Risk factors of child maltreatment within the family: towards a knowledgeable base of family nursing

Eija Paavilainen\textsuperscript{a,\*}, Päivi Åstedt-Kurki\textsuperscript{a}, Marita Paunonen-Ilmonen\textsuperscript{a}, Pekka Laippala\textsuperscript{b}

\textsuperscript{a}Department of Nursing Science, University of Tampere, FIN-33014, Finland
\textsuperscript{b}Tampere School of Public Health, University of Tampere, Tampere University Hospital, Finland

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Abstract

The purpose of this study was to compare family dynamics in child maltreating families ($n = 42$) with that in ordinary families with children ($n = 77$), and to ascertain risk factors of child maltreatment within the family. Child maltreatment was defined as physical, psychological or sexual abuse or neglect of a child by a parent. Data were collected using questionnaires (Family Dynamics Measure 2, FMD 2) ($N = 119$) basing on Barnhill’s conceptual framework of healthy family systems and analysed by forming sum variables and logistic regression. The study results indicate that family functioning in child maltreating families is lower on all dimensions of family dynamics (individuation, mutuality, flexibility, stability, communication and roles) than that in ordinary families with children. Furthermore, it seems that specific risk factors, detected with logistic regression analysis, are related to whether child maltreatment occurs in the family or not. These include the parent’s low educational background, many children in the family, unemployment of a parent, low individuation of the family members, and poor stability and security within the family. The results of this study provide guidelines for detecting and preventing child maltreatment as well as for recognising its existence, although no generalizations can be made due to the small sample size and complexity of the phenomenon under study. © 2001 Elsevier Science Ltd. All rights reserved.

Keywords: Child maltreatment; Family functioning; Family nursing; Logistic regression

1. Introduction

Caring for families as well as supporting their coping and wellbeing are among the primary tasks of nursing (Friedemann, 1989; Gilliss, 1991; Wright and Leahey, 1994; Paavilainen and Åstedt-Kurki, 1997). Nursing science has investigated families in different life situations (Hall et al., 1994; Wilson et al., 1994; White et al., 1996; Hakulinen, 1998) and families having difficulties, for example, in their inner relationships (Berardo, 1990; Gilliss, 1991). Knowledge of different families is needed to develop family nursing. Problematic family functioning and interrelationships are typical of child maltreating families (Cappelleri et al., 1993; Kolko et al., 1993; Silber et al., 1993; Gaudin et al., 1996). More multidisciplinary knowledge of child maltreatment and risk factors within the family is needed to better care for these families in social welfare and health care. This need has given rise to an extensive international educational and research collaboration in the field of child maltreatment. Nursing plays a key role in this collaboration, since nurses meet most of the families in hospital settings and at family homes, and are interested in their wellbeing (Ministry of Social Affairs and Health, 1991; Canadian Nurses Association, 1992; Birks, 1995).
The present article reports the findings of a study the purpose of which was to compare family dynamics (Barnhill, 1979) in child maltreating families with that in ordinary families with children, and to ascertain risk factors of child maltreatment. In this study, child maltreating families refer to those in which maltreatment has been detected by social workers. Ordinary families are those in which there has been no indication of child maltreatment. The Department of Nursing Science at the University of Tampere, Finland, takes part in an international family nursing research project, which attempts to clarify differences in family dynamics in child maltreating families and ordinary families with children in the USA, Island, Japan and Finland. The research project was started in 1994.

2. Literature review

In this study, child maltreatment refers to physical, psychological or sexual abuse or neglect caused by parents or other adults in the family (Tzeng et al., 1991; Briere, 1992; Corby, 1993; Birks, 1995; Paavilainen et al., 1996). Physical abuse denotes acts that cause pain and permanent or temporary damage to the child’s physical functions (Lewis, 1992; Kolko, 1996). Psychological abuse refers to cases where the child is rejected in a hostile manner, degraded or terrorised, isolated, exploited, corrupted or deprived of adequate emotional responses (Hyman, 1987; Walker et al., 1988; Hart and Brassard, 1991). Sexual abuse indicates any sexual act with the child (Ludvig, 1992; Berliner and Elliott, 1996), and neglect refers to a failure to care for the child either emotionally or physically (Crouch and Milner, 1993; Dubowitz et al., 1993; Gaudin et al., 1996).

