Social environment and its impact on selected aspects of children's health in Prešov region

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Original Articles

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Submitted: 26.2.2016 Revised: 20.3.2016 Accepted: 5.4.2016

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Key words:

Socially risk environment, morbidity of children, breastfeeding, hospitalization of children, caseworker

Abstract:

*Aim.*Child Health is greatly determined by the social environment (quality of saturation needs of the child families). The aim was to analyze the influence of social environment on child morbidity, length of breastfeeding, child development, incidence of hospitalization. *Design.* Retrospective analysis of medical and social documentation in the years 2011-2013 in J.A.Reimana Hospital in Prešov. *Methodics.* Children (n-450) were classified in two categories: children at risk of social environment (RSE children, 65.6%) children without endangering social environment (without RSE children, 34.4%). At the same time we assessed children's morbidity, length of lactation, incidence of hospitalization of children. *Results.* Children RSE you found a significantly higher likelihood of gastrointestinal disorders (OR: 4.694, p = 0.000), respiratory tract (OR: 5.21, p = 0.000), skin disorders (OR: 7.154, p = 0.000), delays in Psychomotorics (OR: 3.184, p = 0.000), and neglecting the child (OR: 14.687, p = 0.000) in comparation with children without RSE. Children without RSE were breastfed longer (M – 3.64, SD – 3.32) than children RSE (M – 1.94, SD – 3.23) (p = 0.000). We found that the child admitted to the hospital after the intervention of social workers occurred in 12.4% of children without RSE and in 87.6% of children RSE (p = 0.000). *Conclusion.* Social environment can negatively affect the health of the child. The role of social workers is the assessment and elimination of risk factors, family environment.

Introduction

The major determinant affecting the health of the child is sufficiently stimulating social environment. Taking into account the fact that human health is at 20% -Tachov participates environment (including social) and 50% -Tachov lifestyle (Kozierová et al. 1995), which is initially formed family, the family and social environment surrounding the child plays an important role in health promotion and disease prevention of the child. The family has a role in enhancing

the childs‘ growth, development, health of the child and satisfying their needs of vital importance (Fischer, Škoda 2009). The dependence of the child‘s family is quantitatively greater than in adults. Without the cooperation of the family it is not possible to promote the health of the child (Dunovský 1999).

In the literature we meet various alternatives term „socially disadvantaged background“ such as poverty, social exclusion, marginalization, children at risk of social protection, social inequality, social differentiation, stratification of society (Kovalčíková, Džuka 2014). In hospital practice, children from such environments are known as „casus social“. Law no. 245/2008 Coll. in Slovak republic on education defines socially disadvantaged environment as an environment where social, family, economic and cultural conditions insufficiently encourage development of mental, emotional and volitional qualities of man. Such an environment does not support the socialization of the child and does not provide sufficient incentives for optimal development (Rosinský, Klein 2008). Since there is no uniformity in the definition of the term „socially disadvantaged background“ likewise, there is no uniformity in the criteria that should be taken into account in its analysis. The common criteria are zaradzované: families who do not fulfill their basic functions, poverty and material deprivation, lack of education for the child‘s parents, poor living and sanitary conditions, the language other than the language which the child at home say, segregated Roma families, social exclusion community (Machálková 2007; Rosinský, Klein 2008).

Dluholucký and Šváč (1988) created a “scoring system of social traits“, which integrates the 12 monitored criteria (tab. 1). This system should be preferred over the traditional concept of „casus social“. The common denominator criteria included in the scoring system is to interact at the same time contribute to the quantity and quality of meeting all the needs of the child‘s family, health promotion and disease prevention.

Objectives

- To assess the influence of social environment on child morbidity, length of breastfeeding, child development, incidence of hospitalization and placement of the child after discharge from hospital.
- Identify differences in the incidence of hospitalization after the intervention of social workers in social environment of the child.

Methodology

Design.

The research was conducted through retrospective analysis of health and social documentation. Family data for hospitalized child were profiled so that the children could be classified into two categories:

- children at risk of social environment (children RSE),
- children who are not at risk of social environment (children without RSE).

The categorization were prepared based on “scoring system of social traits“ (SSST) (Dluholucký, Šváč 1988), which is a method of at-risk children. SSST can be used by pediatricians, nurses and social workers. The system integrates the 12 regions (Table 1), the scoring is based on a binary response (symbol present / absent). The presence of ≥ 3 points is a clear risk.

Documentation for the selection criteria were established:

- Including – health for the child (0-19 years) hospitalized at the Department of Pediatrics or neonatal of the hospital J.A.Reimana in Presov.

