



## Effectiveness of psychosocial interventions in abused children and their families

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### Abstract

**Background:** Child abuse is a significant public health and social problem worldwide. It can be described as a failure to provide care and protection for children by the parents or other caregivers. This study aimed at evaluating the effectiveness of psychosocial interventions in abused children and their families.

**Methods:** This quasi-experimental study was conducted in the psychosocial support unit of a pediatric hospital in Bandar Abbas, Iran, from 2012 to 2013. The participants consisted of child abuse cases and their parents who referred to the psychosocial support unit to receive services. Services delivered in this unit included parenting skills training, psychiatric treatments, and supportive services. The effectiveness of the interventions was assessed with Child Abuse Questionnaire, General Health Questionnaire (GHQ), and Strengths and Difficulties Questionnaires (SDQ). Participants were assessed at baseline, at 3, and 6 months follow-ups. ANOVA with repeated measures and Friedman test were used to evaluate the effect of the interventions.

**Results:** A total of 68 children and their parents enrolled in this study, of whom 53% were males. Post-intervention follow-ups revealed significant changes in mothers' general health questionnaire ( $p < 0.001$ ), and children's conduct problem ( $p < 0.05$ ), hyperactivity ( $p < 0.001$ ), and peer problems ( $p < 0.05$ ). Physical and emotional abuses significantly decreased ( $p < 0.001$ ).

**Conclusion:** Our findings revealed that psychosocial interventions effectively improved child-parents interaction and mental health of parents. The effectiveness of interventions based on subgroup analysis and implications of the results have been discussed for further development of psychosocial interventions in the health system.

**Keywords:** Child Abuse, Neglected, Psychosocial Intervention, Parenting Skills Training

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### Introduction

Evidence shows that child abuse, as a health problem in Iranian families, needs to be addressed (1, 2). According to the ecological models of child development (3), definition of child abuse as a multifaceted problem requires a context to explain all the influential factors in a systematic approach (4-6) and address the risk factors and multiple support factors at individual, familial and, social levels and their interaction (7).

At the individual level, children's characteristics, name-

ly, behavioral problems, physical aggression, antisocial behaviors, poor emotional adjustment, distraction, negative emotions, difficult temperament, developmental retardation, and physical disabilities (8-14); at the familial level, deficits in parenting skills, and wrong parenting attitudes (15, 16), mental health problems of the parents, ie, depression and stress (7, 17-21), addiction, and substance abuse (22, 23); and at a larger perspective, the living status including economic and social status (24, 25),

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#### ↑What is "already known" in this topic:

- Psychosocial interventions effectively improved child-parents interaction and mental health of parents
- In child abuse interventions family is considered as a single unit and could have an effective role in service provision.
- Providing multi-level programs are more effective for preventing child abuse.

#### →What this article adds:

Establishment of a child support unit in a hospital for providing multi-level interventions for abused children and their parents is an efficient and feasible model for child abuse management.

lack of social support networks, and local communication (26) are among the main risk factors of child abuse.

Child abuse risk factors are targeted and addressed in interventional programs, particularly family interventions (27). In the literature on child abuse prevention, the role of family interventions in this respect has been greatly emphasized (16, 28-30). Evidence shows that programs focusing on a combination of changing attitudes, enhancing knowledge, and parenting skills are more effective than programs focusing on just one parameter (31). In addition, the more successful programs are those that include group trainings, personal counseling, and house visits at the same time (32-34).

Although child abuse commonly occurs in the Iranian families, most children and their parents do not receive adequate and efficient support (1, 35). The organizations providing services to abused children in Iran such as the Ministry of Health, the Welfare Organization, and the Imam Khomeini Relief Foundation are not coordinated with each other, and this decreases the efficacy of their services. To overcome this problem and fill the gap among these organizations and their services, some interventions were designed and implemented from the diagnosis level to different therapeutic and supportive services. Considering the ecological approach and the complex nature of child abuse, this study aimed at designing an efficient and feasible intervention model. The primary outcome measure in this study was reducing the frequency of child abuse, and the secondary outcome measure was improving mental health of parents and decreasing the problems of children.

