# ASSESSMENT OF PSYCHOLOGICAL STATES OF PARENTS OF CHILDREN WITH CHRONIC DISEASE IN A TURKISH SAMPLE

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SUMMARY

*To assess the psychological states of the parents whose children with chronic and lethal disease 20 parents of children with types of cancer and 25 parents of healthy children were selected. Symptom Check-List 90 (SCL-90) and Questionnaire and Resource on Stress were administered all their mothers and fathers. The depression and Anxiety Scores were found higher in the parents whose children with a chronic disease compared to the parents who have healthy children. Findings suggest that these parents suffer from financial problems, limitations on family opportunities and life span child care.*

Key Words: Symptom Check-List 90, Parents, chronic disease
Klinik Psikofarmakoloji Bülteni,6:(1-4)(54-65 ),1996

ÖZET

*Çocuklarında kronik ve ölümcül hastalık olan ebeveyinlerin psikolojik durumlarını değerlendirmek için, çeşitli tipdeki kanserli çocukların 20 ebeveyini ve sağlıklı çocukların 25 ebeveyini seçildi.Tüm anne ve babalarına Ruhsal Belirti Tarama Listesi 90 (SCL-90) ve Stres kaynakları ve ölçeği uygulandı.Kronik hastalıklı çocukları olan ebeveyinlerin depresyon ve anksiyete skorları, sağlıklı çocukların ebeveyinleriyle kıyaslandığında daha yüksek bulundu.Bulgular bu ebeveyinlerin mali problemlere maruz kaldığı, aile fırsatlarının kısıtlandığı ve yaşam çocuk bakımına harcandığını göstermektedir.*

Anahtar Kelimeler: Ruhsal Belirti Tarama Listesi 90, Ebeveyn, kronik hastalık.
Bulletin of Clinical Psychopharmacology, 6: (1-4), (54- 65),1996

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Because of recent improvements in medicine many of chronic diseases have become nonfatal and patients were enabled to live longer (1,2). While in the past treatment of children with cancer was the only important concern, recently as cure of cancer becomes increasingly successful interest has turned on psychosocial problems (3,4).

There are a number of childhood cancers. Acute lymphocytic leukemia is the most common one (5). The advances in the treatment of cancer have increased survival rate over 60% (6). It is estimated that by the year 2000, that one in 1000 adults will have survived cancer in childhood (7). There are studies including only children with leukemia (4) as well as the studies including the children with any cancer (7). These studies mostly have focused on children's depression. There are also studies focusing on adjustment of cancer survivors, psychological changes in parents of children with cancer, marital and family functioning (7,8,9,10).

A child with a chronic disease could be a source of stress and concern for their families. The degree of this stress varies due to certain factors such as severity of disease, psychological maturity levels of family members, financial resources and social support (11). It is well known that disease and its treatment affect the families and surrogates as well as patient (12). As an example in childhood cancer the parents are the first who hear the diagnosis and are aware it's meaning (3). It is so hard for the families to adjust all stages including diagnosis, treatment and post treatment period. The most common reactions in these families are denial, depression with guilt feelings, accepting the realty, making realistic plans. Over protection, hostility and hostile staff (health providers) are also remarkable family behaviours (13). In another study, almost one fourth of a sample of mothers met diagnostic criteria for clinical depression and anxiety 12 to 18 months after diagnosis (14).

The initial phase of awareness of the disease is the hardest period for the parents to live, they usually undergo reactions of shock and generalized alarm at this stage (5,15,16). The remission period is the least painful period for the child with cancer. Even this period is also considered difficult by many parents due to some reasons such as uncertain span of this period, the possibility of recurrence. Recurrence period causes remarkable increase in parents' stress, while a severe sadness is experienced in the terminal period. Göktürk (17) has observed the depressive symptoms among the mothers of children with leukemia both by clinical evaluation and by administering Hamilton and Zung self reported scales.

