

The influence of selected sociodemographic data on coping with stress by parents of hospitalized children

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A – Study Design, B – Data Collection, C – Statistical Analysis, D – Data Interpretation, E – Manuscript Preparation, F – Literature Search, G – Funds Collection

Summary Background. A child's illness is a major stress-inducing factor for parents. It alters interpersonal relationships in and outside the family unit and weakens the sense of safety. In stressful situations, everyone adopts certain behaviors that are defined as a stress-coping style.

Objectives. The aim of the study was to analyze factors which contribute to the choice of a stress-coping style by parents of hospitalized children.

Material and methods. This survey-based study was conducted among 292 parents of children hospitalized in the General and Neurological Pediatric Ward of the Voivodeship Independent Public Hospital in Gorzow Wielkopolski. The research instruments were: the Coping Inventory for Stressful Situations (CISS) – a standard questionnaire for measuring one's ability to cope with difficult situations, developed by N. S. Endler & J. D. A. Parker, and a questionnaire of the authors' own design.

Results. The parents of hospitalized children employed all types of stress-coping strategies, but task-oriented coping was the most common (41.10%). Education was the only sociodemographic factor that had a statistically significant influence on the parents' choices of stress-coping styles ($p < 0.01$).

Conclusions. 1. Most frequently, parents of ill and hospitalized children adopt a task-oriented coping style. 2. Parents' education significantly contributes to their choice of a stress-coping style.

Key words: stress, parents, hospitalized child, stress-coping style.

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Background

A child's illness, especially chronic or incurable, is a highly stressful event in the life of parents. It changes existing relationships between family members, their relations with the environment, roles, system of values, and it weakens the feeling of safety [1, 2]. During a child's stay in the hospital, parents experience a constant presence of the feeling of stress and states of anxiety fearing for their child's life, which, in turn, can trigger depression and a breakdown of family and social ties [3]. The experienced stress interferes with the parent-child relationship, often leading to parents' emotional maladjustment [4], which can reflect onto children's health and their recovery speed [5]. When a stressful situation occurs, each person undertakes a specific activity, which is defined as a stress-coping style.

Objectives

The aim of the study was to analyze factors which contribute to the choice of a stress-coping style by parents of hospitalized children.

Material and methods

This survey-based study was conducted among 292 parents of children hospitalized in the General and Neurological Pediatric Ward of the Voivodeship Independent Public Hospital in Gorzow Wielkopolski. The study involved 292 parents of hospitalized children.

The study included a diagnostic questionnaire method, and the research instruments were the Coping Inventory for Stressful Situations (CISS) – a standard questionnaire for measuring one's ability to cope with difficult situations, developed by N. S. Endler & J. D. A. Parker, used in its Polish version made by Strelau, Jaworowska, Wrześniewski and Szczepaniak [6], and an original questionnaire, containing sociodemographic data, prepared by the authors. The CISS questionnaire consists of 48 statements that concern different behaviors undertaken by people in stressful situations. It distinguishes 3 basic stress-coping styles: a task-oriented style (SSZ) that consists in taking active measures aimed at solving a problem, an emotion-oriented style (SSE) that characterizes people whose behavior in a stressful situation is focused on themselves and their own emotional experiences, and an avoidance-oriented style (SSU), where such people are characterized by a tendency to avoid thinking about and experiencing difficult situations. This last style contains 2 subtypes – the first oriented at engaging in substitutional activities (ACZ), and the second seeking social contacts (PKT). Each subject was asked to select a response on a scale of 1–5, where 1 means “never” and 5 – “always”, which characterized the frequency of the behaviors or phenomena listed in the statements. Particular styles and subtypes are measured using a corresponding subscale. The so-called raw results obtained are converted into sten scores by gender and age of the subject. The sten scale range is between 1 and 10. A sten score from 1 up to 3 is a low result that indicates a lack of tendency to a particular stress-coping style. Sten scores of 4, 5 and 6 are average results showing a moder-



ate tendency to a particular style. A sten of 7 or above is a high score, interpreted as a strong tendency to a given style [6].