## Methods

### Study Design

This prospective quasi-experimental pilot study was conducted to design and establish a child support unit in a hospital, and its chief objective was to provide an efficient and feasible intervention model and assess its effectiveness for abused children and their families.

### Participants

The target populations were the abused children and their families in a pediatric hospital in Bandar Abbas, Iran, from 2012 to 2013 who referred to the psychosocial support unit, a specialty unit providing psychosocial support services for the referred patients. In this study, child abuse included physical, emotional, and sexual abuse. Sample size was calculated to be 50 assuming  $\alpha = 0.05$ ,  $\beta = 0.2$ , study power of 80%, and impact size of 4. To compensate for the possible dropouts or loss to follow up, 68 participants were included.

The inclusion criteria included children residing in Bandar Abbas, who were diagnosed as cases of child abuse by the physicians, and their parents were cooperative and consented to their participation in the study. The exclusion criteria were abused children whose parents did not consent to their participation in the study, those residing in other cities, and those who could not be accessed.

## Assessment Tools

The following tools were used in the present study:

1. Demographic Questionnaire: This questionnaire included data about the child and parents such as gender, living status, order of child in the family, parents' marital status, occupational status, education level, age, history of substance abuse, and history of mental disorders in parents.

2. Child Abuse Checklist: This checklist was designed by Arabgol et al. (35) using the World Health Organization's definition of violence and taking into account various forms of child abuse. This checklist evaluates all forms of child abuse as follows: physical, emotional, and sexual abuse.

3. Child's Strengths and Difficulties Questionnaire (SDQ): This questionnaire is a short screening tool with 25 phrases. Each question can be answered with "certainly true", "somewhat true", and "not true" options and evaluates 5 major subgroups of psychological symptoms: conduct problems, hyperactivity, emotional symptoms, peer problems, and prosocial behavior. The sum of the first 4 subgroups comprises the total score of difficulties (36, 37). Tehranidoost et al. (38) evaluated this questionnaire in an Iranian population and its sensitivity was calculated to be 74%.

4. General Health Questionnaire (GHQ): The 28-question General Health Questionnaire (GHQ-28) was designed by Goldberg & Hillier (1979) by factor analysis of its longer version. This questionnaire contains questions assessing the individual's mental status in the past 1 month and includes signs, namely, abnormal thoughts and feelings, and aspects of observable behaviors emphasizing the present situation. This questionnaire has the ability to measure various aspects of mental health such as physical manifestations, anxiety, insomnia, and depression. The total score of an individual is obtained by summing the 4 subscale scores. For scoring, each answer from right to left is allocated a score of 0, 1, 2, or 3. Ebrahimi et al. (2007) reported the cut-off point of 24 for this questionnaire, with sensitivity of 80% and specificity of 99% at this point. The split-half reliability coefficient and Cronbach's alpha were 90%, and 97%, respectively, in their study.

## Procedure

First, all the personnel and attending physicians in the departments and emergency ward of the pediatric hospital attended the training workshops on how to detect cases of child abuse. They were requested to look for such cases in their routine daily activities, and in case of finding a case of child abuse, report the case to psychosocial support units for abused children for further scrutiny (Table 1).

Children referred to the psychosocial support unit were first visited by a psychologist with adequate experience in recognizing abused children.

In the next step, the abused child and his/her parents were examined and visited by a psychiatrist. If the psychiatrist diagnosed that the child or parents required pharmaceutical therapy, the therapeutic intervention was started and the next session for continuation of medical treatment

**Table 1.** Interventions\* for Abused Children and Their Parents

Target Group	Child Intervention	Target Group	Parents' Intervention
Children with mental disorders diagnosed by a psychiatrist	Treatment of mental disorder	Parents with mental disorders diagnosed by a psychiatrist	Treatment of mental disorder
Children with physical problems diagnosed by a pediatrician	Medical intervention	Parents with substance abuse	Substance abuse treatment
Children with malnutrition diagnosed by a pediatrician	Nutritional intervention	All parents	Parenting skills training & Anger management training

\*Based on the social worker's assessment, legal and social support was provided for each case.

