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Evaluating different stressors among parents with hospitalized children

Mimoza Canga, Irene Malagnino¹, Giulia Malagnino¹, Vito Antonio Malagnino²

Abstract:

BACKGROUND: The pediatric hospital is an environment with a high level of stress for most parents. Parents experience high levels of stress if their children are hospitalized due to the fear for the loss of their child's life.

OBJECTIVE: The objective of this study was to evaluate stress factors in parents of hospitalized children.

MATERIALS AND METHODS: This study was conducted from January to July 2019 at the General Pediatrics Department of Fieri Regional Hospital. The study sample was composed of 200 parents, of which 86 (43.3%) were males and 114 (56.7%) were females. The parents chosen as our sample had their children hospitalized for at least 5 days.

RESULTS: Our results showed that 80% of the sample was stressed out by waiting at the hospital, whereas 42% of them felt stressed also by their child's oral problems. Parents of hospitalized children (83%) felt stressed about the painful techniques applied to their children. Nearly 65% of them were stressed out by the hospital environment; child's sleep bruxism was considered another stressor by 39% of the sample.

CONCLUSION: This study claims that parents of hospitalized children experience stress from different stressors such as dental visits, waiting for the diagnosis, and sleep bruxism. There are other factors which do not influence parental stress including residence, divorced parents, and hospital conditions.

Keywords:

Age, gender, hospitalized children, parental stress, stressors

Introduction

The pediatric ward is an environment with a high level of stress for most parents. In the hospital, family members tend to depersonalize themselves as they need to conform to the rules set by the hospital institution.^[1-7]

During the 1st days of hospitalization, parents experience the highest levels of stress, but in the following days, they feel a reduction of it.^[8]

Stress, anxiety, fears, and worries, caused by the hospitalization of children, accompany not only parents, but the whole family.

Communicating to the parents that their children have to be hospitalized is a state of alarm and worry because parents think that something bad is going on with their children.^[9]

Studies conducted by La Clare and Anthony *et al.* proved that parents are obviously affected by their children's illness and hospitalization.^[10,11]

Hospital procedures, such as examination of vital signs, blood tests, and other tests, cause anxiety to the children, as well as to their parents.^[12]

Different studies claimed that parents of children with health problems were twice likely to report depressive symptoms,

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Department of Nursing,
Faculty of Public Health,
University "Ismail Qemali,"
Vlora, Albania, ¹Malagnino
Associated Medical Clinic
Rome, ²Department of
Endodontics University
"Gabriele D'Annunzio",
Chieti, Italy

Address for correspondence:

Dr. Mimoza Canga,
Street: Pavaresia,
No. 13 Vlore, Albania.
E-mail: mimoza-canga@
hotmail.com

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anxiety, and poorer overall health, compared to parents that have healthy children.^[13,14]

In a more recent study, it was reported that half of the parents of hospitalized children, who had threatening illnesses, suffered from acute stress disorders and had depression symptoms.^[15]

Pediatric patients, can be defined as individuals under the age of 18 that are treated with different medical treatments.^[16]

Other researchers arrive at a conclusion that hospitalization has a negative impact on children's cognitive, psychological, and emotional development, specifically on children in nonfamily settings.^[17]

Parenting stress consists of a series of complex and dynamic processes related to child behaviors, perceived demands on parenting, sources of parenting, the quality of parent-child relationship, as well as the connections with other people outside home.^[18]

After analyzing 3450 studies' abstracts, researchers concluded that parents of hospitalized children experienced psychological symptoms such as stress, anxiety, and depression.^[19]

Materials and Methods

This study was conducted from January to July 2019, at the General Pediatrics Department in Fieri Regional Hospital. The sample was composed of 200 parents, of which 86 (43.3%) were males and 114 (56.7%) were females. The parents chosen as our sample had their children hospitalized for at least 5 days. Even at their most stressful times, they were willing to complete the questionnaire, which was accepted by both parents. The participants' age range varied from 18 to 40+ years; they came from different areas and had different education levels. The questionnaire included demographic data such as age, employment, education, residence, and other stressors, such as child's dental visits, waiting for diagnosis, and sleep bruxism. These factors cause stress to the parents of hospitalized children. The questionnaire was designed based on the resolution of Albanian National Committee no. 9, date 11.11.2011. The questionnaire's purpose was to identify how stressed were the parents of the children depending on different stressors. This 7-month study claims that stress varies on the level of education, age, gender, etc. This questionnaire's compilation lasts about 20 min and is completely anonymous. Our study was conducted in accordance with Helsinki declaration. Based on the Declaration of Helsinki issued by the World Medical Association, our research, which was on adult human

participants, was clearly formulated based on protocols. The sample had the right to withdraw at any time.

Study design

This descriptive-analytical research was designed as a longitudinal study. The present study was approved by the University of Vlora, Albania.