StatSoft Statistica 10 PL was used for the statistical analysis. The Kruskal–Wallis test was used for multiple independent groups, and the chi-square test was used for variables expressed on a nominal scale. The normality of distribution was confirmed by the Saphiro–Wolf test. The accepted level of statistical significance was $\alpha = 0.05$.

The study received a positive opinion from the Bioethics Committee of the Pomeranian Medical University.

Results

The average age of parents was 31.72 ± 6.59 , where the minimum age was 18 and the maximum 59. Most of the subjects were women (84.25%), married couples (67.47%), people with higher education (44.86%) and people living in cities of more than 100,000 residents (45.89%).

The analysis of results of the CISS scale showed that for the task-oriented stress-coping style (SSZ), all of the results were within the range of 1–10 stens. The dominant was equal to 5, and this result was obtained by 22% of the subjects. For the emotion-oriented stress-coping style (SSE), a full range of sten points was observed as well. Half of the respondents obtained a value between 3 and 6 points. The dominant was equal to 6, and this result was obtained by 26% of women. In the last of the scales – avoidance-oriented scale (SSU) – a full range of possible values was obtained as well. Multiple dominant forms appeared here. Values of both 5 and 6 were obtained by 20% of the subjects (Table 1). In the ACZ subscale, after conversion to stens, a value from 1 up to 10 was obtained. The dominant was equal to 5, and this result was obtained by 27% of the subjects.

In the PKT subscale, the dominant was 6, and such a value was obtained by 21% of the subjects.

Table 1. Descriptive statistics for the obtained scores on the CISS scale

Variable	$\bar{X} \pm SD$	Min–Max	Q_1-Q_3	Me
TOC	6.23 ± 2.03	1–10	5–8	6
EOC	5.05 ± 2.11	1–10	3–6	5
AOC	5.26 ± 2.03	1–10	4–7	5
Distraction	5.01 ± 1.99	1–10	4–6	5
Social Diversion	5.88 ± 2.00	1–10	5–7	6

χ^2 – chi-square test result, SD – standard deviation, Min – minimum, Max – maximum, Q_1 – lower quartile, Q_3 – upper quartile, Me – median, TOC – task-oriented coping style, EOC – emotion-oriented coping style, AOC – avoidance-oriented coping style, Distraction – engaging in alternative activities, Social Diversion – seeking social contact.

The studies have shown that the dominant stress-coping style was the task-oriented style, which was found in 41.10% of the subjects. An avoidance-oriented style was found in 21.92% of the subjects, while an emotion-oriented style was found in 16.10%. In 2.4% of the subjects, there was no significant difference between the stress-coping styles. Two styles intensified more than the third were observed in 18.49% of the subjects.

Statistical data analysis has shown that age, sex and place of residence did not significantly affect the adopted stress-coping styles ($p > 0.05$). As for education, there were statistically significant differences in the method of choosing the stress-coping style ($p < 0.01$). Individuals with higher education more frequently adopted the task-oriented style, while those with lower education focused on the other two styles (Table 2).

Table 2. Demographic factors contributing to the choice of a stress-coping style by parents of hospitalized children

