The Psychological Problems among Children Suffering from Chronic Diseases

Zeinab Fathy El-Sayed[1] and Asmaa Hafez Afefe Barakat[2]

[1]Pediatrics Nursing Department and Psychiatric [2]Mental Health Nursing Department, Faculty of nursing - Ain Shams University
Zeinab.fathy@yahoo.com

Abstract: Aim: this study aims to assess the psychological problems of children suffering from chronic diseases. **Methods:** A cross-sectional analytic design was used in conduction of this study as a research methodology. The study was conducted at inpatients and outpatients clinics of pediatrics hospital affiliated to Ain Shams University hospital. **Sample:** A purposive sample involved 310 children suffering from chronic diseases namely asthma, diabetes mellitus, renal failure, malignancy, epilepsy, and chronic heart diseases. **Tools:** Different tools were used for data collection involved questionnaire sheets to assess psychological problems, psychometric assessment (depression inventory, anxiety scale, loneliness scale, self-esteem inventory). **Results:** The study revealed that children with chronic illness are vulnerable to suffer from psychological problems (anxiety, depression, loneliness and low self esteem). It can be **concluded** that, chronic diseases have psychological impact on the affected children. Anxiety, depression, loneliness and low self esteem are common feelings experienced by children suffering from chronic diseases.
[Zeinab Fathy El-Sayed and Asmaa Hafez Afefe Barakat. T**he Psychological Problems among Children Suffering from Chronic Diseases.** *Life Sci J* 2013;10(1):1676-1683] (ISSN: 1097-8135). http://www.lifesciencesite.com. 246

1. Introduction

A chronic illness is defined as a condition that interferes with daily functioning for more than three months in a year [1]. Around 15% and 20% of children and adolescents live with a chronic physical, developmental, behavioral or emotional condition. However, the affected children are at much higher risk of disruptions to social, emotional, behavioral, and educational achievement with effects that may last a life time [2].

The chronically ill child is to three times more likely to experience emotional, behavioral and education difficulties. Low self-esteem, impaired self image, behavioral problems, depression, anxiety and school dysfunction are all common problems that occur as a result of the child's own reaction to his/her chronic disease or the reaction of parents, peers, and society as a whole [3]. Moreover, children with chronic illness may be presented with problems in school, where they may encounter a range of academic, social and emotional difficulties [4].

The impact of a chronic illness on a child's life will be determined by a number of influencing factors including age at diagnosis, stage of development, gender, personality, temperament and coping styles. It will also be influenced by the characteristics of the chronic condition, including nature of onset, disease trajectory, effects on appearance, daily functioning, behavior, the ability to tolerate others, and the care required [5].

The coping strategies used by children with chronic illness will depend upon their personal characteristics. These include level of confidence, self-esteem, usual coping style, view of the world, past experiences, developmental stage, cognitive ability, family structure and dynamics, and how parents, family and friends perceive and cope with the condition [6].

The nurses dealing with children need an in-depth knowledge of the theories of grief, adaptation and change, and need to be able to understand and apply the underlying theoretical principles in the context of care they provide to children with chronic illness. They also need to be knowledgeable of normal child development to be able to recognize any deviation from normal to be able to put preventative or remedial strategies into place [7].

Significance of the study:

Chronic illness and disability produce significant change and consequently stress because the chronically ill child and his family must deal with a change of customary life style [8]. The impact of the chronic illness or disability on the child is affected by the age of onset, developmental stage, age, gender, type and duration of illness, family cohesion and its implication as they develop and grow [9]. Therefore, this study will be conducted to assess the emotional disturbance and identify stressors related the children's chronic diseases and provide support based on their actual need assessment.

Aim of the Study

This study aimed at assessing the psychological problems of children suffering from chronic diseases.

2. Subjects and methods

Research design and setting: The study was conducted at both inpatient and outpatient clinics of the Pediatric Hospital affiliated to Ain Shams University Hospitals. A cross-sectional analytic design was used, where all variables were measured at one point in time.