Table 1 Areas „scoring system of social traits"

SSST area	scoring
alcoholism in the family	1 = present one character = one alcoholic parent 2 = present characters both parents are alcoholics
housing conditions	present sign = poor housing conditions
Roma families	present character = family of Roma origin
many children	present sign = fourth child and more
death of children in the family	present sign = exit child in the family
intelligence mother	present sign of low intelligence = mother
marital status of mother	present sign = living alone (single, divorced)
punish parents	present sign = punishing parent
children in institutional care	present the = child in institutional care
maternal age	present sing = less than 18 years
interest of the child	present sing = lack of interest hospitalized child
„other"	present sing = other relevant factors included in other areas (in the case of research, we present as a feature included neglect of a child)

- in the years 2011-2013, and health and social status of the child require the intervention of a social worker in hospital,
- Negative – not including medical records documenting the social worker.

Sample

In the years 2011-2013 was at the Department of Pediatrics at the University Hospital JAReimana 11,413 hospitalized children, and assessment of social workers subject to 455 children (3.98%). The analysis was scrapped five dossiers. The research sample consisted of 450 respondents – parents and their children.

The average age of mothers of hospitalized children was 32.75 years (SD – 9.83, range: 14-60). 30.2% of mothers are unemployed, 43.2% in receipt of parental allowance, 19.5% of employment and 3.6% of mothers are schoolgirls.

The average age of fathers of children bolt 35.8 years (SD – 9.63, range: 18-59). 59.3% of fathers are unemployed and 20.9% of the employed.

Parents have averaged 4:52 of children (SD – 2.96, range: 1-16). The average age of children was 13.4 years (SD – 5:00, range: newborns up to 18 years). 204 children (45.3%) were female and 246 (54.7%) males.

Data collection

The research was conducted during the period February 2014 to June 2014. Documentation processing was carried out with the approval of the Ethics Committee Hospital JAReimana Prešov.

Data analysis

For statistical data processing SPSS 17.0 software was predominantly used. In assessing the odds ratio (OR) occurrence of the same phenomenon we chose logistic regression with 95% confidence intervals (CI).

For statistical comparison of average values was used Mann-Whitney test. Relationships between variables were tested by Spearman correlation coefficient. For the identification of occurrence of the phenomenon between two categorical variables, we chose Chi-Quadrat test. The level of significance was $p < 0:05$.

Table 2 Areas „scoring system of social traits in the research sample

SSS region in the research sample	n (%)
one alcoholic parent both parents are alcoholics	123 (27.3%) 47 (10.4%)
bad housing conditions	183 (41.7%)
family of Roma origin	332 (73.8%)
≥ four children in the family	241 (53.6%)
death of children in the family	34 (8.6%)
low intelligence, including mother‘s mental illness mother	112 (25.0%)
mother living alone in households (= single, widow, divorced)	62 (13.9%)
punishment / parents	9 (2.0%)
children in institutional care	40 (8.9%)
maternal age less than 18 years	18 (4.0%)
hospitalization of a child without parents interest of the child: regular visits interest of the child: an occasional visits interest of the child: No visit	448 (99.6%) 123 (27.3%) 123 (27.3%) 202 (44.9%)
neglect of a child found in the day hospital	189 (42.0%)

Results

Using SSST we found that 295 (65.6%) children are at risk of social environment and 155 children (34.4%) without endangering social environment.

Data analysis showed significantly more likely to develop gastrointestinal disorders (OR: 4.694), respiratory tract (OR: 5.21), skin disorders (OR: 7.154), delays in psychomotorics (OR: 3.184), and neglecting the child (OR: 14.687) in RSE group of children in comparation with children without RSE (tab 3).

The average length of breast-fed infants was 2:52 months (SD – 3:36, range: 0-12 months). 48.4% of children were not breastfed at all ≤ breastfeeding for six months, we have identified in 41.1% of children and breast-feeding 7-12 months in 10.5% of children. Children without RSE were breastfed on average 3.64 months (SD – 3.32), while children RSE 1.94 months (SD – 03.23). Observed differences are statistically significant (p = 0.000). Children without RSE in the current year (ie. 2011, 2012, 2013) 1:35 hospitalized times (SD – 0.96), while children RSE 2:43 times (SD – 2.28) (p = 0.000). We further found that children were without RSE during their lifetime hospitalized an average of 2.28-fold (SD – 3.27) and children RSE 3.84 times (SD – 4.48), the differences are analyzed significantly (p = 0.000). The correlation between the risk of endangering the child‘s social environment and the length of suckling pointed out that with increasing degree of endangering a child decreases the length of breastfeeding (r: -0,419). Also rising risk to the child‘s social environment leads to an increase in frequency of hospitalization of a child in a given year (r: 0.380) and increases the total number of hospitalizations child during their lifetime (r: 0.322). The correlations are statistically significant (tab.4). We can say that an increasing number of negative elements in the social environment of the child reduces the length of breastfeeding of children and increases the frequency of hospitalization in a hospital.