was scheduled. Then, the child and parents were referred to a psychologist or a social worker for nonpharmaceutical interventions. Nearly all the parents participated in parenting skills training and anger management courses. In addition, the children participated in a training course for learning how to protect themselves from child abuse and to be prepared for everyday life, however, some of the parents were resistant against this activity. Other non-pharmaceutical therapies, specifically social and legal support, were performed based on the requirements of children or their parents. These interventions included counseling services, school counseling, financial support through welfare organizations, or charity foundations, home visit etc. Social workers referred children and their parents to support services if necessary. If the living status of the patients had to be evaluated, or in case of parents not showing up for treatment, home visits were performed. If the child's life was in danger, social workers requested legal support for the child. Parenting skills were taught to parents in 6 sessions. These sessions were held based on the principles of constructive training with the difference that 2 of the 6 sessions were allocated to anger management and discussions on child abuse, physical punishment, and its negative effects on the child.

### Data Collection

After establishing a connection with the children and their parents, Child Abuse Questionnaire was filled out based on the collected data (through observing, examining, and interviewing the parents and children). Experience shows that most abusive parents hide abusing their children, thus, for data collection, it is very important for the counselor to establish a connection with them and encourage them to open up. Child's Strengths and Difficulties Questionnaire was then filled out for the child based on the obtained data from the parents. General Health Questionnaire was filled out for the mothers. The participants received services and were followed-up after 3 and 6 months. These questionnaires were completed by the psychologist of the team who had participated in an educational workshop (the workshop on Child Abuse Detection and Acquaintance with the Instruments), and had adequate clinical experience for making a connection with the children and parents.

Study design and objectives were thoroughly explained to the parents and older children (adolescents); and after obtaining written informed consent, they were entered the

study.

### Data Analysis

Data were analyzed using SPSS 18 software. Demographic characteristics of the participants were expressed as frequency, percentage, mean, and standard deviation. ANOVA was used to assess the effect of interventions on the child's strengths and difficulties and mothers' mental health. To eliminate the possible effects of mother education, this variable was entered into the covariance test as a covariate. Bonferroni post hoc test was then used to assess the differences between the mean values in the 3 stages. To evaluate the effect of interventions on physical and emotional child abuse (ordinal scale), nonparametric Friedman test was used.  $P < 0.05$  was considered statistically significant.

### Results

As shown in the participants' flow diagram (Fig. 1), out of 130 cases referred to the center, a total of 78 cases of child abuse were detected; out of which, 10 did not consent to participate in the study. The remaining 68 were entered into the study; and 4 were excluded prior to the first assessment (at 3 months), and 7 were excluded prior to the second assessment (at 6 months). A total of 68 cases were evaluated. Tables 2 and 3 present the demographic characteristics of the children and their parents.

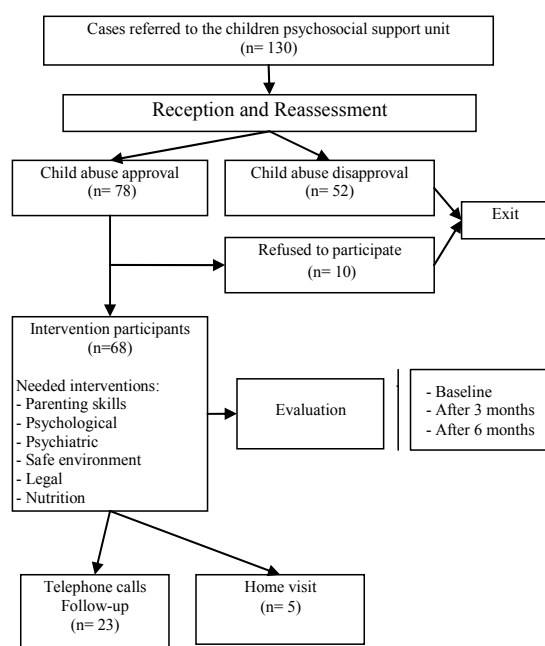


Fig. 1. Flow of the Participants during the Study

**Table 2.** The Demographic Characteristics of the Children

Variables	n (%)
Gender	
Male	26 (52.9)
Female	32 (47.1)
Child's age	
Younger than 2 yrs.	13 (19.1)
2-4 yrs.	15 (22.1)
4-6 yrs.	27 (39.7)
Older than 6 yrs.	13 (19.1)
Child's order	
First	45 (66.2)
Second	13 (19.1)
Third or higher	10 (14.7)
Living status	
Both parents	66 (97)
Single parent	2 (3)