Subjects (sample size): The study sample consisted of a non-probability quota sample of 310 children attending the study settings with their accompanying mothers for management and follow-up. The eligibility criteria for children were age from 6 to 18 years, from both gender and having a diagnosed chronic disease. Six chronic diseases were chosen to be included in this study given according to the most common diagnosis in medical records related to chronic illness in childhood. These are namely: chronic heart diseases, renal failure, diabetes mellitus, malignancy, bronchial asthma, and epilepsy.
Data collection tools: Data were collected using the following tools:

- **Part I: Structured Questionnaire sheet:** It was designed in Arabic Language to suit understanding of the study subjects and to gather data in relation to:

- Socio-demographic characteristics of the chronically ill child as age, gender, school grade, etc.

- **Part II: Psychometric assessment** : It was used to assess psychological problems of the studied children through:

a) Children Depression Inventory (CDI): The Arabic version originally prepared by **Kovcas (1983)** [10], and modified by **Abdel-Fattah 1988**[11]. It aimed to assess the degree of severity of depressive symptoms; it fits children from age (6-18 years). It consists of 27 questions each contain 3 answers; the child chooses one of them. Responses are scored on a "0-2" score with "zero" representing the absence of a particular depressive symptom, while "two" representing the severe form of symptoms thus the degree on the score ranges from "zero to 54" classified as mild (0-18), moderate (19-36), and severe (37-54) depressive symptoms.

b) Children Manifest Anxiety Scale (CMAS): It modified by **Abdel-Hamid and El-Nail (1991)** [12], from **Castaneda (1956)** [13], to assess the severity of anxiety symptoms of children. It consists of 36 statements measuring the somatic, emotional, physiological, mental, motor, and social features, each category assessed by 6 statements and the child answer "Yes or No" (scored 1-0). The total score ranges from zero to 36, classified into no (zero), mild (1-12), moderate (13-24), and severe (25-36) anxiety symptoms.

c) Loneliness Scale (UCLA): It was originally prepared by **Rasel (1980)** [14] and modified by **Al-Behery (1985)** [15], it aimed to assess children's feeling of loneliness. It consists of 20 statements each one includes four answers; child chooses one of them. Then children`s responses were classified into either almost (scored 3), sometimes (scored 2), rarely (scored 1), never (scored 0). The total score ranges from zero to 60 score, classified as no feeling of loneliness (0), mild (1 :< 20), moderate (20 :< 40), and severe (40 :< 60) feeling of loneliness.

d) Self-Esteem Inventory (SEI): It was developed by **Smith (1967)** [16] and modified by **EL-Dosoki and Mosa (1987)** [17]. It is used to measure self-esteem of children. It consists of 20 statements each statement has four answers the child chooses one of them. Then children's responses were classified into either too much (scored 3), fair degree (scored 2), to some degree (scored 1) and absolutely not (scored 0), the total score ranged from 0 to 36, classified as (0-8) low, (9-16) moderate, (17-24) mild. (25-36) high self esteem.

Operational Design:
Preparatory phase:
This phase included reviewing of the literature covering various aspects related to chronic diseases was done by using periodicals, articles, magazines and books to get acquainted with the research problem develop the study tools.
Exploratory phase:
A pilot study was carried out on 10% of the total study sample to test the clarity and applicability of the tools. Results of the data from pilot were helped in modifications of the study tools, where certain items were corrected, omitted or added as needed. Pilot subjects were excluded later from the study.
Procedure of the study:
The study was carried out from April 2010 to September 2010. The researchers were available in the morning (9.00 am-1.00 pm for outpatient) and afternoon (1.00 pm- 4.00 pm for inpatient) shifts for 3 days/week. Each child was interviewed individually in the presence of his/her mothers for feeling of secure. Aim of the study and its expected outcomes was explained for children and their accompanying mothers by the researcher prior to get the questionnaire sheet. The interview sheet was filled within 30-45 minutes.

Administrative design:

An official permission was obtained from the directors of the previously mentioned setting to conduct the study.