Most children (n – 449, 99.7%) before hospitalization lives with his biological parents respectively. relatives. This

Table 3 Analysis of morbidity, lagging behind in development and neglect of children due to social environment

	OR (95% CI)	sig.
	GIT disease	
children without RSE children RSE	1 4.694 (2.780 – 7.925)	**<0.000**
	diseases of the respiratory character	
children without RSE children RSE	1 5.212 (2.685 – 10.116)	**<0.000**
	disease VVCH	
children without RSE children RSE	1 1.194 (0.659 – 2.162)	0.559
	skin disorders	
children without RSE children RSE	1 7.154 (4.005 – 12.778)	**<0.000**
	diseases of the blood	
children without RSE children RSE	1 2.524 (0.714 – 8.921)	0.151
	CNS disease	
children without RSE children RSE	1 1.159 (0.552 – 2.434)	0.696
	intoxication	
children without RSE children RSE	1 0.736 (0.390 – 1.388)	0.343
	accident in the home	
children without RSE children RSE	1 0.918 (0.264 – 3.184)	0,892
	delays in psychomotorics	
children without RSE children RSE	1 3.184 (1.873 – 5.411)	**<0.000**
	child neglect	
children without RSE children RSE	1 14.687 (8.090 – 26.664)	**<0.000**

Note. reference group – children free of that disease, trauma, lagging in development, neglect

Note. RSE without children – children without endangering social environment; RSE children – children at risk of social environment

effect is predominantly observed after hospital discharge (n – 357, 80.5%). 87 children (19.6%) had a change of placement of the child after discharge from hospital and in terms of the child‘s removal from the original family (parents, relatives) to inpatient / emergency care (n – 86, 19.4%). The change of location of the child after discharge from hospital, we identified in 13.8% of children without RSE and in 86.2% of children RSE (p = 0.000). After the intervention of a social worker readmissions child was present in 97 cases (21.6%). Rehospitalization child after the intervention of social workers was identified in 12.4% of children without RSE and in 87.6% of children RSE (p = 0.000).

Table 4 Correlation between the risk of endangering the child's social environment and the descriptive variables

	length breast-feeding	frequency of hospitalization of a child in a given year	the total number of hospitalizations child
risk to the child social environment	-0.419**	0.380**	0.322**

Note ** Correlation is significant at the 0.01 level.
Note 2. Risk to the child‘s social environment was expressed by the number of characters present in 12 areas SSST

Discussion

Social workers work with hospitalized child focuses on the social causes and consequences of child illness (Navratil, Musil 2000). Social worker at the hospital uses a wide range of interventions conducted directly with the child and his family. In the survey sample, we have seen many negative phenomena in child‘s family environment, which can be determined by his health. Although the mean age of mothers was almost 33 years, 4.0% of mothers were juveniles. Without partner was 13.9% of mothers of children. Substandard housing conditions were identified in up to 36.9% of families at what can be clearly involved a high proportion of parents who are unemployed (30.2% of mothers and 59.3% of fathers) or just receive different allowances from the state.

The vast majority of families were Roma ethnic group (73.8%). According to the Infostat (2002), the proportion of Roma in the Slovak population will increase from 7.2% (2002) to 9.6% (2025). Population density Slovak Republic, the Roma population is not homogeneous, the highest number of Roma population is in eastern Slovakia (Slovak Statistical Office, 2001). The Prešov region in the years 1997-2011 slightly increased birth rate of Romani children (from 2,632 to 2,908 children), while the Slovak ethnic birth rate has fallen more strongly. Despite the same time, higher infant mortality Roma ethnic group (Kovaľ, Mrosková Schlosserová, 2012a), roma families have a higher number of children, which is confirmed by our research data. The Roma families had four children ≥ 60.5% of households, while non-Roma families have a higher number of children identified in 33.9% of families. The Roma population is both younger children component is strongly represented in it (Vaňo 2004). The Roma population is specific accumulation of many negative criteria such as low education, high share of unemployment, poor housing conditions, low hygiene standards, a greater share of abuse (Infostat 2002). From the above it can be assumed that Romani children, where there is no change and the ability to access their parents in meeting their needs, they will be in a hospital environment represent a significant proportion of hospitalized children and will require the intervention of a social worker.