Statistical analysis

Statistical analysis was performed using IBM SPSS Statistics Version 23.0, Microsoft Windows Linux, Chicago, IL, USA. Data were analyzed by post hoc test, using analysis of variance (ANOVA). $P \leq 0.05$ was considered statistically significant.

Results

The majority of the participating parents were females (56.7%), whereas the remaining were males (43.3%). Majority of the sample (45%) were 26–30 years old. Nearly 75% of the parents reported that they were unemployed. A greater number of parents claimed that they had secondary education (59%). Almost 56% of them stated that they live in villages, whereas 44% said that they were residents in the city [Table 1].

Based on our data analysis, 55% of the parents had symptoms of depression, originating from insomnia, whereas 30% of them stated that they slept at work from the same cause. A small number of parents, about 1%, attempted suicide. Nearly 14% of the parents of pediatric patients were treated with insomnia medications, whereas the remaining 86% were not treated. The sample (23%) reported that they had cardiac rhythm

Table 1: Demographic characteristics of the sample

Variables	n (%)
Parents' gender (n=200)	
Male	86 (43.3)
Female	114 (56.7)
Parents' age (years)	
18-20	9 (4.5)
21-25	34 (17)
26-30	90 (45)
31-40	60 (30)
Over 40	7 (3.5)
Parents' employment	
Unemployed	150 (75)
Employed	48 (24)
Part-time employment	2 (1)
Parents' education	
Secondary education	118 (59)
High school education	48 (24)
Higher education	34 (17)
Parents' residence	
City	88 (44)
Village	112 (56)

disturbances, during their child's hospitalization. On the other hand, certain data collected showed that 80% of the sample were stressed out by waiting at the hospital, whereas 42% of them felt stressed also by their child's oral problems.

Parents of hospitalized children (83%) felt stressed about the painful techniques applied to their children. Nearly 65% of them were stressed out by the hospital environment; child's sleep bruxism was considered another stressor by 39% of the sample [Table 2].

A strong correlation was found between age, gender, and child's sleep bruxism ($P = 0.001$ and $P = 0.01$, respectively). Age and child's oral problems attained a moderate statistically significance ($P = 0.04$), whereas the same variable and gender had $P = 0.02$ [Table 3].

The age variable had no effects on the family status, and the correlation was not statistically significant ($P = 0.62$). Furthermore, the relationship between age and parents' knowledge about the hospital's equipment did not show statistical significance ($P = 0.45$). The same can be claimed between age and parents stressed by the hospital environment ($P = 0.09$). There was a strong statistically significant correlation between gender and parents' educational level ($P = 0.000$) [Table 4].

The correlation was also statistically significant between arrhythmia and age with a P-value = 0.03, as well as between arrhythmia and gender with a P value = 0.04., whereas the correlation between parents' depression caused by insomnia and age was not statistically significant ($P = 0.7$). Furthermore, there was a positive relation between gender and parents' insomnia depression ($P = 0.01$) [Table 5].

Discussion

This study was conducted in the field of Pediatric Unit, at Fieri General Hospital. The reason behind the consideration of parental stress is that stress is one of the most common concerns related to parenting. We decided to undertake this study because in Albania, there are only a few studies about this issue. Most of the studies are focused on children's anxiety and stress, but parents also suffer from this situation.

Listening and identifying parental worries are major issues in preventive health care. There are many factors that affect parental concerns, with one of them being parents' inability to express themselves, which can adversely affect parent-child relationships. Excessive worry or lack of worry can have an effect on parents' behavior, which will also affect the child's well-being.^[20]

Table 2: Parental stress in correlation to various factors

Item	Yes (%)	No (%)
Depression from insomnia	110 (55)	90 (45)
Slept at work from insomnia	60 (30)	140 (70)
Risked suicide	2 (1)	198 (99)
Stressed by child's oral problems	84 (42)	116 (58)
Stressed by the diagnosis of the child's disease	184 (92)	16 (8)
Treated from insomnia	28 (14)	172 (86)
Child's illness causes arrhythmia	46 (23)	154 (77)
Divorced parents	18 (9)	182 (91)
Stressed out by waiting in hospital	160 (80)	40 (20)
Informed about hospital equipment	128 (64)	72 (36)
Painful techniques applied to the child	166 (83)	34 (17)
Stressed by the hospital conditions	138 (69)	62 (31)
Stressed by the hospital environment	130 (65)	70 (35)
Stressed by child's sleep bruxism	78 (39)	122 (61)

Table 3: Different stressors in relation to age and gender

Stressors	Age (P)	Gender (P)
Child's dental visits	0.04	0.02
Waiting for the diagnosis	0.01	0.1
Sleep bruxism	0.001	0.01

Table 4: Different factors in relation to age and gender

Factors	Age (P)	Gender (P)
Residence	0.65	0.43
Parents' educational level	0.47	0.000
Divorced parents	0.62	0.97
Stressed by the hospital environment	0.09	0.02
Informed about hospital equipment	0.45	0.68
Lack of heat in the hospital	0.52	0.32

Table 5: Parental stress consequences

Consequences	Age	Gender
Parents' insomnia depression	0.7	0.01
Risked suicide	0.65	0.87
Arrhythmia	0.03	0.04

Another study concluded that stressful parents, despite their psychological problems, reported high level of blood pressure.^[21] While in our study, we proved that 23% of the parents of pediatric patients were affected by arrhythmia during their child's hospital examinations.

