Implementation of Mother-Training Program to Improve Parenting in Pre-School Age Children: A Randomized-Controlled Trial

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Abstract

Background: Preventing child abuse is an area of evaluation that should be deeply considered. The enhancing skill of maternal child care is also useful in this field. Aim: The aim of this study was to assess the impact of a training strategy to improve parenting in the families identified as at risk of child maltreatment. Materials and Methods: This randomized and controlled trial was conducted in 60 mothers allocated in the experimental and controlled group by a simple random allocation in Amirkola Children's Hospital in North Iran from January 2009 to December 2009. Mean score of maternal child abuse before and after intervention has been assessed by Conflict Tactics Scale for Parent and Child. Data analysis was based on the independent t-test, the paired t-test and one way analysis of variance. Results: The mean and standard deviation of maternal child abuse score in the experimental group before and after intervention were 30.21 ± 1.21 and 23.31 ± 1.52, respectively, (P < 0.001, t = 6.63), but no difference was found in the control group. Conclusions: The training program on maternal skills to prevent child abuse was a powerful resource. Therefore, healthcare providers in the field of pediatric about parenting skills should be taught with a specific consideration.

Keywords: Child abuse, child maltreatment, parent training

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Introduction

Child abuse and neglect are worldwide problems. It is well-illustrated by the growing flow of literature in the field of child maltreatment throughout the world.[1] In this way, there are many descriptive and repetitive articles on high-risk parents. Among those parents, mothers were found to abuse their children, psychologically or physically, twice as often as fathers.[2-5] Adult parents using nurturing techniques have learned from a variety of informal sources including their experience in childhood, advices from their grandparents and friends, medical providers, and the community.[6] However, an important policy in child maltreatment reduction is a growing program, which offers a variety of packages of support, education, counseling, and training.[7] Recent studies have shown that if parents improve their knowledge in children’s needs and put this awareness into practice, they will get more insight in their behavior towards their children.[2,8] Parents’ understanding of typical development patterns can better guide and discipline their child. Despite a general consensus about benefits of parenting training programs with different effects,[9-11] several studies have reported some parenting training programs that failed to improve parents’ skills in the child safeguarding and welfare so that the most effectiveness of training programs is still unknown.[9,12-14]
In Iranian society, a number of studies have demonstrated some kinds of child abuse in different groups of children,\textsuperscript{[15-17]} to the best of our knowledge, a little evidence regarding the preventive programs has been published.\textsuperscript{[16,18,19]} Therefore, the further studies are needed to assess the training programs for mothers who are currently screened as high-risk mothers in child maltreatment. The purpose of this study is to measure the effects of implementation of a mother-training program to improve the parenting skills.

**Materials and Methods**

**Ethical consideration**

This study was approved by ethical committee of Mazandaran University of Medical sciences (Ethical code: 85-142). All of the participants were informed of the purpose and design of the study as well as the confidentiality of the gathered data. They have right to withdraw the study at any time. All participants were provided with written informed consent before the start of study.

**Setting and data collection**

This randomized controlled trial study was conducted at Amirkola Children’s Hospital, Mazandaran Province in North Iran, in where the hospital is a teaching medical care center. The study population was mothers accompanied by their children to receive healthcare services within a specific period of time from January 2009 to December 2009.

**Procedure**

There were two stages in this project. In the first stage, the prevalence of different forms of maternal child abuse in referent mothers in whom last child aged toddler (151 cases), preschool (135 cases), or school age (132 cases) was identified by Conflict Tactics Scale for Parent and Child. To avoid the influence of children’s illness on child maltreatment, if the last child was the same and admitted in the mentioned hospital, the mother was then excluded. A total of 418 mothers completed the questionnaire at the end of this stage.

After analyzing the primary data from the first stage, the second stage revealed that child maltreatment was more frequent among mothers having preschool-aged children. These mothers were included in the training program. In the second stage, 60 volunteer mothers were invited to present at the hospital by phone calls, and randomly assigned in the experimental group (30 cases) and control group (30 cases). In this regard, there were two balls in a bag, one labeled with experimental and another with control, and then one ball was drawn from the bag by each mother for determining the group they would be assigned to. The effectiveness of an educational package on eligible mothers was examined.