Kupst and Schulman (1988) have carried a 6-year follow up study among the mothers of 64 children with acute lymphocytic leukemia (ALL), and they have found just after diagnosis an heavy stress has been experienced, but in time a good tolerance has taken place (14). Brown, Kaslow, Hazzard, Swain, Sexson, Lambert and Baldwin, (1992) have reported few psychiatric problems with higher anxiety in mothers while higher depression in fathers (5). One year after the diagnosis they have determined 17 % of fathers as Major depression and 34% of mothers as anxiety according to DSM-III-R criteria. They have also indicated having communication with fathers was difficult due to their less frequently visiting times to the department of hematology-oncology. However, declining in anxiety and depression levels has also been reported with continuos change occurring significantly over 12 month period (18).

Barbarin and Chesler (1986) have determined a strict adherence in many families (19). Well educated families have tended to use denial less, instead of this they have preferred more active methods like counseling, talking to solve the problems (5). Barbarin, Hughes and Chesler, (1985) have reported less divorce and fighting in the families who have children with disease (20). Increase in adaptive family functioning has been shown in off-therapy group problems (5). Mothers of childhood cancer survivors placed less emphasis on the intellectual and cultural orientation and recreational activity than did mothers in the comparison group (7). Lamb (1983) reported fathers concerned more about the financial problem than did mothers (21).

The current study was designed to examine the psychological states of parents who have children with cancer. It was hypothesized parents of children with cancer would report higher scores on both Symptom Distress Check-List (90) and The Questionnaire on Resources and Stress than controls.

## METHOD

### *Subjects*

Eligible subjects included all of the parents of the children hospitalized between. March 1993 and March 1994 with the diagnosis of any pediatric cancer or Thalasemia major at the Department of Pediatrics of Gülhane Military Medical Academy. Ages of patients were between 5-12 with the mean

of 7.6. Of 20 subjects, 9 were the parents of female patients and 11 were the parents of male patients. The group of controls included the parents of children with no physical and psychological problems. Of these controls, 12 were the parents of healthy girls and 13 were the parents of healthy boys. These healthy children were also 5-12 ages with mean age of 8.0.

### *Measures*

1. Symptom Distress Check-List (90) was developed by Derogatis, Lipman, & Covi, (1973) to assess the psychopathological symptoms (22). It is 90- item scale including 10 symptomatological areas. These are somatization, obsessive-compulsive, interpersonal sensibility, depression, anxiety, hostility, phobic anxiety, paranoid ideation, psychoticism and the other feelings. The cross cultural application of this scale has been carried by Fidaner and Fidaner (1984) (23) and Dağ (1991) (24).

2. The Questionnaire on Resources and Stress was developed by Holroyd (1974) to assess the degree of the stress experienced by parents who have children with a chronic disease (25). The short 66-question form of this scale has been applied. Dependency and self control, cognitive disorder, limits on family opportunity, caring for life span, lack of family integration, lack of personal awarding, continuous concern for disease, physical incapacitation, financial problems, preferring an institutional care, and difficulties caused by patient for family were the subscales. The cross cultural application of the scale was carried by Akkök (1989) (26).

### *Procedure*

Both scales were administered to the parents of patients and healthy children after giving information about the purpose of study. T-test was employed to compare groups by using SPSS.

## RESULT

The fathers of both patients and controls are officers, noncommissioned officers, clerks, with all being from middle socioeconomic class. The distribution of fathers' occupations of both patients and controls has been shown in Table I. The ages of mothers of patients ranged between 24 to 37 and the ages of fathers of patients ranged between 23 to 44 while these were 26-45 and 27-40 for the mothers and fathers of healthy children respectively.

**Table I: The job distribution of fathers of patients and controls**

| job | fathers of cases | Fathers of controls |
|---|---|---|
| officer | 4 | 2 |
| noncommissioned officer | 7 | 1 |
| clerk | 9 | 22 |
| total | 20 | 25 |

The distribution of the diseases of patients has been presented in table II. Acute lympocytic leukemia was the most common disease with 24 (60%) cases.