Dominant style	Demographic factors contributing to the choice of a stress-coping style						
Age							
	N	Rank sum	Mean rank	H	p-value		
EOC	47	6,736.5	143.330	4.767	> 0.05		
AOC	64	8,347.5	130.430				
TOC	120	18,682.5	155.688				
Two styles	54	7,774.5	143.972				
Three styles	7	1,237	176.714				
Sex							
	Female	Male		χ^2	p-value		
	N (%)	N (%)		2.920	> 0.05		
EOC	43 (17.48)	4 (8.70)					
AOC	55 (22.36)	9 (19.57)					
TOC	98 (39.84)	22 (47.83)					
Two styles	44 (17.89)	10 (21.74)					
Three styles	6 (2.44)	1 (15.75)					
Education							
	Primary	Vocational	Secondary	Higher	χ^2	p-value	
	N (%)	N (%)	N (%)	N (%)	27.931	< 0.01	
EOC	4 (33.33)	12 (26.67)	14 (13.46)	17 (12.98)			
AOC	4 (33.33)	14 (31.11)	27 (25.96)	19 (14.50)			
TOC	2 (16.67)	9 (20.00)	38 (36.54)	71 (54.20)			
Two styles	2 (16.67)	8 (17.78)	22 (21.15)	22 (16.79)			
Three styles	0 (0.00)	2 (4.44)	3 (2.88)	2 (1.53)			
Place of residence							
	Village	City/town up to 10,000	City/town up to 100,000	City/town over 100,000	χ^2	p-value	
	N (%)	N (%)	N (%)	N (%)	6.772	> 0.05	
EOC	14 (19.44)	5 (14.71)	6 (11.54)	22 (16.42)			
AOC	15 (20.83)	6 (17.65)	16 (30.77)	27 (20.15)			
TOC	26 (36.11)	14 (41.18)	20 (38.46)	60 (44.78)			
Two styles	16 (22.22)	8 (23.53)	9 (17.31)	21 (15.67)			
Three styles	1 (1.39)	1 (2.94)	1 (1.92)	4 (2.99)			

χ^2 – chi-square test result, p – level of significance, H – Kruskal–Wallis test result, EOC – emotion-oriented coping style, TOC – task-oriented coping style, AOC – avoidance-oriented coping style.

Discussion

The studies have shown that as for the stress-coping strategies parents, depending on sex, show significant differences. According to Goldbeck [7] and Pilarczyk et al. [8], in situations of a child's illness, mothers adopt the emotion-oriented stress-coping style, and fathers often prefer the task-oriented style. A similar result has been demonstrated in the studies of Kózka et al., where was found that in a study group of women, the task-oriented style is present to a lesser degree, and the stress-coping method among the subjects depended on age, gender and professional activity [9]. This has not been confirmed in the authors' study. Regardless of sex, parents presented all types of stress-coping styles. Both among mothers and fathers, the dominant stress-coping style was the task-oriented style – in mothers 39.84%, in fathers 47.83%. The second most common style was that focused on avoidance – 22.36% of mothers, 19.57% of fathers. The smallest group was focused on emotions – 17.48% of mothers, 8.70% of fathers.

In the authors' study, individuals with higher education amounted to as many as 44.86% of the subjects. The conducted statistical analysis has shown a significant influence of the subjects' education on the adopted stress-coping style. Individuals with better education were more likely to adopt the task-oriented style. Presumably, this could be related to parents' knowledge and the ability to use it, e.g. for the solving of problems

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that emerged during a child's illness. However, parents with lower education concentrated on avoidance or emotions. The studies conducted by Aftyka et al. have shown no statistically significant correlation between the level of education of parents of children hospitalized at the Intensive Medical Care Unit and the stress-coping style [10]. In a different study conducted by Podolska and Majewska, it has been found that women with symptoms of perinatal depression, who had Caesarean birth, regardless of their age and education, preferred the emotion-oriented style and substitutional activities when in stressful situations [11].

The conducted studies have shown that the parents' place of residence does not significantly influenced their stress-coping style ($p > 0.05$). Similar conclusions were drawn by authors who studied the caretakers of children hospitalized for short periods [5].

Conclusions

- In the situation of a child's illness and hospitalization, parents usually adopt the task-oriented stress-coping style; this is not dependent on their age, gender and place of residence.
- Parents' education had a significant influence on the adopted style of coping with stress. Highly educated individuals were more likely to adopt the task-oriented style, and those with lower education focused on emotions or avoidance.