Child maltreatment is part of domestic violence, a phenomenon intertwined with the activities and functioning of the whole family. Likewise, domestic violence is interwoven in family functioning, family members’ interrelationships and behavioural patterns. Violence within the family and child maltreatment as part of it affects each family member either directly or indirectly (Bentovim, 1992; McCloskey et al., 1995; Paavilainen, 1998). Earlier research has identified several risk factors of child maltreatment. Poor economic situation of the family, unemployment, substance abuse, single parent family and poor communication patterns within the family have been attached to child maltreatment. (Margolin, 1992; Ney et al., 1992; Bath and Haapala, 1993; Cappelleri et al., 1993; Kolko et al., 1993; Silber et al., 1993; Gaudin et al., 1996). These factors constitute structural and functional aspects of families and are central when thinking about families as systems (Minuchin, 1974; Kantor and Lehr, 1975; Barnhill, 1979; Belsky, 1993). However, it is important to bear in mind that the existence or non-existence of these factors does not decide whether child maltreatment occurs in the family or not.

On the basis of Barnhill’s (1979) conceptual framework of healthy family systems, family dynamics is composed of six dimensions which represent important parts of family life: individuation of the family members, mutuality within the family, flexibility, stability, communication and role structure. Individuated family members have the ability to think, feel and form opinions independently, and they have a clear perception of their identity. In a mutual family, the family members are close to each other, and in a flexible family, the family members are able to conform and adapt to different situations and changes. Interaction in a stable family is consistent, responsible and secure. When family roles are functional, family members complement each other’s roles according to prevailing behavioural patterns. The whole system relies on the principle that a change in one dimension also causes changes in other dimensions. Assessment of these different dimensions of family functioning provides information about families, their strengths and weaknesses. This makes it possible for nursing practitioners to focus on the problematic areas of family functioning. (Lasky et al., 1985; Sawin and Harrigan, 1995).

3. Sample and methods

Data (N = 119) were collected with a questionnaire basing on Barnhill’s conceptual framework of healthy family systems (Family Dynamics Measure 2, FDM 2) from child maltreating families (n = 42) and ordinary families with children (n = 77) who attended social welfare and health care services. The FDM 2 consists of 66 statements measuring family dynamics, in which the respondents rate their family on a scale ranging from 1 to 6. As family dynamics gets better, the grade gets higher. The statements are based on six dimensions, in the form of sum variables: individuation, mutuality, flexibility, stability, communication and roles (Barnhill, 1979). Additional questions concern the families’ background factors, such as the age and number of the family members, the number of children in the family, educational background and profession of the respondent and their partner and possible illnesses and problems in the family. The earlier version of the instrument (FDM 1) has been found to be reliable (e.g. Brackbill et al., 1990; Tomlinson et al., 1990; Tomasdottir et al., 1991; Hall et al., 1994; White et al., 1996), as measured by Cronbach alpha values of the instruments’ sum variables, which have ranged from 0.51 to 0.89. Validity of the instrument has been ensured by using experts on family research and practice in developing the instrument from the early stages up to the present form to assess the content and form of the statements, which
have been developed from FDM 1 to FDM 2 (Lasky et al., 1985; Sawin and Harrigan, 1995).

One member of each family completed the questionnaire on behalf of the family. The decision on who will represent the family in the study is a major concern in family research (Ferketich and Mercer, 1992; Moriarty and Cotroneo, 1993; Uphold and Strickland, 1993), as is the number of participant family members. The decision is dependent on the object of study, research assignment and study setting. In this study, it was found appropriate to choose one family member to represent the entire family, since the complexity of the object of study made it extremely difficult to recruit even one family member for the study.