**Table II: The distribution of diseases of study group**

| Diseases | n | % |
|---|---|---|
| Acute lympocytic leukemia | 12 | 60 |
| Acute myelocytic leukemia | 2 | 10 |
| Thalasemia major | 2 | 10 |
| Hodgkin' disease | 1 | 5 |
| Neuroblastoma | 1 | 5 |
| Cerebral tumor | 1 | 5 |
| Ewing Sarcoma | 1 | 5 |
| Total | 20 | 100 |

The parents of patients have got significantly higher scores on both anxiety and depression subscales of SCL-90 than the parents of controls (Table III).

**Table III. The comparison of the scores of parents of patients and controls on SCL-90.**

| Subscales | Parents of patients | | Parents of controls | | |
|---|---|---|---|---|---|
| | X | SD | X | SD | T-value |
| somatization | 6.48 | 4.33 | 7.51 | 5.92 | 0.94 |
| obsessive-compuls. | 7.56 | 3.79 | 7.85 | 5.21 | 0.29 |
| interpersonal sensi. | 6.38 | 4.68 | 6.33 | 5.88 | 0.04 |
| depression | 7.17 | 5.13 | 10.56 | 9.58 | 2.10* |
| anxiety | 4.60 | 2.68 | 6.55 | 5.33 | 2.00* |
| hostility | 3.46 | 2.98 | 4.67 | 4.78 | 1.44 |
| phobic anxiety | 2.23 | 2.77 | 2.56 | 2.87 | 0.55 |
| paranoid ideation | 4.35 | 3.15 | 4.85 | 4.78 | 0.58 |
| psychoticism | 3.04 | 3.05 | 4.21 | 3.56 | 1.59 |
| other feelings | 4.31 | 2.91 | 5.31 | 4.35 | 1.27 |
| total | 49.44 | 27.67 | 59.77 | 45.02 | 1.31 |
| GSI | 0.52 | 0.32 | 0.66 | 0.50 | 1.56 |

*p<.05

This comparison was repeated for both parents separately, and nonsignificant difference was found between fathers of patients and fathers of controls (Table IV), while a significant difference was determined between mothers of patients and mothers of controls (Table V).

**Table IV. The comparison of the scores of fathers of both patients and controls on SCL-90.**

| subscales | Fathers of patients | | Fathers of controls | | |
|---|---|---|---|---|---|
| | X | SD | X | SD | T-value |
| somatization | 6.00 | 5.12 | 5.79 | 3.63 | 0.16 |
| obsessive-compuls. | 7.20 | 5.64 | 7.67 | 3.70 | 0.33 |
| interpersonal sensi. | 6.30 | 6.87 | 5.50 | 3.89 | 0.49 |
| depression | 9.85 | 11.16 | 5.46 | 3.31 | 1.84 |
| anxiety | 6.05 | 5.77 | 4.08 | 2.98 | 1.46 |
| hostility | 4.35 | 5.38 | 3.79 | 2.96 | 0.44 |
| phobic anxiety | 2.55 | 2.78 | 1.79 | 2.14 | 1.02 |
| paranoid ideation | 5.45 | 5.29 | 4.42 | 3.44 | 0.78 |
| psychoticism | 4.35 | 4.24 | 3.46 | 3.53 | 0.76 |
| other feelings | 5.40 | 5.29 | 4.33 | 2.97 | 0.84 |
| total | 56.95 | 54.50 | 45.88 | 23.95 | 0.94 |
| GSI | 0.61 | 0.58 | 0.50 | 0.26 | 1.06 |