It is necessary to differentiate whether the parents can, are unable or whether they want their children to take care (Machálková 2007). The inability to take care of children may be involved in the intelligence condition of the mother as the primary carer of the child. Simplex state was found in nearly ¼ of mothers (23.9%). If childcare in terms of financial resp. psycho-social one parent (eg. in the exercise of parental punishment – in the sample was a 2.0% mom living without a partner / husband – 13.9%) can lead to the fact that the parents can not or can not adequately take care of the children. The result of these phenomena is usually that some

children are placed in institutional care (in the study was a 8.9% of children), there is the child‘s death (8.6%), or parent does not seem adequate interest of the child during his hospital stay (almost half of the parents even once not visited their child in a hospital environment). Data on the interest of the parents of the child are social workers important, but it is necessary to consider the objectivity of reasons for the under interest of the child in hospital by their parents (eg. Poor financial situation, which may be a problem with commuting to the hospital every day, a greater number of children in particular, young age, serious health problems parents intentional lack of interest of the child and his health).

The frequency of hospitalization of children is significantly determined by the social environment and to the detriment of children RSE, which was higher frequency of hospitalization ($p = 0.000$). At the same time, we found that with the deteriorating social environment (ie. On a greater number of positive elements in SSOD) increases the number of hospitalizations. These results suggest that inappropriate social environment increases the risk of various diseases requiring hospitalization.

The probability of digestive diseases, respiratory tract and skin was higher in children RSE in comparation with children without RSE. Respiratory diseases include nationwide for the most common diseases in childhood (110,038 cases in 2012), followed by skin diseases (37,556 cases) and gastrointestinal system (27351) (National Health Information Center 2013), as well as the dominant reasons for hospitalization of children for pediatrics clinic at the University Hospital JAReimana in Prešov (Koval, Pochová, Čuříková 2010). On the high incidence of respiratory disease contributes mode of transmission (droplet infection) of many diseases of the respiratory system, underdeveloped immunity at an earlier age, children RSE come into consideration other factors: inadequate housing conditions, cold, malnutrition, a higher number of people living in one room. Diseases of the digestive system may be associated with poor nutrition (Šašinka, Šagát, Kovácz 2007), with the absence of drinking water and sanitation, and particularly in segregated Roma groups (Matyšák 2015). Kovaľ et al. (2012b) indicate qualitative differences in diet composition of Roma children (low share of fruits, vegetables, dairy products, high proportion of sweets, meat, meat products, the low number of meals during the day). Skin disorders, specifically dermatitis, psoriasis, intertrigo, louse hair, insect bites, festering wounds of the skin, are related primarily to very low hygiene standards in families, the high number of people living in a small living space, which creates conditions for their rapid and repeated dissemination. The dominant negative determinant of health of the Roma is the low level of education triggers an insufficient level of health awareness (= health awareness), followed by low personal and communal hygiene, low standard of living and unhealthy eating habits (Hanobik 2014).

Social environment has no impact on the incidence of central nervous system disorders, congenital developmental defects, diseases of the blood. Although in children RSE is likely to develop these diseases slightly higher in comparation with children without RSE did not show statistically significant differences. The etiology of these disorders is multifactorial and has no clear and exact correlation with the social environment of the child. Terms of factors such as heredity, diet pregnant women, the quality of nutrition of the child (Šašinka, ~~Saga~~ Šagát, Kovácz 2007), which can occur in families of different social nature. The smallest differences were identified intoxication. In children, the likelihood of intoxication RSE somewhat lower than those without RSE (p

= 0.343). The intensive care unit Pediatrics Clinic Hospital JAReimana in Prešov in the years 2003-2007 was hospitalized for severe alcohol intoxication 129 children (2-18 years). By ethnicity they were more often intoxicated „non-Roma“ children (91%) as Roma children (9%) (Kovaĺ et al. 2007). Alcohol intoxication is becoming increasingly frequent problem but does not specifically connected with the social environment. Intoxication is for larger children and adolescents importance influence of friends, parties, breakup with a boyfriend / girlfriend (Vágnerová 2004).