Data on child maltreating families were collected through social welfare and health care practitioners. According to the permission granted by the Ministry of Social Affairs and Health, the researchers had no knowledge of the identity of the respondents. The selection of the families was based on the practitioners' assessment of the existence of maltreatment according to the criteria that were agreed upon in a group of investigators. The concepts of family and maltreatment were defined based on these criteria. Family was defined as a unit of adults and children under 18 living in the same household. The maltreatment was defined as physical, psychological or sexual abuse or neglect towards the child by a parent. The practitioner asked the family member to complete the questionnaire during the visit. The family member then returned the questionnaire in a closed envelope to the practitioner who delivered it to the investigator. The data on ordinary families with children were collected from families attending social welfare and health care services, for example, from child welfare clinics and adult physical examinations. These families attended the services for general reasons and there was no indication of child maltreatment in these families, although the opposite could not be excluded, either. Since the object of study is sensitive and difficult to approach, particular attention was paid to ethical considerations in collecting, analysing and reporting the data (Cowles, 1988; Lee, 1993; Paavilainen et al., 1998).

The data were first descriptively analysed by frequency and percentage distributions and by forming sum variables, and consequently, by logistic regression. The sum variables used were, in accordance with Barnhill's (1979) theory, as follows: individuation, mutuality, flexibility, stability, communication and roles. Means and standard deviations of these were calculated for the groups of child maltreating families and ordinary families with children. In the multivariate analysis, only complete cases could be included. Accordingly, the missing data were replaced by the respective subgroup mean. The analysis was carried out using both complete cases only and all cases. The results were analogous, and the presentation is based on the latter. All sum variables and the families' background data (age and number of family members, number of children in the family, educational background and profession of the respondent and their partner, possible illnesses and problems in the family) were then included in the logistic regression model. Variables that were included in the model were removed based on their significance so that the least significant ones were removed first. This procedure continued until the powers of explanation of the model did not improve. Model building was grounded on fitting the variables, not on testing them. The final model was evaluated by using two- and three-dimensional cross-tabulation. (McCullagh, 1980; Polit, 1996; Laippala et al., 1997).

4. Results

The mean age of the respondents was identical both in child maltreating families (group 1, $n = 42$) and in ordinary families with children (group 2, $n = 77$), that is, 34 years. The families of the first group had on average 4.2 family members and 2.3 children, whereas those in the second group had on average 3.8 family members and 1.8 children. The mean length of education was 11 years in the first group and 15 in the second group. Twenty six percent of the respondents in the first group and 74% of the second group were employed. Absence from work was caused by unemployment. Twenty two percent of the respondents of the first group reported that the family had several problems relating to, for example, economy, housing and relationships within the family, affecting family functioning, while 7% in the second group reported several problems. When asked about illnesses, child maltreating families reported mostly psychological disorders and alcoholism, whereas in ordinary families the most common illnesses were allergies and disorders of the back.

Comparison of family dynamics in child maltreating families and ordinary families showed that family functioning in the families of the first group was poorer on all dimensions than that in the second group. Child maltreating families scored lower than ordinary families with children on individuation, mutuality, flexibility, stability, communication, and role structure (Table 1). Child maltreating families were found to be less flexible with changes and to experience less togetherness. Role structure in these families was more unstable, and there was less communication between family members than in ordinary families.

Risk factors related to the incidence of maltreatment were also found by means of logistic regression. These include the parent’s low education and unemployment, many children in the family, poor individuation of the family members and poor stability within the family.
Existence or non-existence of these risk factors helped to classify 87% of the families into the right group (Table 2). Over 50% classification is considered good in logistic regression models (Polit, 1996).

Family members’ individuation and self-confidence in relation to the other family members and their conception of the stability and security of the family were most clearly associated with the incidence of maltreatment. Of the maltreating families, 45% belonged to the group where both individuation and stability were measured as poor. On the other hand, 91% of the ordinary families belonged to the group where both individuation and stability were measured as good.