**Table V. The comparison of the scores of mothers of both patients and controls on SCL-90.**

| subscales | Mothers of patients | | Mothers of controls | | |
|---|---|---|---|---|---|
| | X | SD | X | SD | T-value |
| somatization | 9.10 | 6.41 | 7.17 | 4.91 | 1.12 |
| obsessive-compuls. | 8.53 | 4.77 | 7.46 | 3.94 | 0.80 |
| interpersonal sensi. | 6.37 | 4.79 | 7.25 | 5.29 | 0.57 |
| depression | 11.32 | 7.81 | 8.88 | 6.06 | 1.15 |
| anxiety | 7.05 | 4.91 | 5.12 | 4.28 | 1.37 |
| hostility | 5.00 | 4.16 | 3.13 | 3.03 | 1.71 |
| phobic anxiety | 2.58 | 3.04 | 2.67 | 3.27 | 0.09 |
| paranoid ideation | 4.21 | 4.24 | 4.29 | 3.91 | 0.07 |
| psychoticism | 4.05 | 3.27 | 2.63 | 3.50 | 1.62 |
| other feelings | 5.21 | 3.22 | 4.29 | 2.91 | 0.98 |
| total | 62.74 | 38.20 | 53.00 | 31.05 | 0.92 |
| GSI | 0.69 | 0.42 | 0.55 | 0.32 | 1.13 |

**Table VI. The comparison of the scores of parents of patients on SCL-90.**

| subscales | Mothers of patients | | Fathers of patients | | |
|---|---|---|---|---|---|
| | X | SD | X | SD | T-value |
| somatization | 9.10 | 6.41 | 6.00 | 5.12 | 1.68 |
| obsessive-compuls. | 8.53 | 4.77 | 7.20 | 5.64 | 0.79 |
| interpersonal sensi. | 6.37 | 4.79 | 6.30 | 6.87 | 0.04 |
| depression | 11.32 | 7.81 | 9.85 | 11.16 | 0.47 |
| anxiety | 7.05 | 4.91 | 6.05 | 5.77 | 0.58 |
| hostility | 5.00 | 4.16 | 4.35 | 5.38 | 0.42 |
| phobic anxiety | 2.58 | 3.04 | 2.55 | 2.78 | 0.03 |
| paranoid ideation | 4.21 | 4.24 | 5.45 | 5.29 | 0.24 |
| psychoticism | 4.05 | 3.27 | 4.35 | 4.24 | 0.24 |
| other feelings | 5.21 | 3.22 | 5.40 | 5.29 | 0.13 |
| total | 62.74 | 38.20 | 56.95 | 54.50 | 0.40 |
| GSI | 0.69 | 0.42 | 0.61 | 0.58 | 0.26 |

A comparison has also been done between scores of mothers and fathers for both patient and control groups. There was no difference between the scores of mothers and fathers of patients (Table VI), while there was a significant difference between the scores of mothers and fathers of controls on depression subscale (Table VII).

**Table VII. The comparison of the scores of parents of controls on SCL-90.**

| subscales | Fathers of controls | | Mothers of controls | | |
|---|---|---|---|---|---|
| | X | SD | X | SD | T-value |
| somatization | 5.79 | 3.63 | 7.17 | 4.91 | 0.10 |
| obsessive-compuls. | 7.67 | 3.70 | 7.46 | 3.94 | 0.19 |
| interpersonal sensi. | 5.50 | 3.89 | 7.25 | 5.29 | 1.31 |
| depression | 5.46 | 3.31 | 8.88 | 6.06 | 2.42* |
| anxiety | 4.08 | 2.98 | 5.12 | 4.28 | 0.98 |
| hostility | 3.79 | 2.96 | 3.13 | 3.03 | 0.77 |
| phobic anxiety | 1.79 | 2.14 | 2.67 | 3.27 | 1.11 |
| paranoid ideation | 4.42 | 3.44 | 4.29 | 3.91 | 0.14 |
| psychoticism | 3.46 | 3.53 | 2.63 | 3.50 | 0.94 |
| other feelings | 4.33 | 2.97 | 4.29 | 2.91 | 0.05 |
| total | 45.88 | 23.95 | 53.00 | 31.05 | 0.89 |
| GSI | 0.50 | 0.26 | 0.55 | 0.32 | 0.50 |

*p<.02

Similar comparisons have been done between the scores on QRS. According to these the parents of patients have obtained higher scores on limits on family opportunity, caring for life span and financial problems subscales than the parents of controls (Table VIII).

