatment historically suffered within the health care system⁽²⁹⁾.

Regarding nationality, two individuals were foreigners from Haiti and eight Brazilian. When investigated further, the situation of immigrants during a Pandemic tends to worsen for these people, since they are sometimes found to be in an irregular situation in the country, becoming invisible citizens, unable to exercise their rights and duties, often lacking qualifications in the labor market, leading them to seek income in precarious work, even if minimal⁽³⁰⁾.

From the total number of interviewees, most were single, with a total of six men, and only two had children.

Regarding the use of public healthcare services, seven interviewees stated that they are totally dependent on the Unified Health System (*Sistema Único de Saúde – SUS*). However, three men mentioned that they seek the resources offered by the SUS, but that depending on the degree of urgency and their need, they end up resorting to private services because they understand that they are quicker in solving problems.

Regarding the working time they are linked to the platforms, the interval ranged from six months to three years. Regarding the employment relationship, five men reported that it was their exclusive source of income and the others

saw informality as a way to supplement the family income, interspersing this activity with formal work, using their free time for deliveries and work as app drivers, especially at night and on weekends.

Self-care requirements of the interviewees

Universal Requirements

Table 1 presents the quantitative data of people regarding universal self-care requirements. It is observed that the interviewees perceive their health positively precisely because they rarely seek health care services, mentioning that if they do not seek it, it is because they are not sick. However, this condition does not rule out the real need to seek health care services, nevertheless, some specific factors, such as diet, sedentary lifestyle, mental health, among others, negatively affect the ways they perform their self-care and, consequently, their health.

This can be confirmed especially when they answer questions related to food, sleep and tiredness, sedentary lifestyle and demand for health care services, as shown in the statements:

[...] if I had something, I would look for the doctor... I understand that I would need to do more things to benefit my health, but since I am not feeling nothing physically, I do not need to seek medical attention and that makes me believe that I'm fine. W4

I consider my health to be good. I think it's about 70% because I'm a bit sedentary, the other 30% is because I don't do any physical activity. W10

[...] I don't do physical exercises. Eating fruit and vegetables, I don't. I eat junk food. Snack, cookies just that crap. When I have lunch, I eat around 2:30 pm, until 3:00 pm, because of the intense workflow at lunch time. D3

Regarding eating habits, most interviewees mentioned eating fruits and vegetables, along with a diet rich in fats, salt and sugar, associated with variable mealtimes. Possibly, this is due to the greater flow of deliveries at lunchtime, indicating a less healthy diet than the interviewees mentioned, who often have casual meals, for example, eating a quick snack.

Regarding the practice of physical activities, most of the interviewees reported being sedentary, or when they perform some type of physical activity, it is insufficient. Contrasting

Table 1 – Universal self-care requirements of interviewees. Cuiabá, Mato Grosso, Brazil, 2023

UNIVERSAL SELF-CARE REQUIREMENTS	YES	NO
Do you drink enough water? (Around 2L/day)	7	3
Do you eat enough food (fruits, vegetables, carbohydrates, proteins)?	7	3
Do you consume a large amount of oil, salt, sugar?	5	5
Are your mealtimes fixed?	5	5
Are you satisfied with your weight?	5	5
Do you habitually weigh yourself?	8	2
When you notice you are overweight, do you take any action to get back to the “ideal” weight?	5	5
Provision of care associated with elimination processes and excrements – Do you have the habit of “holding” urine?	5	5
Maintaining the balance between activity and rest – Apart from work-related activities, do you perform any physical activity?	5	5
Prevention of dangers to human life, functioning and human well-being – Do you have the habit of going to the health care unit to consult with a professional regularly?	3	7
Do you believe you get enough sleep/night?	7	3
Do you smoke?	0	10
Do you drink alcoholic beverages?	5	5
Is your vaccination card up to date?	7	3

Source: Authors, 2022.

the closed questionnaire with the semi-structured interviews conducted with the individuals participating in the study, it becomes evident that this sedentary behavior is a result of the little time left outside work, excessive workload, and the fatigue of these workers.