Ethical considerations:

Oral informed consent was obtained from each child prior to fill in interviewing questionnaire after clarification of the study aims and assuring them that the gathered information will be used for scientific research purpose only. All principles of ethics in research were applied including informed consent, rights to refuse or withdraw, and confidentiality of information. The study maneuvers could not lead to any harm to participants. Professional help was provided as needed.

Statistical analysis

Data entry and statistical analysis were done using SPSS 16.0 statistical software package. Quantitative continuous data were compared using Student t-test in case of comparisons between two groups. Qualitative categorical variables were compared using chi-square test. Statistical significance was considered at p-value <0.05.

Study limitation:

- No special place was available to give adequate privacy with the study subjects during the data collection.
- Frequent interruption and over crowdedness of the outpatient clinics.

3. Results

The results of this study clarified that the distribution of the study sample according to their socio-demographic and diseases *(figure 1&2)* showed that near to three quarter (73.6%) of children with bronchial asthma were below 12 years, while epilepsy was common at age 12 or older (86.3%). As for gender, the table showed that renal failure has the highest frequency among girls (45.1%), whereas epilepsy was the lowest proportion among girls (33.3%). Concerning school grade, primary and preparatory school constituted the highest proportion more than 95% of chronic diseases were clear in heart disease, renal failure, Asthma Malignancy, Epilepsy %, and diabetes)

Figure (3) showed the distribution of psychological problems among children with chronic diseases, the figure clarified that most of children with heart diseases and diabetes mellitus (94.2% & 86.7%) respectively have the feeling of moderate/severe loneliness (chi=63.78 p<0.001). Meanwhile most of children with renal failure and malignancy (84.3% & 92%) respectively have the feeling of severe anxiety (chi=23.37 p<0.001). In relation to depression and low self esteem it was found among (80% &76%) of children respectively

who have malignancy (chi= 14.12 p=0.05, 16.78 p=0.005). Severe anxiety, low self esteem and severe depressive symptoms were prevailed among children with malignancy.

Table (1) as regard to the relation between loneliness and the socio-demographic characteristic of studied children, it was clear from this table that there was significant difference in relation to the asthmatic children with their age and gender (t. test 2.8 p<0.05 -3.9 p<0.05). Also there was a significant difference among the children with heart diseases and their school grade (t. test 3.5 p=<0.05) loneliness was found among children who have asthma and heart diseases.

Table (2) as regards to the relation between anxiety and socio-demographic characteristic of studied children, it was clear from this table that there was no significant difference between the age and gender of studied children and their anxiety. Meanwhile, there was a statistical significant difference in relation to their school grade and children who have heart diseases, diabetes, and bronchial asthma (t. test = 2.91, p. <0.05- 2.92 p<0.05- 3.3 p<0.05 respectively).

(Table 3) clarified that the relation between depression among studied children and the socio-demographic characteristics, there was a statistical significance difference found between age and school grade of studied children who have diabetes mellitus and epilepsy respectively (t.test3.3p<0.05 , 2.5p<0.05 and 3.9 p<0.05,3.4 p<0.05) respectively.

Table (4) demonstrates that the relation between self-esteem among studied children and their socio-demographic characteristic. It was observed that there was no statistically significant difference
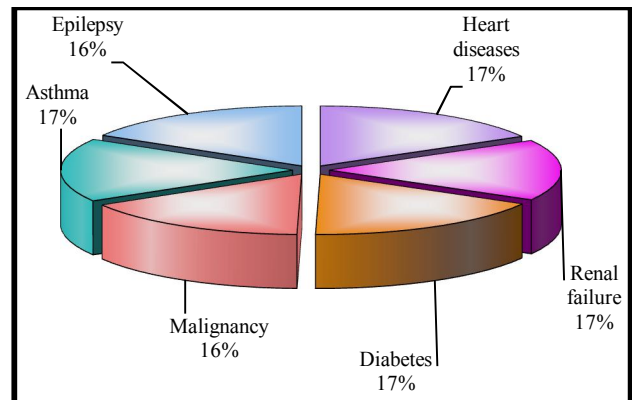