**Table VIII. The comparison of the scores of parents of both patients and controls on QRS.**

| subscales | Parents of patients | | Parents of controls | | |
|---|---|---|---|---|---|
| | X | SD | X | SD | T-value |
| dependency & self-cont. | 1.72 | 1.49 | 1.91 | 1.52 | 0.59 |
| cognitive disorder | 1.31 | 1.49 | 1.58 | 1.83 | 0.78 |
| limits on family opportunity | 2.80 | 1.59 | 1.61 | 1.61 | 3.56** |
| caring for life span | 2.71 | 1.77 | 1.29 | 1.64 | 4.02** |
| lack of family integration | 1.98 | 0.49 | 2.00 | 0.59 | 0.19 |
| lack of personal awarding | 0.89 | 1.01 | 0.53 | 0.82 | 1.61 |
| continuos concern for disease | 2.20 | 0.83 | 2.15 | 0.99 | 0.27 |
| physical incapacitation | 3.66 | 0.65 | 3.85 | 0.36 | 1.77 |
| financial problems | 2.91 | 1.07 | 2.41 | 0.92 | 2.27* |
| preferring an institutional care | 2.81 | 0.79 | 2.91 | 0.97 | 0.54 |
| difficulties due to patient | 2.74 | 1.16 | 2.74 | 0.97 | 0.00 |
| total | 25.83 | 4.72 | 23.13 | 5.21 | 2.23* |

*p<.05 **p<.001

Found on limits on family opportunity and caring for life span subscales (Table IX).

**Table IX. The comparison of the scores of fathers of both patients and controls on QRS.**

| subscales | Fathers of patients | | Fathers of controls | | |
|---|---|---|---|---|---|
| | X | SD | X | SD | T-value |
| dependency & self-cont. | 1.86 | 1.64 | 1.59 | 1.37 | 0.66 |
| cognitive disorder | 1.30 | 1.58 | 1.57 | 1.73 | 0.53 |
| limits on family opportunity | 2.87 | 1.76 | 1.80 | 1.73 | 2.23* |
| caring for life span | 2.74 | 0.37 | 1.35 | 1.82 | 2.63** |
| lack of family integration | 2.04 | 0.37 | 2.00 | 0.59 | 0.30 |
| lack of personal awarding | 1.00 | 1.02 | 0.67 | 0.91 | 1.13 |
| continuos concern for disease | 2.32 | 0.89 | 2.27 | 0.97 | 0.32 |
| physical incapacitation | 3.52 | 0.79 | 3.87 | 0.34 | 1.94 |
| financial problems | 2.91 | 0.99 | 2.38 | 1.07 | 1.71* |
| preferring an institutional care | 2.86 | 0.83 | 3.13 | 0.92 | 1.02 |
| difficulties due to patient | 3.00 | 1.31 | 2.83 | 0.83 | 0.54 |
| total | 26.16 | 5.19 | 23.25 | 4.88 | 1.70* |

*p<.05 **p<.02

Similar result has been obtained for the mothers of patients comparing with the mothers of controls (Table X).

**Table X. The comparison of the scores of mothers of both patients and controls on QRS.**

| subscales | Mothers of patients | | Mothers of controls | | |
|---|---|---|---|---|---|
| | X | SD | X | SD | T-value |
| dependency & self-cont. | 1.57 | 1.63 | 2.22 | 1.62 | 1.32 |
| cognitive disorder | 1.32 | 1.36 | 1.60 | 1.96 | 0.57 |
| limits on family opportunity | 2.71 | 1.65 | 1.42 | 1.47 | 2.79* |
| caring for life span | 2.68 | 1.81 | 1.24 | 1.48 | 3.00* |
| lack of family integration | 1.91 | 0.59 | 2.00 | 0.60 | 0.49 |
| lack of personal awarding | 0.77 | 1.02 | 0.42 | 0.72 | 1.38 |
| continuos concern for disease | 2.09 | 0.75 | 2.08 | 1.01 | 0.30 |
| physical incapacitation | 3.81 | 0.40 | 3.83 | 0.38 | 0.20 |
| financial problems | 2.90 | 1.18 | 2.45 | 0.76 | 1.46 |
| preferring an institutional care | 2.76 | 0.77 | 2.71 | 0.99 | 0.20 |
| difficulties due to patient | 2.48 | 0.95 | 2.65 | 1.11 | 0.57 |
| total | 25.47 | 4.27 | 23.00 | 5.72 | 1.39 |

*p<0.01

There was no difference between the scores of mothers and fathers for both patients and controls groups (Tables XI and XII).