A study conducted in Maringá-PR, of the household survey type with a population of 421 men aged between 20 and 59 years old, points out to similar results, showing that overall, men presented different health risk behaviors and that such attitudes are work-related and economic issues. Another important factor pointed out by the study and that can negatively influence the high rate of men who do not perform physical activities is the occupational

status. The authors argue that people linked to the formal work system have a greater advantage than the self-employed in terms of performing physical activities. This is due to the fact that they dedicate most of their time to work, since their income is closely related to the amount of work performed⁽³¹⁾.

The habit of holding urine and postponing the urge to evacuate were reported by most of the interviewees and justified based on the semi-structured interviews:

[...] At lunch they give a 20-minute break, so we don't have time [...] if you want to go to the bathroom and do “number 2” (referring to the act of evacuating), you

have to wait for the application time[...] if you arrive at a restaurant and the food is not ready yet, you have to take this preparation time to be able to go to the bathroom. You cannot respect your body's schedule. We follow a strict application schedule and if you do not accept the ride, because you need to go to the bathroom, for example, the application punishes you [...] they send you a ride, you are grounded, and they only send you a ride with little earnings [...]. W10

[...] We don't have a bathroom to go to, only when we find bathrooms in the establishments and when the staff lets us [...]. W9

Maintaining an adequate standard of elimination is essential, as it allows the disposal of toxic substances to the body, also enabling the proper functioning of vital organs⁽³²⁾. These results show an intense work routine, in which individuals are dependent on the availability of bathrooms in the restaurants where they pick up orders and hostages of the delivery time offered by the apps, in order to avoid delays and consequent blockages or punishments.

This reality may undergo changes over time, since, from January 2022, after the enactment of Law No.14.297/2022⁽³³⁾, delivery workers gained certain rights, including the requirement for restaurants to provide access to restrooms and clean drinking water. However, such legal guarantees were only regulated two years after the start of the pandemic and only favor delivery workers, excluding app drivers. In this sense, further studies should be conducted in order to verify whether the measure provided an improvement in the working conditions of these professionals.

A qualitative study conducted with 22 app delivery workers in the city of Uberlândia-MG, to discuss the uberization process, points out that the precariousness of work directly reflects on the workers' living conditions, and this aspect was raised by the study participants as a point of improvement for better performance within the platforms. Strategies such as building support for such workers, where they can rest, go to the bathroom, have a meal, space to solve problems related to work, improvement in traffic conditions and even an increase in the fees passed on to workers were raised by the authors⁽³⁴⁾.

Still on the universal requirements, it was possible to identify that most of interviewees have a low self-care attitude regarding the lack of habit of seeking help from a health professional on a regular basis. In the interviews, they mentioned that this type of search took place approximately

twice a year, and when they did, they preferred to go to the pharmacy to resolve their health demands.

When I needed medical help, I ended up going to the pharmacy, because I was afraid of COVID, so I went there in my neighborhood, because they always know which medicine we need and teach us how to use it correctly. W9

When I got flu, I didn't go to the health care unit, no. I just took medicine and it passed. W1

[...] I only consult when I'm really bad. W7

A similar result was found in a study⁽³⁵⁾ that sought to investigate the difficulties of access by men in the city of Macaíba-RN to Primary Health Care services. Interviewees pointed out a preference for hospital services, emergency rooms and pharmacies due to agility and easy access. Thus, such evidence is close to the outcomes of a study⁽³⁶⁾ which reported that men, when they perceive being sick, tend to initially seek pharmacies and emergency rooms, making self-medication evident as a means of maintaining health, with no follow-up, guidance and prescription of health care professionals for this purpose.

A low self-care attitude was also observed when asked about the use of prophylactic medications to prevent various diseases. This behavior reinforces the hegemonic masculinity in which an ideal of a man is created, who does not cry, does not suffer or gets sick⁽³⁷⁾ or who often gets tired of having his demands repressed within healthcare units and prefers to make himself invisible rather than go through wear and tear.

Therefore, it is up to health professionals to adopt an approach that provides qualified listening, so that value judgments and speeches that reinforce the distancing of these informal workers from healthcare services are renounced. Working from a global perspective, considering the heterogeneity of individuals, is the role of nursing in the exercise of embracing and in compliance with the principles of equitable and comprehensive care.

