




Stress factors in mothers with school-age children in a pandemic situation

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ABSTRACT

Objective: To determine the stress factors in mothers with school-age children during the pandemic. **Materials and methods:** Research with a quantitative approach, descriptive scope and cross-sectional design. A total of 124 mothers participated, to whom the adapted and validated Stress Factors in Mothers (FEMAF, for its Spanish acronym) questionnaire was administered with prior informed consent. The data were analyzed with the statistical program STATA version 17. Descriptive analysis was used, applying the distribution of frequencies and percentages. **Results:** A total of 87.1% showed lack of support at home in the performance of household chores; 86.3% reported low family budget to cover expenses for food, studies, house payments or rent, among others; 75.8% reported the increase in the number of COVID-19 infections in their community as a stress factor; 74.2% reported long working hours in the development of their work activities; 45.2% showed family conflicts (fights or arguments) with their partner, children and other family members. **Conclusions:** The stress factors in mothers with school-age children during the pandemic were poor support in carrying out household chores, low family budget to cover expenses, long working hours in the development of their work activities, the increase in the number of COVID-19 infections in their community, and family conflicts.

Keywords: predisposing factors; stress; mothers; population characteristics; coronavirus 2019-nCoV.

INTRODUCTION

The nursing profession is based on the science of care, with the objective of providing holistic care to individuals, families, and communities in health maintenance and recovery (1). In this regard, school and adolescent nursing professionals focus their work on the promotion comprehensive health and disease prevention to contribute to improving quality of life (2). Mental health is defined as a state of complete well-being that allows individuals to use their qualities and skills to cope with the various circumstances in everyday life (3).

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However, unusual changes and excessive demands become stressors that affect mental health (4).

As a consequence of the COVID-19 pandemic, the Peruvian population has experienced various stressors. This disease emerged in 2019 following the report of a series of cases of atypical pneumonia that the World Health Organization (WHO) later named COVID-19 (5).

Measures were implemented to prevent the spread of the virus, including mandatory social immobilization, suspension of mass gatherings, vehicle restrictions, closure of in-person educational activities, and non-essential work activities, among others (6). These measures affected the mental health of the global population, as demonstrated by international studies (6-8).

In Peru, Datum Internacional (9) identified that 41% of the population suffers from stress, with women being the most affected group, accounting for 47%.

Garcés-Prettel et al. (10) concluded that the frequent stressors in the Colombian population were the economic situation (25.8%), the fear of food shortages (23.4%), unemployment problems (22.6%), work overload (18.1%), increased household chores (17.7%), and family conflicts (15.6%).

Saavedra et al. (11) found that female participants obtained a higher percentage of stress at moderate levels (60.3%). In addition, the situations that caused the highest levels of emotional distress or stress included teleworking (30.3%), having to supervise their children's remote education activities (47.3%), and not being able to work (70.8%).

Stressors are conditions or events in the environment that can trigger stress. They may stem from a person, an event, or a situation. Parental stress is a complex process in which parents feel overwhelmed by the demands of their parental role, leading to negative feelings about themselves or about their children (4).

Nursing practice in school and adolescent health involves health promotion and risk prevention. At the same time, families are part of the educational community. In this context, the parental role during the pandemic was influenced in marital, family and individual roles, situations that cause stress due to physical and emotional demands, which may lead to the adverse effects on health and well-being.

From a gender perspective, women, who often assume the maternal role, are frequently more affected by the multiplicity of responsibilities they take on and the stressful life situations they face. During the pandemic, additional tasks emerged, demanding greater effort.

Nursing care related to mental health is based on different theories, including the Transition Theory proposed by Meleis (12). As for mothers, the presence of stressors as a result of the pandemic determines transitions that may be either healthy or not. In the first case, it relates to the management of emotions, behaviors, or characteristics associated with new roles. On the other hand, a transition is considered unhealthy when there is a deficiency in the proper adoption of roles that prevent the practice of preventive and therapeutic behaviors. Transitions can be determined by changes related to lifestyles, habits, roles, and relationships. In addition, they encompass conditions and critical points, such as death or being diagnosed with an illness. Furthermore, there are the conditions that determine how an individual moves to a new transition, which may be influenced by the socioeconomic status (12).