Fig (1): Distribution of children according to their diagnosis of chronic illness (n=310)
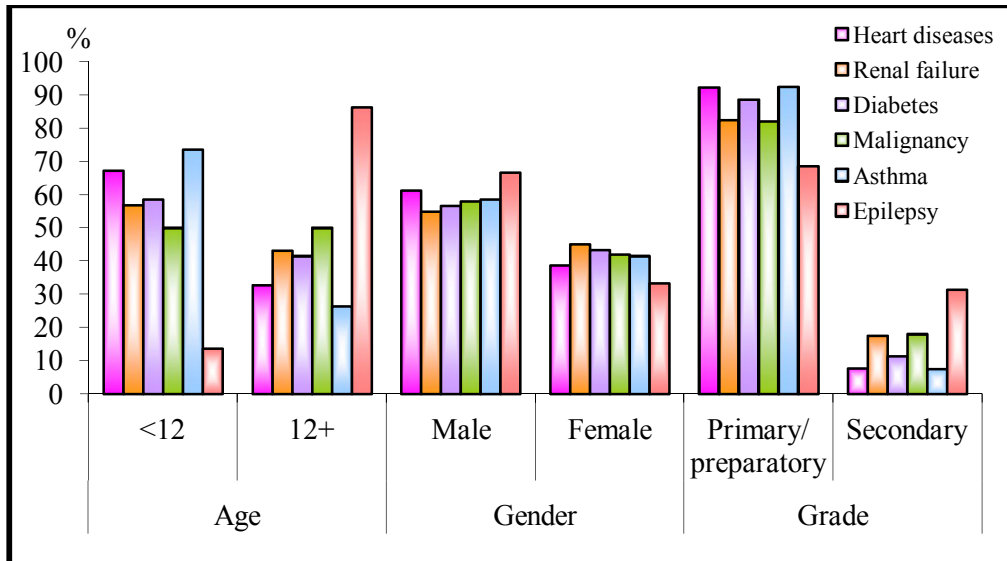
Fig (2): Distribution of the children according to their socio-demographic and diagnosed chronic illness (n= 310)
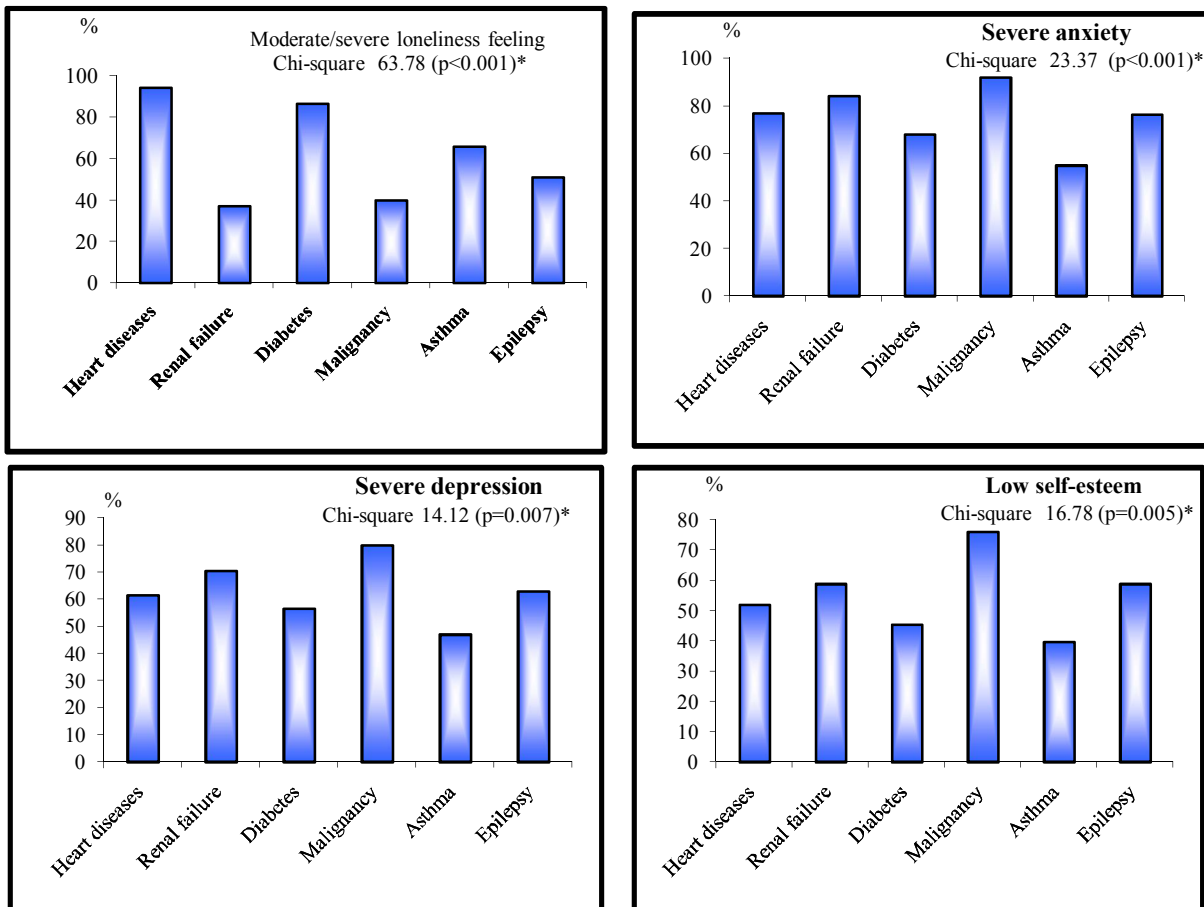