**Table 3.** The Demographic Characteristics of the Parents

Variables	n (%)
Mother's age	
< 30 yrs.	18 (26.5)
30-35 yrs.	40 (58.8)
> 35 yrs.	10 (14.7)
Mother's occupational status	
Employed	6 (8.8)
Housewife	62 (91.2)
Mother's education level	
< high school	29 (42.6)
High school	26 (38.2)
College/university education	13 (19.2)
Father's age	
< 30 yrs.	12 (17.9)
30-35 yrs.	30 (44.8)
> 35 yrs.	25 (37.3)
Father's occupational status	
Employed	60 (89.6)
Unemployed	7 (10.4)
Father's education level	
< high school	30 (44.8)
High school	28 (41.8)
College/university education	9 (13.4)
Marital status of the parents	
Married	64 (94.2)
Divorced/Widowed	2 (2.9)
Re-married	2 (2.9)
Mental disorder in parents	
Yes	6 (8.8)
No	62 (91.2)

Evaluation of child abuse showed that 60 children had experienced at least 1 type of emotional abuse, out of

which 8 (11.8%) experienced one, 16 (23.5%) experienced 2-3, and 36 (52.9%) experienced 4 or more types of emotional abuse.

A total of 34 children (50%) reported at least 1 type of physical abuse, among which 12 (17.6%) reported one, 15 (22.1%) 2-3, and 7 (10.3%) reported 4 or more types of physical abuse. One child (1.5%) had experienced sexual abuse.

The frequency of comorbidity of physical and emotional abuse at the onset of the study was 34 cases (50%), which dropped to 2 cases (2.9%) in the first assessment (at 3 months), and to 1 (1.5%) in the second assessment (at 6 months).

Data obtained from the Child's Strengths and Difficulties Questionnaire were analyzed using repeated measures ANOVA. The results revealed that after controlling mother's education, except emotional symptoms and socialization subscales, in others the differences between the first and second and the first and third assessments were statistically significant (Table 4). Thus, evaluating the differences between the mean values in the 3 levels revealed a significant reduction in the mental health score of the mothers ( $p=0.001$ ).

Evaluating the changes in child abuse during the interventions using Friedman test indicated that the mean score of physical abuse and emotional abuse during the 3 levels of intervention significantly decreased ( $p<0.001$ ; Table 5).

## Discussion

Evaluation of the efficacy of interventions for reducing most of behavioral problems of children in our study revealed that the intervention program successfully decreased the severity of the problems. In addition, this finding confirms the possible efficacy of family behavioral interventions for decreasing the behavioral and emotional problems of children (38). In another study (39), it was demonstrated that intervention among high risk families increased the productivity of children and resolved their behavioral problems. It could not be clearly specified that whether targeting the parenting style of parents resolved children's problems, or promoting the mental health of parents decreased their negative perception about their children's behavior. Harnett and Dawe (39) believed that

**Table 4.** ANOVA With Repeated Measures for the Mean Scores of SDQ in Children and GHQ in Mothers in Pre-intervention, 3, and 6 months Post-intervention

	Mean (SD)			F	p
	Before the intervention	3 <sup>rd</sup> month follow-up	6 <sup>th</sup> month follow-up		
Children's Strengths and Difficulties					
Emotional symptoms	8.47 (1.99)	8.10 (1.68)	7.73 (1.51)	0.44 <sup>a</sup>	0.64
Conduct problem	9.43 (3.00)	8.36 (1.24)	7.19 (0.71)	4.61	0.014
Hyperactivity	10.25 (1.88)	11.13 (1.66)	10.79 (1.21)	5.12	0.009
Peer problems	7.25 (1.22)	7.09 (1.36)	6.29 (1.29)	3.63	0.033
Socialization	12.90 (1.54)	12.62 (1.59)	12.93 (1.39)	0.03	0.97
Mental Health (GHQ score)	27.15 (14.12)	22.08 (13.38)	17.58 (8.07)	7.86	0.001 <sup>a</sup>