Three-dimensional cross-tabulation showed more standard deviation in the first group compared with the second group. Most of the ordinary families with children belonged to the group where individuation and stability were measured as good. Ordinary families with children had fewer children than did child maltreating families. When considering the number of children, individuation of the family members in the first group was good in 52% compared with 88% in the second group. The same applies to stability, when it was related to the number of children in the family. Of the ordinary families with children, 90% showed high stability, whereas stability was good only in 42.5% of the child maltreating families. The number of children was largest in the families that had the poorest stability and security within the family. The same applies to individuation of the family members in families with many children: individuation was lowest in families with many children.

In child maltreating families, the parents had generally a lower education than did ordinary families. Individuation of the family members and stability and security within the family were lowered in child maltreating families, and in these cases also parents with high education maltreated their children, and family dynamics was poor in the first group of families. On the other hand, there were families in which the parents had high educational attainment and who themselves had assessed individuation and stability as good, but in which maltreatment had been detected. This contradiction may relate to the fact that educated respondents anticipate what to answer in order to be ranked among the group of good family dynamics.

Unemployment and child maltreatment in the family serve to lower its stability and individuation. It seems that unemployment, child maltreatment and excessive interdependence of family members, and, on the other hand, insecurity and unpredictability of family life as well as illogical family relationships are related to each other. The risk of maltreatment was lowered with the increase of education, and the increase in the number of

<table>
<thead>
<tr>
<th>Dimension of family dynamics</th>
<th>Group 1 ($n = 42$)</th>
<th>Group 2 ($n = 77$)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>SD</td>
</tr>
<tr>
<td>Individuation</td>
<td>4.3</td>
<td>0.8</td>
</tr>
<tr>
<td>Mutuality</td>
<td>4.3</td>
<td>1.0</td>
</tr>
<tr>
<td>Flexibility</td>
<td>3.5</td>
<td>0.7</td>
</tr>
<tr>
<td>Stability</td>
<td>4.1</td>
<td>0.9</td>
</tr>
<tr>
<td>Communication</td>
<td>4.0</td>
<td>0.9</td>
</tr>
<tr>
<td>Role</td>
<td>3.5</td>
<td>0.8</td>
</tr>
</tbody>
</table>

Table 2
Risk factors of child maltreatment within the family ($N = 119$)

<table>
<thead>
<tr>
<th>Risk factor</th>
<th>Regression coefficient</th>
<th>Standard error</th>
<th>OR</th>
<th>Confidence intervals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Education of the parent</td>
<td>-0.5294</td>
<td>0.1418</td>
<td>0.5889</td>
<td>0.45–0.78</td>
</tr>
<tr>
<td>Number of children</td>
<td>1.0097</td>
<td>0.4206</td>
<td>2.7448</td>
<td>1.20–6.26</td>
</tr>
<tr>
<td>Unemployment</td>
<td>-0.4221</td>
<td>0.1586</td>
<td>0.6557</td>
<td>0.48–0.89</td>
</tr>
<tr>
<td>Individuation</td>
<td>0.6337</td>
<td>0.4632</td>
<td>1.8846</td>
<td>0.76–4.67</td>
</tr>
<tr>
<td>Stability</td>
<td>1.1030</td>
<td>0.4914</td>
<td>3.0132</td>
<td>1.15–7.89</td>
</tr>
<tr>
<td>Constant</td>
<td>5.5208</td>
<td>1.8382</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Overall rate of correct classification 87%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
children in the family added to it. Unemployment also added to the risk of maltreatment.

5. Discussion

5.1. Reliability

The purpose of this study was to compare family dynamics in child maltreating families and ordinary families with children, and to unravel risk factors of child maltreatment within the family. These risk factors were found by logistic regression modelling. There were some limitations concerning the small sample size, the study design, and the correlations between the variables. The sample and the results are biased to a certain extent, because it was very difficult to find suitable families who wanted to participate. The sensitive topic of the study made it impossible to use random sampling to decrease bias. The sample size remained small for the same reason. This has presented a great problem for other child maltreatment studies, too (e.g. Widom, 1989; Cappelleri et al., 1993).