Fig (3): Distribution of psychological problems according to the types of chronic diseases (n=310)

Table (1): Distribution of children with loneliness in relation between children's socio-demographic characteristics (who have loneliness) with their diagnoses (n=310)

| Sample variable | Loneliness scores (mean ±SD) | | | | | | | | | | | |
| | Age | | | | Gender | | | | Grade | | | |
	<12	12+	t-test	**p-value**	Male	Female	t-test	p-value	Prim/Prep	Secondary	t-test	p-value
Heart diseases (n=52)	31.1±4.7	31.2±4.9	0.11	> 0.05	31.4±5.2	30.8±4.1	0.3	> 0.05	30.8±4.0	36.7±11.6	*3.5	*<0.05
Renal failure (n=51)	42.9±9.8	42.2±10.0	0.35	> 0.05	41.4±10.1	43.9±9.4	0.3	> 0.05	42.9±9.7	41.1±10.5	0.9	> 0.05
Diabetes (n=53)	32.5±6.7	32.9±7.2	0.3	> 0.05	32.7±6..9	32.6±6.9	0.08	> 0.05	32.6±6.8	33.3±8.2	0.46	> 0.05
Malignancy (n=50)	41.2±10.1	42.8±9.8	0.8	> 0.05	42.9±9.8	40.9±10.2	1.0	> 0.05	41.7±10.0	43.3±10.0	0.8	> 0.05
Asthma (n=53)	35.1±8.9	40.4±10.3	2.8	*<0.05	33.9±8.0	40.9±10.2	3.9	*<0.05	36.5±9.5	40.0±11.6	1.7	> 0.05
Epilepsy (n=51)	37.4±9.7	37.7±9.7	0.08	> 0.05	40.0±10.2	39.4±10.3	0.3	> 0.05	40.9±10.1	37.5± 10	1.7	> 0.05