Passive form of child abuse is its neglect (Vágnerová 2008). Neglect is usually based on ignorance of parents about what is appropriate care for the child, or inability Planning (Kohut 2008). In the research we have a group of neglected children on admission to the department included only neglect „ physical“ for example, children dirty, with insufficient ensure hygiene, inappropriate clothing malnourished. We found almost 15 times more likely (OR: 14.687) (p = 0.000) neglecting the child from RES in comparation with children without RSE

Growth and development of children are important indicators of child health (Šašinka, Šagát, Kovács et al., 2007). For healthy development is an important right for the stimulation of the child (Vágnerová 2008), the functioning of the nervous system, supply nutrients and oxygen to the brain, the quality of nutrition (Nevoral et al. 2003). Probability lagging behind in development, according to data from the study three times higher in children RSE in comparation with children without RSE (p = 0.000). Also in this case it can be expected that a higher incidence of falling behind in development among children RSE is mainly related to insufficiently stimulating environment from parents. In clinical practice remains a problem even parents who do not respond to warning doctors about the child‘s retardation attending a medical examination which it is possible to change this situation (Vágnerová 2004).

An integral part of a healthy growth and development of the child is **breastfeeding.** The average length of breastfeeding in children was two and a half months (M – 2.52, SD – 3.36) and almost half of children (48.4%) was not breastfed at all, which we assess as a negative approach to maternal health of their child. Breastfeeding is seen as the most ideal way of nutrition during the first months and is an effective form of protection against many diseases of civilization (Agostoni et al. 2009), especially diseases of the respiratory and digestive systems (Duijts et al. 2010; Story Parish 2008). Research has shown that children be breastfed RSE almost one and a half months shorter than in children without RSE while a deteriorating social environment decreases the length of breastfeeding. And it is children from unsuitable environments, as already mentioned, had a statistically higher chance of suffering from respiratory and digestive system. Shorter duration of breastfeeding (p = 0.004) and a higher incidence of respiratory diseases (p = 0.000) showed a Mrosková al. et (2012) in a group of children environmental hazards. However, it should be pointed out that as children RSE perceived by children of Roma origin, has therefore applied a different methodology in the categorization of children. Details of the length of breastfeeding in disadvantage of Roma children do not correspond to results of research conducted on 657 Roma families (even distribution in Slovakia), where Roma children were breast-fed at a higher rate than the total population of children (Popper, Szeghy Šarkózy in 2009).

At the same time, we analyzed the incidence of re-hospitalization of a child after the intervention of social workers. After the intervention of social workers did not

need to re-hospitalization, 78.4% of children. For nearly ¼ of children (21.6%) after the intervention of repeated hospitalization, and the children were dominant RSE (87.6% versus 12.4% in the group of children without RSE). The data obtained on the one hand, the importance of the work of a social worker in a hospital environment, since most of the children after the intervention or re-hospitalized. However, for children from disadvantaged social environments we have seen, in spite of the social worker, a statistically higher incidence of rehospitalization child. It can be assumed that the problems in the families of these children have complex character and unless dealt with community social workers, family environment will continue to negatively affect the child's health and will interact on his re-hospitalization. For increasing the efficiency of social workers by the social field their scope should include not only the hospital and the community environment (Levická 2005), with the necessity of their mutual overlapping.

The most important task in assessing the situation of the family is deciding whether a child is at risk (Levická 2004). One of the most extreme measures is Social and child protection in terms of its placement in foster care (Machálková 2007). To 99.7% of children were placed in front of the hospital with their biological parents / relatives. However, during hospitalization in 19.6% of children were found significant problems in the family environment, which at the end of hospital care threatened the health of the child, so these children were chosen for alternative forms of care (this was a dominant inpatient care). Changing the placement of the child at the end of their stay in the hospital was predominantly carried out on the basis of recommendations of the social worker in children RSE compared to children without RSE ($p = 0.000$).

Conclusion

Based on the results of the research summary, we can conclude that inappropriate social environment has a negative effect on the health of the child and that the intervention of a social worker in a hospital environment can prevent re-hospitalization of children, ie. his work in the hospital is justified. At the same research results (in)directly) point to the importance of the work of community social workers and the importance of establishing secondary and tertiary prevention. Social workers work with families creates space for change of terminology the term „disadvantaged social environment" to "unfavorable social environment." While the former term refers to the steady state, the second emphasizes that social environment may not have ireparibilný character (Kovalčíková, Džuka 2014), and it is possible to influence the work of social workers to change. The findings of the study seem to suggest proper intervention of community social workers would minimize chances of re-hopitalization through improved social environment at places of residence and/ or at the household. This is a more cost effective response than dittaching the child from parental care to institutionalized centres, hence the need to target 'unfavourable social environment'.

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