In this sense, nurses must act in a way to stimulate the care considered as more basic in men who have occupations like those in the study, so that they become regular habits. This may occur both in individual contact through nursing consultations, and at the community level in campaigns and actions developed in groups. As an attempt to strengthen ties with this public, campaigns with restaurants that have the greatest sells in the apps, as well as at frequent points where drivers are requested by app, can be a good strategy of timely health information to these professionals.

Development Requirements

Table 2 presents information regarding self-care development requirements, relating health/illness issues to the work performed. The most striking data in this scenario is the fact that most participants (seven) stated feeling musculoskeletal physical pain related to the work of delivery app or app drivers. On the other hand, the same proportion of interviewees who seek help from healthcare professionals for health monitoring, in the face of stressors, is not observed, with only five interviewees who opted for health assistance resources. From these, only three believe that the work perform directly affects the mental health of those who execute it.

As pointed out by the participants, the use of backpacks or bags are highly influential factors in the occurrence of accidents during the work development, since they can interfere with the kinematics of the motorcycle and the body of the person driving it. This situation can be a decisive factor in the occurrence of accidents, since the use of bags makes it difficult to see everything through the rearview mirrors⁽³⁸⁾

In the so-called “pandemic” period, app delivery workers were the professionals who had the most changes in their weekly workdays, comprising six to seven days a week. This group traveled up to 160 km for around ten hours a day, and may still experience changes in the data when it comes to people who obtain their exclusive source of income through deliveries, surpassing 64.5 hours a week⁽³⁹⁾.

This type of workday can explain the pain reported by research participants, which are especially concentrated in the back, spine, arms and shoulders. It is noteworthy that

long periods worked on motorcycles with the delivery bag on the back, often full of orders or sitting in the wrong car seats, require a wide mobilization of the musculoskeletal system.

Thus, healthcare professionals, especially nursing professionals, should look at such behaviors with a focus on helping these men to find strategies that can alleviate such pain in their daily work. Orientation activities on the best ergonomic positions, quick stretching between one run and another can help these workers to better take care of their health.

Regarding the mental health of the interviewees, most state to have excellent or good psychological vitality, stating that the work performed does not directly affect mental health, since in their perspective, the work performed is flexible in relation to working hours, easing, in part, the stress suffered.

In the semi-structured interviews, it was observed that this type of work negatively influences mental health, with traffic stress and mental fatigue being the harmful factors, as shown in the statements below:

*[...] it messes a lot with the head, right?! The intense traffic you must be extra careful to drive, the application time you have to comply with [...] I think that everything somehow influences [...] there is still the stress of daily life, huh? W6
 [...] this work ends up affecting a lot of things. [...] especially the psychological, mental health, stress and tiredness from traffic affect my psychological a lot, because we have to keep checking ourselves and thinking “I won't call names”, because we don't know who is driving on the other side [...] most times, the tiredness of traffic ends*

Table 2 – Self-care Development Requirements of interviewees.Cuiabá, Mato Grosso, Brazil, 2023

DEVELOPMENT REQUIREMENTS	YES	NO
Do you feel body pains due to your work?	7	3
Do you believe your work affects your mental health?	3	7
Have you ever needed or need to do any medical follow-up?	5	5
Did you follow or follow the recommendations of the health team?	5	0

Source: Authors, 2022.

up affecting my psyche too much. The whole day, the hot sun, these are the factors that most affect health, on a daily basis. W9

The schedules are very demanding, we get home late, we are very tired, and I'll tell you that when we get home, we don't feel like doing anything, except lying down and rest [...]. W10

It is known that informal work, especially in times of the COVID-19 Pandemic, has brought several psychological problems, such as panic, depression, post-traumatic stress disorders and certain anxiety as a result of payment, since this depends on the daily performance, which can lead to both psychological and physical impairment⁽⁴⁰⁾.

The new configurations of work modes directly affect the mental health of delivery workers, since their earnings are based on the demand and service's performance, where they will consequently suffer from the competitiveness of work, low fees, which causes an increase in the levels of stress among this class of workers⁽⁴¹⁾.

When it comes to self-care development requirements, that is, the necessary attitudes to adapt to this new world scenario, the risk of exposure to the COVID-19 virus becomes just another "bonus" in the face of the numerous threats which these men are exposed during work, which mainly involves traffic accidents and diseases related to bad working conditions⁽⁴²⁾.