It is also difficult to determine the role of the individual risk factors of child maltreatment found by logistic regression, since they correlate with each other. Thus, it is difficult to evaluate the meaning of an individual risk factor. It is typical of logistic regression modelling that besides correctly classified positive cases, there also emerge false positive and false negative cases. Therefore, logistic regression modelling constitutes only one tool for recognizing child maltreatment. (McCullagh, 1980; Polit, 1996). The conclusion after these limitations is that the results of this study provide one view in understanding child maltreatment within the family, which was the aim of this study. On the ground of these limitations, the results cannot be generalized to the functioning of other child maltreating families. However, the study provides an alternative view of family functioning in child maltreating families and adds to the earlier knowledge of the risk factors of child maltreatment (Ross et al., 1990; Ney et al., 1992, 1994; Bath and Haapala, 1993; Cappelleri et al., 1993; Kolko et al., 1993).

5.2. Results

The study results indicate that family functioning in child maltreating families is lower on all dimensions of family dynamics than that in ordinary families with small children. Furthermore, the study suggests that specific risk factors are related to whether child maltreatment occurs in the family or not. These are the parent’s low educational attainment, many children in the family, unemployment of a parent as well as low individuation of the family members, and poor stability and security within the family. Consequently, the families have several problems that affect their functioning.

Silber et al. (1993) and Gaudin et al. (1996) have also found that child maltreating families have problems with positive interaction and that these families do not express themselves verbally as much as ordinary families with children. Mollerstrom et al. (1992) have found that the lack of positive interaction in the family adds to the risk of child maltreatment. Earlier studies (Ross et al., 1990; Ney et al., 1992, 1994; Bath and Haapala, 1993; Cappelleri et al., 1993; Kolko et al., 1993) have shown that risk factors of child maltreatment include the following: unemployment, economic problems, low mutuality in the family, low educational attainment, many children in the family, social deprivation, substance abuse, poor social network and the accumulation of problems. The results of this study are consistent with earlier research, but from a Finnish viewpoint. It is interesting and highly important to investigate the nature of the phenomenon of child maltreatment in different cultures.

While considering the risk factors, one wonders whether their incidence describes the actual state of child maltreatment. It may well be that families with many problems, with unemployment and economic difficulties are more easily caught in child maltreatment. These families use social welfare services and their life is more controlled than that of more well-to-do families, in which the reasons and methods of maltreatment may be of a different kind. Although one can be critical of the results of this study, they serve to provide guidelines for detecting and preventing child maltreatment as well as for recognising its existence. Nevertheless, it is dangerous to conclude that the existence of risk factors in the family will provide conclusive evidence of child maltreatment. Research of this kind serves to provide knowledge of possible characteristics of child maltreatment, and many other aspects, for example, knowing the family well, collaboration with professionals working with the family, and the children’s behaviour have to be considered carefully case by case. However, knowledge of the families’ activities and of risk factors of maltreatment makes it possible to develop care systems and to seek to influence wellbeing of families and children on a broader scale. The results are useful in planning prevention of child maltreatment, in developing support programmes for families, and in developing education of nurses and other professionals concerning families and their wellbeing. Much more attention should be paid on caring for families instead of focusing solely on individual clients. Understanding of families provides tools for developing nursing care. Nurses need to regard these risk factors as only one aspect in caring for families. Much more attention should be paid to discuss with families, to identify families which are in
need of more concrete and emotional support and to provide more individual-level services to families instead of concentrating on individual clients.

5.3. Challenges for future research

The results of this study reveal a number of features related to the functioning of child maltreating families. It would be interesting and important to ascertain what the families themselves think about their lives and how they experience their family and child maltreatment as part of their family functioning. This would add to our understanding of families’ own thoughts concerning their situation and expectations with regard to nurses and other professionals. This would facilitate further development of nursing care and other care systems for the families.

References