The mothers were eligible if they met the following criteria:
1. Their children’s average age was five years;
2. Mothers who are living with their target children;
3. Mothers who were able to speak and read Persian; and
4. Mothers’ had at least completed elementary education.

The mothers, who have previously obtained training programs about child abuse, are currently working in healthcare centers, and their educational fields are in the psychological sciences were excluded.

In the experimental group, mothers’ training sessions were conducted by using the educational package in Iranian context for promoting mothers’ competent care of their children.\textsuperscript{[19]} The qualitative content validity of this package was confirmed by experts in the field of psychology and pediatric. Experts were asked to assess the educational package in terms of the scientific accuracy, clarity, and fluency.

For implementing current study, the face-to-face sessions, in a form of lecture presentation, were held four weeks: Two sessions weekly and two hours for every session (totally eight sessions for each mother). In the first session, a pediatric nurse who was an academic member of nursing school presented the first item of family nurturing strategies and maternal training program in terms of children care and management skills. In the second session, an overview of the content of the first session and the answer to the participants’ questions were held by the same nurse. Similarly, the child-mother relationships were conducted in sessions three and four, the child physical and developmental needs were in the session five and six, and finally, sessions seven and eight about managing, including anger, corporal punishment, and discipline in children as well as problem-solving skills were taught. In any session, description of the detailed skills as well as the common mistakes in parenting was discussed. Meanwhile, in the control group, there was no intervention conducted, except for a physical examination of their children. Post-test was established by Conflict Tactics Scale for Parent and Child in the both experimental and control groups for six weeks after the last training session. No payment or financial benefits were provided for the engagement of participant mothers beyond the educational value of this program and physical examination of their children. When the program came to the end, an educational package was presented to the entire experimental group who participated in the project.
Instruments
The instruments for data collection in this study include the following three:
1. Nameless demographic characteristics questionnaire.
2. A validated version of Conflict Tactics Scale for Parent and Child to elicit maternal self-report of parenting behavior.

This scale was developed by Straus to assess epidemiological and clinical child abuse. It had been validated in some countries and also justified for Iranian culture. The instrument measures how often in the past year the mother engaged in abusive behaviors in the form of physical aggression and emotional abuse toward her last child. Participants were asked to determine the times that they have used each kind of abusive behaviors to their last children in the past year on a 6-point Likert scale. The scale includes the following points: 0 = Never, 1 = It happened before last year, 2 = one to two times, 3 = three to five times, 4 = Six to 10 times, and 5 = More than 10 times. The total score of each abusive behavior was obtained from the average score of the questions. 3) Educational package that has been used in a similar study for promoting mothers’ competent care of their children.

Data analysis
The Statistical Package for Social Sciences for Windows Version13.0 (SPSS Inc., Chicago, IL, USA) was employed in the study. Descriptive statistics was used to determine maternal and children demographic characteristics and signify the mean score of all kinds of maternal child abuse. The relationship between variables was evaluated by the independent t-test, paired t-test, and one-way analysis of variance. P-value at 0.05 or less was considered to be significant.

Results
Respondents’ ages in the first stage ranged from 18 to 36 years (26.62 ± 6.24), and their mean score of child age was 20.71 ± 3.57 years. Also, the mean score of child abuse (in a form of physical aggression or emotional abuse) was significantly higher in the preschool age children than the others [Table 1]. The demographic characteristics of participants revealed that no significant differences were seen between the experimental and control groups [Table 2]. Mean and the standard deviation of the participants’ child abuse scores in experimental and control groups before and after intervention demonstrated that there was a significant difference in the experimental group before and after intervention [Table 3]. The effect sizes were moderate: d = 0.9 on emotional abuse score and 0.5 on physical aggression score.