The objective of this study was to determine the stressors in mothers with school-aged children during the pandemic. This study will facilitate the implementation of strategies aimed at mothers, fathers and children through the execution of nursing educational interventions, fostering and/or developing personal resources to help manage stress. In this way, it seeks to promote mental health in the school setting through psychoeducation for families on coping strategies, social skills and emotional intelligence, with the goal of promoting and strengthening parental competencies.

MATERIALS AND METHODS

A quantitative study with a descriptive scope was conducted. A non-probability convenience sampling method was applied. A total of 124 mothers from a school located in the district of Independencia, Lima-Peru participated in the study. Data collection was gathered in person by small groups considering the food distribution schedule of the *Qali Warma* National School Feeding Program. Due to the pandemic context, distancing and biosafety measures were implemented.

According to selection criteria, mothers of children enrolled in the first and second grades of elementary school, who voluntarily agreed to participate in the study, were included. The exclusion criteria were mothers who were not present on the day of the instrument's application and those who had some difficulty to participate. Data collection was gathered using a self-administered survey technique. For this research study, an adapted version of the EPISTRES

scale, designed by Breilh (13), was used. The instrument demonstrated the validity of the content, construct and criterion through a binomial test result lower than 0.05. Apart from that, its reliability was confirmed with a Kuder-Richardson coefficient above 0.7. For this, a pilot test was conducted with 15% of the population in a school with similar characteristics to the study population. The instrument consists of five dimensions, structured into 24 items with dichotomous responses (yes and no), aimed at gathering the perception of stressors.

A descriptive analysis was conducted using frequency distribution tables and percentage values according to dimensions and indicators.

The research study was approved by the Ethics Committee of the Universidad Peruana Cayetano Heredia.

RESULTS

In Table 1, it was identified that 51.6% of mothers were between 26 and 35 years old; 54.8% went to high school; 61.3% were married or cohabiting; 57.3% were housewives; 23.4% were formally employed; and 68.5% had between two and three children.

Table 1. Sociodemographic characteristics of mothers during the COVID-19 pandemic in a school from the district of Independencia, Lima, 2022.

Sociodemographic characteristics	n	%
Age		
18 to 25	13	10.5
26 to 35	64	51.6
36 or more	47	37.9
Level of education		
Elementary school	29	23.4
High school	68	54.8
Technical higher education	23	18.5
University higher education	4	3.2
Marital status		
Single	39	31.5
Married/cohabitant	76	61.3
Widow	7	5.6
Divorced	2	1.6
Occupation		
Housewife	71	57.3

Table 1. (Continuation).

Domestic worker	7	5.6
Dependent worker	29	23.4
Self-employed worker	17	13.7
Number of children		
One	25	20.2
Two and three	85	68.5
Four	14	11.3

In Table 2, the most frequently reported stressors in the wage labor factor dimension were long working hours in the performance of their job activities (74.2%), doing repetitive tasks at work (71.8%), and losing their job or being dismissed (55.6%).

Table 2. Stressors related to wage labor among mothers during the COVID-19 pandemic in an educational institution in the district of Independencia, Lima, 2022.

Factors	Yes		No	
	n	%	n	%
Long working hours in the performance of their job duties	92	74.2	32	25.8
Performing repetitive tasks at work	89	71.8	35	28.2
Change in work modality, whether virtual or in-person	67	54.0	57	46.0
Losing their job or being fired	69	55.6	55	44.4

In Table 3, the most frequently reported stressors among mothers were the lack of household support for domestic tasks (87.1%), being aware of the upbringing, care, attention, and education of their young children (84.7%), and simultaneously managing work and household chores during the day (75%).

In Table 4, the predominant stressor factor was the low family budget to cover expenses such as food, education, housing payment or rent, among others (86.3%), followed by changes in their economic situation (decreased income, debt for loans, etc.) (83.9%), and uncertainty about their future economic situation (81.5%).

Table 3. Stressors of domestic work among mothers during the COVID-19 pandemic at a school from the district of Independencia, Lima, 2022.