**Table XI. The comparison of the scores of parents of patients on QRS.**

| subscales | Mothers of patients | | Fathers of patients | | |
|---|---|---|---|---|---|
| | X | SD | X | SD | T-value |
| dependency & self-cont. | 1.57 | 1.63 | 1.86 | 1.64 | 0.64 |
| cognitive disorder | 1.32 | 1.36 | 1.30 | 1.58 | 0.03 |
| limits on family opportunity | 2.71 | 1.65 | 2.87 | 1.76 | 0.32 |
| caring for life span | 2.68 | 1.81 | 2.74 | 0.37 | 0.11 |
| lack of family integration | 1.91 | 0.59 | 2.04 | 0.37 | 0.89 |
| lack of personal awarding | 0.77 | 1.02 | 1.00 | 1.02 | 0.74 |
| continuos concern for disease | 2.09 | 0.75 | 2.32 | 0.89 | 0.91 |
| physical incapacitation | 3.81 | 0.40 | 3.52 | 0.79 | 1.50 |
| financial problems | 2.90 | 1.18 | 2.91 | 0.99 | 0.03 |
| preferring an institutional care | 2.76 | 0.77 | 2.86 | 0.83 | 0.42 |
| difficulties due to patient | 2.48 | 0.95 | 3.00 | 1.31 | 0.54 |
| total | 25.47 | 4.27 | 26.16 | 5.19 | 0.43 |

**Table XII. The comparison of the scores of parents of controls on QRS.**

| subscales | Mothers of controls | | Fathers of controls | | |
|---|---|---|---|---|---|
| | X | SD | X | SD | T-value |
| dependency & self-cont. | 2.22 | 1.62 | 1.59 | 1.37 | 1.40 |
| cognitive disorder | 1.60 | 1.96 | 1.57 | 1.73 | 0.07 |
| limits on family opportunity | 1.42 | 1.47 | 1.80 | 1.73 | 0.30 |
| caring for life span | 1.24 | 1.48 | 1.35 | 1.82 | 0.23 |
| lack of family integration | 2.00 | 0.60 | 2.00 | 0.59 | 0.00 |
| lack of personal awarding | 0.42 | 0.72 | 0.67 | 0.91 | 1.03 |
| continuos concern for disease | 2.08 | 1.01 | 2.27 | 0.97 | 0.49 |
| physical incapacitation | 3.83 | 0.38 | 3.87 | 0.34 | 0.34 |
| financial problems | 2.45 | 0.76 | 2.38 | 1.07 | 0.24 |
| preferring an institutional care | 2.71 | 0.99 | 3.13 | 0.92 | 1.51 |
| difficulties due to patient | 2.65 | 1.11 | 2.83 | 0.83 | 0.60 |
| total | 23.00 | 5.72 | 23.25 | 4.88 | 0.43 |

## DISCUSSION

Primary objectives of this study to determine the psychological states of parents who have a child with a chronic and lethal disease and to find out the factors which cause concern and stress. The parents of patients who admitted to Gülhane Military Medical Hospital, Childhood Disease, Clinic Hematology and Oncology Service for a year long treatment were studied as a sample. However, to study with a larger sample will provide much better information. So it is necessary to carry a multicentric study to be able to have a larger sample.

In some similar studies the study sample has been categorized into groups such as newly diagnosed, treatment and posttreatment group (5), which can allow researchers to make some possible comparisons between these groups. In our study having a small sample size prohibit us to categorize the sample into groups.