In the context of informal workers linked to deliveries and app drivers, it was necessary to adapt to numerous situations such as the use of hand sanitizer inside cars and bags for hand hygiene, use of masks to protect the oral and nasal cavity, avoiding receiving banknotes, avoiding direct contact with transported products and the use of protective barriers, in the case of app drivers, which prevents direct contact with passengers. In this sense, the adaptations are mainly related to issues regarding the COVID-19 pandemic and the consequences in this scenario.

A study developed in Campinas-SP showed the perception of Uber drivers about working and health conditions in the context of COVID-19, in addition to the imminent risks of traffic accidents to which these workers are still subject and robberies during rides performed. The degree of insecurity perceived by the drivers is emphasized, about which they mention the risk of assault by the passengers and even the fear of losing their lives while working. About 46.2% of interviewees reported that it is an unsafe activity, and of all interviewees, 51% had already suffered some type of violence in their work activities⁽⁴³⁾.

As far as app delivery workers are concerned, among the most prevalent factors in the occurrence of traffic accidents are the conditions of the streets that workers must travel by. On the way, drivers for apps are subject to accidents due to the defects in the lanes (holes), traffic on slippery roads, poor traffic signs and recklessness of other users of vehicle and motorcycle traffic. The sudden climate changes to which they are exposed and, mainly, the ergonomic risks resulting from the long hours of work with the "bags" on their backs, are factors highlighted by the interviewees:

[...] I get a lot of sun, dew, I have a lot of headaches, back pain, for spending a long time with a heavy backpack on my back, and I walk practically all night with a heavy bag on my back. W2

[...] because I spend a lot of time on the bike, right?! Lots of repetitive movements, bad posture [...] this all influences the pain. W6

[...] the sun here is very exhausting [...] it harms because the results will come in the future, right?! Pain in the spine, in the back, you feel all over your body. It doesn't interfere, but it hits you, because you feel tired, because it's very tiring, your body is much attacked. So, it affects more the effects that I feel in my body as the days go by. W8

A documentary study conducted in Niterói-RJ, which aimed to present the risks related to work through applications, mainly showed the ergonomic and psychosocial risks, which indicate that the pandemic proved to be a danger in terms of exposure to the virus. Above all, the risks inherent to traffic, accidents, violence and fatigue, related to the effort used in the countless hours of work to reach the stipulated goals, causing problems, such as: anxiety, depression, physical and emotional overload, in such a way as to affect the sleep pattern, social relations and biological rhythms⁽⁴⁴⁾.

In this sense, it is necessary that the action measures in mental aspects of the health of informal workers go beyond medication processes, although these are essential in many cases, they are not enough for realities to be transformed, but, above all, that the pain of these workers to become known, so that they are approached in a much broader way, according to their specificities.

The results of this category point out to a need for nursing professionals to rethink the way they work in health care so that they build the loyalty of the male population to feel they belong to health care services and subjects of mental health care. Once this is done, the nurse linked to the Primary Health Care services has the role of acting in the screening of cases

of illness and the monitoring/support of these people. The reception of the individual in a humanized way can make the man return at other opportunities, seeking other services.

In this self-care requirement, nurses can and should act as professionals who assist the population in coping with such issues, mainly in guiding care for the prevention of injuries that prevent individuals from seeking more complex healthcare services.

Health Deviation Requirements

Table 3 presents the disease processes already installed in app workers and the actions they adopt to cope with the illness process.

When asked about their knowledge of pre-existing diseases, most individuals reported not having any diagnosed disease. Interviewees who reported having diseases reported that they were not diagnosed by health professionals, but by previously acquired popular knowledge. From those who sought medical help for the diagnosis, most did not do so spontaneously, leaving the role of insisting on behavior change to someone else.