Factors	Yes		No	
	n	%	n	%
Lack of household support for doing household chores such as cooking, washing the dishes, cleaning, grocery shopping, doing the laundry, etc.	108	87.1	16	12.9
Performing work and domestic activities at the same time during the day	93	75.0	31	25.0
Being aware of the upbringing, care, attention, and education of their young children	105	84.7	19	15.3
Caring for a family member with a disability, chronic illness, or serious condition	45	36.3	79	63.7
Feeling of lack of time to devote to the care of their children and other family members	80	64.5	44	35.5

Table 4. Stress factors related to economic problems among mothers during the COVID-19 pandemic at a school from the district of Independencia, Lima, 2022.

Factors	Yes		No	
	n	%	n	%
Changes in their economic situation (decrease in economic income, indebtedness due to loans, etc.)	104	83.9	20	16.1
Low family budget to cover expenses in food, education, housing payments or rent, among others	107	86.3	17	13.7
Lack of access to healthcare facilities due to lack of money	89	71.8	35	28.2
Problems of access to technological devices for their children’s studies (such as cell phones, laptops, etc.) and Internet connectivity due to high market costs	87	70.2	37	29.8
Uncertainty about their future economic situation	101	81.5	23	18.5

In Table 5, the most frequently reported stressors were family conflicts (fights or arguments) with their partner, children and other family members (45.2%), the use of psychoactive substances (alcohol, tobacco, or others) by a family member (41.1%) and mental health problems (depression, anxiety, stress, among others) of a family member (41.1%).

In Table 6, the most prevalent stressor was the increase in the number of COVID-19 infections in the community (75.8%), followed by testing positive for COVID-19 and/or infecting a close family member (73.4%), and the loss of a family member or someone very close (73.4%).

Table 5. Family-related stressors among mothers during the COVID-19 pandemic in an educational institution in the district of Independencia, Lima, 2022.

Factors	Yes		No	
	n	%	n	%
Use of psychoactive substances (alcohol, tobacco, or others) by a family member	51	41.1	73	58.9
Mental health problems (depression, anxiety, stress, among others) of a family member	51	41.1	73	58.9
Family conflicts (fights or arguments) with their partner, children, and other family members	56	45.2	68	54.8
Physical, verbal or psychological domestic violence	35	28.2	89	71.8

Table 6. Stressors related to COVID-19 among mothers during the COVID-19 pandemic at a school from the district of Independencia, Lima, 2022.

Factors	Yes		No	
	n	%	n	%
Strict compliance with the sanitary measures implemented by the Government, such as constant handwashing, wearing face masks, among others	82	66.1	42	33.9
Increase in the number of COVID-19 infections in their community	94	75.8	30	24.2
Being unable to contact family and/or friends due to social isolation	87	70.2	37	29.8
Testing positive for COVID-19 and/or infecting a close family member	91	73.4	33	26.6
Loss of a family member or someone very close	91	73.4	33	26.6
Difficulty to fall asleep	68	54.8	56	45.2

DISCUSSION

Stressors become determinants that affect health, as they are environmental conditions that threaten, challenge, and restrict a person's well-being. These factors contribute to the appearance of stress which, in turn, can be perceived differently by the individual (14).

Regarding the analysis of stressors, domestic work is understood as the set of tasks performed in the household, associated with service, maintenance, support, assistance or cleaning, all of which require dedication and time (15).

In this study, stress caused by the lack of household support predominated, as the workload of mothers during the pandemic intensified due to the increased hours dedicated to caring for children and elderly adults, maintaining household cleanliness, preparing meals, among others (16). Regarding gender roles, although they have been changing in many societies, men and women do not share domestic tasks equally, as these responsibilities primarily fall on women. In this context, managing all these activities simultaneously demanded greater pressure and effort (17).

Another stressful life situation refers to the responsibility to perform work-related and household activities simultaneously. During the pandemic, domestic tasks increased, work interfered with household and family activities, workload intensified, and family conflicts increased (18).

Regarding the challenges of childcare, having to be constantly aware of the upbringing, care, supervision and education of young children, as well as managing school-aged children at home, was a significant source of stress. Another study showed that the general population, particularly women, experienced higher levels of emotional distress or tension because they had to monitor their children's remote learning activities (15, 16).