Ryan-Wenger *et al.* and Hill *et al.*^[22,23] found that parents in hospital settings feel that they do not properly fulfill their role as parents. Parents should make the transition from being parents of a healthy child to parents of a sick child. This can be an extremely difficult process. Parents need time to accept the loss of their former role and adjust to a new role, where other people are in control of their child's life.

The findings of recent studies have shown that parental stress is a factor that adversely affects not only their

emotional and physical condition, but also slows down the healing process of pediatric patients.^[24]

In the study conducted by Coull and Cahman,^[12] the parents were asked to rate the care shown to their children. Findings revealed that parents rated the health care provided to their children as very good. However, many parents said that the medical staff did not provide them the necessary information.

Professional doctors not only work closely with their pediatric patients, but they also help children's families cope with the stressful situations they are going through. This shows that pediatric hospitals offer a quality service that focuses not only on the patient but also on his or her family. Shields pointed out that it is important for parents to be supported during their children's hospitalization.^[25]

Lerwick^[26] conducted a qualitative study in which she proved that parents felt nervous and worried about their children's hospitalization. The present study did not take children's perceptions into consideration.

Based on the results of our study, we found that 36% of the parents of hospitalized children did not have any knowledge about hospital equipment. The correlation between parents being informed about hospital equipment, age, and gender was not statistically significant ($P = 0.45$ and $P = 0.68$, respectively).

According to Hallström and Elander,^[27] depression usually occurs after stressful situations, where many people lose the desire to perform daily activities and have low levels of happiness hormone.

The results of our study showed that 1% of the observed parents reported suicidal attempts, whereas 14% of them were treated with insomnia medications.

Different studies conducted in the last two decades showed that there were many other stressors which affect parents of hospitalized children. Some of their findings were seeing their child in pain, not knowing how to help their child, and not being able to be with their child.^[28,29]

A child's illness can affect the economic functioning of the family, as it affects its parents' employment.^[30] However, in our study, we noticed that parents who reported high levels of stress did not have a job.

A study conducted by Feizi *et al.*^[31] measured the level of stress experienced by parents of hospitalized children in intensive care for at least 24 h. Their study reported that younger parents had higher levels of stress compared to older parents.

Parenting stress is one of the most common concerns that parents face daily, but it can also be associated with negative parenting characteristics, such as low levels of parental warmth, unhealthy parenting styles, harsh discipline, and child neglect. This is especially true among those residing in low-income communities, where poverty and low socioeconomic status are related to a number of stressful circumstances.^[32-36] According to Lamontagne *et al.* and McIntosh *et al.*,^[37,38] there exists a relationship between anxiety, uncertainty, and optimism in parents of ill or hospitalized children.

High levels of parental stress are related to psychological outcomes for both children and their parents during hospitalization and after hospital discharge.^[39,40]

According to Wise and Delahanty, stress influences the way how parents get the information and process and recall it later; this could affect children's treatment.^[41]

Other studies have had similar findings which showed that high parental stress levels could negatively influence children's medical treatment as well as their behaviors.^[42,43]

According to Neece,^[44] waiting for the child's diagnosis increases the risk of developing stress depression. Within the current study, 92% of the parents were stressed while waiting for their child's diagnosis to be clarified. Furthermore, we can claim that waiting for diagnosis and age ($P = 0.01$) showed statistically significant positive correlations.

The present study proved that parents' insomnia depression and child's sleep bruxism were significantly associated with gender. In addition, there were statistically significant correlations between different stressors and gender ($P < 0.05$).

The present study helps raise the awareness and takes more in consideration parental stress in Albania.

There are some limitations that should be stated in this study; first is the small sample size as only less number of participants were taken under consideration. That is why the results need to be interpreted with caution because they cannot be generalized for the whole of Albania.

Another limitation of this study has to do with the fact that the parents chosen as our sample had their children hospitalized for at least 5 days. Parents of children hospitalized in <5 days were not included.

Conclusion

This study can claim that parents of hospitalized children experience stress from different stressors such

as dental visits, waiting for the diagnosis, stressed by the hospital environment, and children's teeth grinding nature at night. There are other factors which do not influence parental stress including residence, divorced parents, and hospital conditions. The findings obtained by this study showed that more professional help and psychosocial support should be provided to parents of hospitalized children, whereas doctors need to closely collaborate with parents because this will help them know better about their patients.

Another recommendation of this study is to conduct more researches in future that will analyze the negative role that parental stress plays both on children and parents themselves.

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Conflicts of interest

There are no conflicts of interest.

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