(*) Statistically significant at p<0.05

Table (2): Distribution of children with anxiety in relation between children's socio-   demographic characteristics (who have anxiety) with their diagnoses (n=310)

| Sample variable | Anxiety scores   (mean ±SD) | | | | | | | | | | | |
| | Age | | | | Gender | | | | Grade | | | |
	<12	12+	t-test	p-value	Male	Female	t-test	p-value	Prim/Prep	Secondary	t-test	p-value
Heart diseases (n=52)	28.4±4.6	27.8±5.0	0.63	> 0.05	27.9±5.0	27.5±5.3	0.4	> 0.05	28.0±4.9	24.5±6.9	***2.91**	***<0.05**
Renal failure (n=51)	28.9±4.2	28.3±4.7	0.67	> 0.05	27.9±5.0	27.5±5.3	0.4	> 0.05	28.9±4.3	27.8±5.3	**1.2**	**> 0.05**
Diabetes (n=53)	27.0±5.5	26.1±5.9	0.79	> 0.05	26.5±5.8	26.9±5.7	0.36	> 0.05	27.1±5.5	23.6±6.4	***2.92**	***<0.05**
Malignancy (n=50)	29.1±4.0	30.0±2.4	1.4	> 0.05	30.1±2.2	28.8±4.3	1.86	> 0.05	29.4±3.6	30.5±0.0	**1.83**	**> 0.05**
Asthma (n=53)	25.0±6.1	25.4±6.2	0.33	> 0.05	25.5±6.0	24.5±6.1	0.83	> 0.05	25.4±6.0	21.5±6.0	***3.3**	***<0.05**
Epilepsy (n=51)	27.5±5.3	27.8±5.1	0.29	> 0.05	26.9±5.6	27.9±5.0	0.95	> 0.05	27.7±5.2	27.8±5.2	**0.1**	**> 0.05**

(*) Statistically significant at p<0.05

Table (3): Distribution of children with depression in relation between children's socio-demographic characteristics (who have depression) with their diagnoses (n=310)

| Sample variable | Depression scores   (mean ±SD) | | | | | | | | | | | |
| | Age | | | | Gender | | | | Grade | | | |
	<12	12+	t-test	p-value	Male	Female	t-test	p-value	Prim/Prep	Secondary	t-test	p-value
Heart diseases (n=52)	37.8±9.0	40.2±8.9	1.33	> 0.05	39.1±8.8	38.0±1.9	0.6	> 0.05	38.4±8.9	41.0±9.0	1.4	> 0.05
Renal failure (n=51)	40.5±8.2	39.8±8.6	0.4	> 0.05	41.0±7.9	39.2±8.8	1.13	> 0.05	40.8±8.0	37.5±9.5	1.8	> 0.05
Diabetes (n=53)	31.5±14.7	39.8±10.3	3.3	*<0.05	34.6±14.0	35.3±13.2	0.1	> 0.05	33.9±13..9	42.5±7.4	3.9	*<0.05
Malignancy (n=50)	41.0±8.0	42.7±6.6	1.13	> 0.05	41.8±7.4	42.1±7.2	0.2	> 0.05	42.0±7.2	41.5±7.9	0.33	> 0.05
Asthma (n=53)	35.8±9.1	36.5±9.3	0.39	> 0.05	36.2±9.1	36.5±9.2	0.12	> 0.05	36.0±9.1	36.5±10.4	0.26	> 0.05
Epilepsy (n=51)	41.0±8.5	36.8±9.2	2.5	*<0.05	38.6±8.9	39.2±8.9	0.17	> 0.05	40.7±8.1	34.9±9.1	3.4	*<0.05

(*) Statistically significant at p<0.05

Table (4): Distribution of children with self-esteem in relation between children's socio-demographic characteristics (who have self-esteem) with their diagnoses (n=310)