During the pandemic, the highly unequal distribution of household responsibilities worsened due to the increased hours dedicated to daily activities, including virtual school education and remote work. Childcare challenges became a significant source of stress when managing school-aged children at home (18). In this context, the general population—especially women—experienced higher levels of emotional distress or tension as they had to adapt to their children's remote learning activities (15, 11).

It is important to mention that household work and family caregiving have been assigned to women, who play a multifunctional role as a result of gender stereotypes. Under this premise, men, mostly, continue to serve as the primary income providers in the household and, therefore, dedicate much of their time at work. According to the results obtained by the Ombudsman's Office, in a context prior to quarantine and lockdown, few men participated in household chores, i.e. they do not follow democratic guidelines (18).

Regarding the stressor related to economic problems, stress is predominant due to a lack of money to cover basic needs, such as food, healthcare, education, housing, among others. During the pandemic, the population, especially women, have been disproportionately affected by reductions in working hours or mass layoffs. This decline in economically active women generated a challenge for family finances (19). As income became lower than expenses, concern and hopelessness arose due to insufficient food, the inability to pay rent or housing costs, debt accumulation from loans, along with uncertainty about their economic situation. Therefore, economic problems triggered negative emotions, primarily related to unemployment (16, 20).

As for the stressors related to salaried work, long working hours were predominant, as most mothers are dependent workers. During the pandemic, the country experienced economic changes that ultimately impacted household finances. As a result, in order to meet their own and their family's needs, women saw the need to increase their working hours, either in person or remotely. On the other hand, the presence of debt led women to seek new sources of income, including working in more than one job (9).

Work overload or increased working hours, fatigue, monotonous, routine or repetitive tasks, job instability, high levels of responsibility and work pace were unfavorable factors that negatively impacted women's physical, psychological and cognitive well-being. In turn, these conditions led to high levels of stress (10).

Regarding the COVID-19 disease stressor, the predominant source of stress was the increasing number of infections in their community, followed by fear of testing positive for the virus and/or transmitting it to a close family member. The general population felt stressed due to fear of spreading COVID-19 and that a family member would become seriously ill or die. At the same time, among women, stressors were linked to the impact of pandemic-related isolation on their children and other members in their community (21, 22).

Given the demands of new forms of social coexistence, the enforcement of preventive measures and the presence of a highly contagious disease, the adoption of social distancing and mandatory health protocols led to various negative emotions. This included fear of contagion, sadness due to the death of relatives and friends, and uncertainty regarding vulnerability due to preexisting conditions. As a result, mental health was affected, manifesting in sleep disturbances, anxiety, and depression (21, 23).

Regarding the stressor factor related to the family environment, stress caused by conflicts (fights or arguments) with their partner, children and other family members was predominant. This was followed by stress caused by the consumption of psychoactive substances (alcohol, tobacco, or others) by a family member, as well as mental health problems (depression, anxiety, stress, among others) of a family member. During the pandemic, parents reported an increase in alcohol and tobacco use, a habit that disrupted family functioning (24). Many changes in the household due to the pandemic have negatively affected family relationships, as interactions were

altered by inadequate communication and ineffective ways to solve and cope with problems, which has triggered or intensified domestic violence (25, 26).

Given this disruptive circumstance, the role of the school nursing professional is crucial in the educational field, as they are responsible for developing interventions aimed at the educational community, which includes vulnerable populations such as mothers and students, according to the health promotion approach model and healthy educational institution programs.

This study has a limitation related to the non-probabilistic sampling method, as this type of sampling does not allow us to generalize results to the entire population.

CONCLUSIONS

The predominant stressors were the lack of support at home to do the household chores, the limited family budget to cover expenses, long working hours in the development of their job activities, the increase in the number of infections in their community, and family conflicts (fights or arguments) with their partner, children and other relatives.

Health managers are encouraged to promote mental health self-care programs to prevent the increase of stress-related symptoms in mothers, based on the stressors identified in this study. Researchers are encouraged to continue conducting research studies focused on vulnerable groups, such as women, who play a fundamental role in the family and society, with the aim of validating interventions or educational programs. At the same time, similar studies should be conducted to develop the validation of instruments for identifying stressors.

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