<sup>a</sup> Controlling for Mother education

**Table 5.** Friedman Test for Comparing the Mean Ranks of Child Abuse in Pre-intervention, 3, and 6 months Post-intervention

Variable	Mean Rank			Chi square	p
	Before the intervention	3 <sup>rd</sup> month follow-up	6 <sup>th</sup> month follow-up		
Physical abuse	2.50	1.76	1.74	67.36	0.001
Emotional abuse	2.86	1.65	1.49	104.29	0.001

empowering parents with emotional adjustment leads to better management of children and teaching child management skills to parents improves their emotional efficiency.

In our study, the results of GHQ-28 questionnaire revealed that more than one-third of parents (33.8%) had a score higher than the cut-off point before the intervention; this value significantly decreased at 6 months (7.4%). The study results also showed that the mean rank of emotional and physical abuse during the intervention significantly decreased and this reduction for physical abuse was more significant than the emotional abuse.

Mikton and Butchart (40) in their systematic review on interventions done for child abuse, reported that providing education of parents and multi-level programs are more effective for preventing child abuse. Our study as a multi-level intervention, targeted multiple problems and requirements of families by providing medical, psychological, psychiatric, and educational services. Moreover, our study was a family wellness program offering interventions from short-term counseling to parenting classes and, sometimes, home visits for children at risk of abuse (41). These programs are a series of designed services, thus, separate assessment of their individual efficacy is not possible. However, the results of meta-analyses showed that such programs decrease the rate of child abuse (42).

In our study, almost all interventions and services were provided in the psychosocial support unit. Chaffin et al. (43) found that services offered in the unit were more effective than services provided during home visits. On the other hand, those referred to the psychosocial support unit included infants and newborns presenting to the medical center for routine health care services and checkups, therefore, these interventions could be included in the health system services. Dubowitz et al. (44) demonstrated that offering these services to high risk families leads to decreased rate of abuse and severe punishment. Thus, these interventions can be added to the general health interventions. Evidence shows that these interventions, especially for potentially at risk families, significantly decrease substance abuse and related child abuse (45).

### Conclusion

Based on the obtained results, it seems that the psychosocial support unit can be a suitable center to provide services for abused children and their families. Although the service package used in our study limited separate evaluation of the efficacy of interventions, it contained all the various required services by the families. A multidisciplinary team is required for providing such services. Moreover, in these interventions, family is considered as a single unit, and in some cases, family members significantly help and participate in the services.

### Limitations

Our study had some limitations. The first was that interventions were offered in a service package, thus, we could not separately assess the effectiveness of each intervention. For example, we could not specify whether education

of parenting styles to parents helped improve children's problems, or promoting the mental health of parents decreased their negative perception about their children's behaviors. The second limitation of our study similar to others (46) was that the participating families had high rate of tension and resistance, which is a common problem in child abuse studies. Abusive and high risk families are usually not willing to participate in interventional programs and are less likely to enroll in research-based programs (47). Another limitation was the duration of follow-up of the patients, which was 6 months in our study. It seems that this time was not enough to confirm the continuous efficacy of interventions and could be a limitation for ensuring the stability of results and outcome of this interventional package (39).

Another limitation of the current study was that a psychologist filled out the questionnaires. The main reason for this was further scrutiny and higher accuracy when collecting the data because filling out the questionnaires by the mothers carried the risk of distortion of information. To prevent bias when collecting the data, the mentioned psychologist only had the task to filling out the questionnaire and played no role in providing services. However, it is still considered a limitation of this study.

Absence of a control group was a major limitation of this study. However, we could not design a control group because it was unethical to deprive a group of patients from receiving adequate care. Thus, it was considered as a limitation of this study, and only patients' information was compared before and after the intervention.

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### Conflict of Interests

The authors declare that they have no competing interests.

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