Previous studies on families of children with chronic disease have reported different results. However, the finding that the parents of diseased children have minimal psycopathology has been commonly reported. Moreover, this psycopathology has been found among the parents of newly diagnosed patients or 1-year postdiagnosis group (5).

In our study we failed to find any significant difference between the total scores and general symptom index (GSI) of the parents of both patients and controls on SCL-90, while we found a significant difference between the scores on both depression and anxiety subscales (Table III). This has confirmed our expectation that the parents of

patients would have minimal psycopathology. This result is consistent with the results of previous studies. We had an observation relating with this finding. Three mothers who have made many problems, have had temper attacks and were considered as trouble maker at the service due to their children's bad prognosis had scored exactly in normal range. This points that mothers deny their pathologies consciously.

Denial is a defense mechanism which is used most frequently when a lethal disease is diagnosed (5). This knowledge is also consistent with our finding. It was observed that the parents of children with cancer were in a heavy stressful condition. Even in the remission period their beloved children could just act in a way limited by physicians. Bone marrow aspiration, x-rays, blood-tests, chemotherapy and side effects of treatment are the sources of chronic stress (3). Physical appearance such as hair loss, facial distortions could be perceived as strange by her or his classmates. Parents who believe their children will die soon consider the school is unnecessary. Parents continue to treat their children who came back home due to gaining health after treatment, as a patient in a overprotective manner.

When compared the scores on SCL-90 of parents, the fathers of controls (M=5.46,SD=3.31) have obtained lower depression scores than the mothers of controls (M=8.88, SD=6.06) (Table VII), while there was no difference between the scores obtained by parents of patients (M=9.85, SD=11.16; M=11.32, SD=7.82 for fathers and mothers of patients respectively) (Table VI). This might be interpreted that depression is more common among the fathers of patients although there was no statistically significant difference between the scores of fathers of both patients and controls (Table IV). Another interesting point, the patents of patients, especially fathers have got a higher standard deviation score on depression subscale than the scores on all the other subscales (Tables III and VI). This indicates a wide range of scores obtained on the depression subscale. This result suggest three possibilities;

1. The parents deny psycopathologies consciously or unconsciously.

2. Some parents adapt well while the others can not adapt so well. In the literature there are different results relating parents coping. Some report one fourth of mothers have higher scores of anxiety and depression (14), while some report a well adaptation has occurred as time passed (4).

3. The psychological states of parents vary with the stages of children's diseases. In this study children's diseases could not be categorized. A relation between psychological states of parents and the stage and prognosis of diseases might have been found. For instance, in a study, psycopathology has been found among the parents of newly diagnosed patients or 1-year postdiagnosis group but not among the posttreatment group (5).

The higher total score on QRS obtained by parents of children with disease indicate that this disease causes an increase in stress of these parents (Table VIII). Limitations on family opportunity and caring for life span are the most important problems of these parents according to the higher scores obtained on these subscales. Separately comparisons have shown the difference between the scores of mothers of diseased children and controls was more significant than the difference between the scores of fathers of diseased children and controls (Tables X and IX). This suggests mothers of patients complain more than fathers of patients. This was considered as normal because of mothers were involved more in the care of patients, even they stay hospital with children in all times of hospitalization. On the contrary fathers visit the hospital infrequently as reported in another study (5). This also led some difficulties in administering the questionnaires to them.

Lamb (1983) has reported fathers concerned more financial problems that was introduced by the child's disease (21). In our study the parents of patients also obtained higher scores on financial problems subscale than the parents of controls (Table VIII). However, in the separate comparisons of mothers and fathers of both groups any difference was failed to find out (Tables IX and X). This suggest financial problems was not so serious. This can be explained by the health insurance these families already had.

The contribution of present study is important within the limitations mentioned above. This also clears out the need for future studies designed with limitations as little as possible. However, in the light of the results presented here, there is no doubt that in the management of a chronic and lethal disease that a child suffers with psychological counseling is a necessary part of treatment.

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