Discussion
Unknowingness of children’s developmental needs is one of the factors that predispose parents to implement child maltreatment of their kids. Therefore, this project was developed to investigate whether a mother-training program improves parenting skills. As in the first stage of study, it has been shown that mothers of the preschool age children implement more child maltreatment; the effectiveness of a mother-training program in this age group was evaluated. The high frequency of child maltreatment in the preschool-age children in the present study is in accordance with the other studies. It is also related to this fact that the children in this age are more curious, hyperactive, and away from mothers’ obedience.

The results of this study towards improvement in child abuse score in the experimental group compared to the control group confirmed the results of some other researches. Mothers with newly acquired skills through the training program seemed to improve their mothering role, which reduced devastating effects on children’s cognitive, physical, and social development. In this regard, the families who received a specific intervention designed on Project Support Service demonstrated a greater decrease than the families who received services as usual in the same areas. In addition, it was documented that educational books for baby were a promising way to change new mothers’ attitudes and potentially reduce the corporal punishment of their infants and toddlers. This may be a result of an increase in the maternal sensitivity to their child’s cues, which has rooted from social learning theory, posits

| Age group   | N  | Physical aggression* | Emotional abuseb |
|-------------|----|----------------------|------------------|
|             | Mean ± SD | CI 95% | Mean ± SD | CI 95% |
| Toddler     | 151 | 10.64±10.20 | 8.99–12.28 | 20.57±14.08 | 18.30±22.83 |
| Preschool   | 135 | 17.20±14.28 | 14.77–19.64 | 30.17±14.84 | 27.61±22.72 |
| School age  | 132 | 16.42±14.68 | 13.89–18.95 | 27.97±13.67 | 25.64±30.29 |
| Total       | 418 | 12.64±12.85 | 11.57±13.70 | 23.21±15.26 | 21.94±24.47 |

*Mean physical aggression score different by children’s age group, df = 2, P < 0.001, bMean emotional abuse score different by children’s age group, df = 2, P < 0.001, CI Confidence Interval
that people learn from each another, via observation, imitation, and modeling. One model in this theory, namely Verbal Instruction Model, illustrates telling details and descriptions of a behavior could help with the development of new learning among individuals.\[30\]

As parents, who are unaware of effective discipline strategies, may be abusive, prevention activities such as parent education are powerful resources.

Although there was another study with the aim of reducing family stressors and increasing supportive factors, it reported that such a strategy did not seem to be effective in prevention of recidivism of physical abuse and neglect.\[51\] It was speculated that mothers felt vulnerable and frequently powerless when they contacted healthcare providers, especially at their homes. This may lead to reduce the effects of the training programs. Thus, it is important for healthcare providers to continually require the quality of their relationships with clients.\[32\]

The present study has several limitations. The first limitation is that we assumed different forms of physical aggression and emotional abuse as child abuse, and the possible different forms of abuse in the experimental and control groups were not equal. However, previous studies showed that different kinds of child maltreatments would often occur together. Further studies with a larger sample with the assistance of an exclusive training program will be recommended to reduce any specific child maltreatment. The second limitation is that the mothers may have been attending other training program during this study period through different ways such as mass media, which was out of our control. Finally, the follow up of the maternal child abuse after the training program was limited during a short period of time. Therefore, a long term follow-up was more effective and burdened with our knowledge in this issue.

### Conclusion

The current study highlighted the need to plan the training programs, modify the parental punitive attitudes and their behaviors, and also to establish a trustful relationship between parents and child to prevent recurrence of child abuse. To obtain the effective program, it needs to plan different services with a focus on the parental and child characteristics, their functions, their interactions, parent–child nurturing, and children’s physical and developmental needs with considerations of parental sociocultural characteristics. In this way, all relevant healthcare providers to children, such as nursing students, should be taught parenting skills.

The authors hope that this independent and non-published study is considered as a pilot research in developing countries, and illuminates the development of the child abuse prevention in this region. Further studies about the effectiveness of other models of social learning theory (live and symbolic models) as well as the other behavioral change theories are advisable.

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