The information resulting from health deviations reflects the health care profile developed by the male population, which reports not seeking healthcare services with the justification of not having any diagnosed disease, as can be seen in the statements below:

[...] I rarely get sick [...]. W1

[...] If I stop to think about when I took medicine, when I got sick, I will have to think a lot. W1

It's been a while since I've been sick [...] serious stuff like that [...]. D3

[...] if I had something, I would look for the doctor [...]. W4

[...] It's been a while since I went to the doctor [...]. W9

[...] I don't have the habit of going for medical appointments. W7

This behavior of low utilization of healthcare services may be due to denying their sick bodies, that is, to maintain the expected posture of a strong and virile man. This behavior is anchored in the concept of hegemonic masculinity, in which these men are expected to adopt a provider and dominant posture, have difficulty talking about their feelings and delay in seeking specialized help. Such behaviors are reflected in the high rates of addictions, homicides, suicides, traffic accidents and chronic diseases⁽⁴⁵⁾.

These distancing attitudes are also reflected in the search for other less reliable ways, such as pharmacies for self-medication, and thus to treat their health demands, often leading to the worsening of the clinical condition and even the irreversibility of the disease.

Regarding support for self-care, it is noticeable that a second person's influence plays a role in the self-care practices of the interviewees, and most participants mentioned that, when they sought professional help from a health professional, they did not do so spontaneously, leaving the responsibility of a family member to guide and encourage them to take such action:

My wife always tells me to take care of myself. W8

I follow the advice of my father, mother and family to take care of myself. W4

My wife says that I have to take care of myself more, when she sees that I'm getting sick, she even gets tired of picking on me because of that, because she knows that I don't like to take medicines. W9

[...] she (wife) tells me to walk more slowly, because when I met her, I was crazy on the bike, when you're young you don't think much [...] but then she tells me to walk

Table 3 – Health Deviation Requirements of the Interviewees. Cuiabá, Mato Grosso, Brazil, 2023

SELF-CARE HEALTH DEVIATION REQUIREMENTS	YES	NO
Do you have any disease installed?	3	7
Was this disease diagnosed by a healthcare professional?	0	3
For this diagnosis, did you seek the professional out of your own free will?	0	3

Source: Authors, 2022.

carefully, respect the traffic and the people and take care of myself in traffic, because she sees a lot of injured delivery people, dying [...]. W10

The statements of the interviews strongly evidence the culture of the positivist model of health/disease and also what was mentioned in the study⁽³⁶⁾, in which they refer that the man alone does not develop self-care habits, assuming a dependent role regarding this care and transferring this responsibility to another person in their bond, which is usually their mothers and, later, their wives and partners. Which means that many men seek health services encouraged by females and that have influence on their lives, giving marriage a greater source of protection for the health of men than women⁽⁴⁶⁾.

In this sense, it is important for nursing professionals to be able to identify other family members of these men, especially women, who can improve the perception of these men's health deviations. In this action, these individuals can be seen as catalysts in the search for self-care in this population.

As limitations of this study, it should be noted that the sample is limited to a single region, as well as the small number of participants that does not allow to generalize the results presented in this study, requiring studies with a larger number of individuals that encompass a wider range of locations to show whether the same phenomenon is also common in other spaces.

■ FINAL CONSIDERATIONS

This work sought to understand the self-care requirements described by the theorist Dorothea Orem (universal, development and health deviations) of male app workers. Thus, it was evident that, regarding the universal requirements, the men in this research perceive their health positively, but there are reports of poor diet, sedentary lifestyle, changes in mental health, among others, which negatively affect their self-care. Regarding development requirements, stands out the fact that workers refer to musculoskeletal pain. Finally, regarding the health deviation requirements, most workers reported not having a medical diagnosis of preexisting diseases.

Based on these results, the aim of this study is to raise the awareness of healthcare professionals regarding the adoption of strategies that enable self-care in the health of such population, so as to prevent injuries arising from this type of activity, in such a way that increasingly favor the implementation and strengthening of the National Policy for Full Attention to Men's Health, since most informal workers linked to applications are in the age group prioritized by the policy.

As contributions to the academic community, such research can foster the development of future studies aimed at this population, since they have shown and continue to show the importance of the work performed for society. Another contributing factor of this study revolves around self-care, requiring the development of research on this theme which enable healthcare professionals to support and resolve the main demands presented by this population.

In terms of contributions to healthcare assistance, this study can foster reflection among healthcare professionals and public authorities in developing strategies that facilitate the access of such professionals to healthcare services, as well as their engagement in these places, in order to feel like agents and subjects of care and in care.

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