| Sample variable | Self-esteem scores (mean ±SD) | | | | | | | | | | | |
| | Age | | | | Gender | | | | Grade | | | |
	<12	12+	t-test	p-value	Male	Female	t-test	p-value	Prim/ Prep	Secondary	t-test	p-value
Heart diseases (n=52)	24.5±6.1	23.7±6.2	0.7	> 0.05	25.2±5.9	23.0±6.0	1.8	> 0.05	23.7±5.6	23.5±6.4	0.17	> 0.05
Renal failure (n=51)	24.6±6.1	25.6±5.9	0.8	> 0.05	25.1±6.0	25.0±6.0	0.08	> 0.05	24.6±5.5	24.1±5.8	0.44	> 0.05
Diabetes (n=53)	24.2±6.1	22.4±5.9	1.5	> 0.05	24.4±6.1	22.2±5.8	1.9	> 0.05	23.2±5.5	21.7±5.7	1.4	> 0.05
Malignancy (n=50)	27.1±5.2	27.1±5.1	0.00	> 0.05	27.9±4.6	26.0±5.8	1.7	> 0.05	26.1±4.1	26.4±4.8	0.3	> 0.05
Asthma (n=53)	22.3±5.8	24.0±6.2	1.6	> 0.05	21.9±5.7	24.0±6.1	1.7	> 0.05	22.5±5.5	20.8±5.5	1.4	> 0.05
Epilepsy (n=51)	25.0±6.0	25.1±6.0	0.09	> 0.05	25.8±5.8	23.7±6.2	1.8	> 0.05	24.9±5.4	23.5±5.7	1.3	> 0.05

Discussion

Children with chronic diseases and their families face many challenges associated with the disease process and its treatment. In addition to pain and physical limitations, children may also experience altered body image, anxiety around teasing and social acceptance as well as fears about the course of the disease and their future [18].

This study was carried out with the aim of identifying the various psychological problems that children suffering from chronic diseases.

The findings of the present study revealed that children with bronchial asthma near to three quarters of them below 12 years old, while the majority of children with epilepsy were aged 12 or older and one third of them in secondary school grades. As regards to gender the study clarified that near to half of girls have renal failure. This result is highly supported by Gurney, and Bondy, (2006) [19] who studied the chronic illness in pediatric, mentioned that, young male children affected by chronic illness are more often than older female children with ratio of 1.2: 1, while this result is contradicted with Mahmud, (2005) [20] who conducted the study of adaptation of mothers having children with chronic diseases, found that, the majority of the chronically ill children were older and female. This difference could be attributed to the differences in research sample, settings and methodology.

The results of the present study clarified that moderate and severe loneliness feelings were more common among the children who are suffering from chronic heart diseases and diabetes mellitus ((94.2% & 86.7% respectively). This result agreed with **Badri, (2008)** [21] aimed to evaluate the stressors and coping styles of the children with chronic illness and their mothers, who revealed that the children suffering from chronic heart diseases had experienced psychological problems, such as loneliness feeling, anxiety and low self image. These problems were experienced by children throughout the period of disease and will increase if the child is subjected to medication or surgery. These problems together with frequent hospitalization, multiple invasive procedures and separation from family and society lead to the feeling of loneliness as cleared from the results. Also the most of children with malignancy have the feeling of anxiety, depression and low self esteem. This results was supported by **Abu-El-Saad, (2004)** [22] who evaluated the adaptation teaching program for the care of leukemic school age children and found that all cancer children treated by radiotherapy and chemotherapy had altered of psychological state that appear through feeling of insecurity, anger, sadness, withdrawal and shame. These feelings resulted from the child's reactions to the side effects of radiotherapy and chemotherapy that presented in the form of hair loss (alopecia) and skin color changes.

As displayed in table (1) the relation between socio-demographic characteristics (age, gender, and school grade) of the chronically ill children and their loneliness level. It was found that there was a statistical significant association between age, gender of the asthmatic children and their loneliness, as well as, school grades of heart disease and their loneliness level. (t. test 2.8 p<0.05 -3.9 p<0.05 – 3.5 p<0.05 respectively). The older and female asthmatic children had more severe loneliness level. This is supported by **Schiller et al., (2005)** [23] who reported the population health interview survey, and vital health statistics that, the bronchial asthma is a single most prevalent cause of disability in children. Disability in adolescent leads to the sense of feeling different from peers can cause isolation and loneliness

As regards to the relation between socio-demographic characteristics of the studied children and their anxiety, it was found that, there was no statistical significant difference between age and gender of studied children and their anxiety. While anxiety was found in school grade among children who have chronic heart diseases, diabetes mellitus, and bronchial

asthma (t. tests 2.91 p< 0.05 - 2.92 p< 0.05 – 3.3 p < 0.05 respectively). This may be due to poor regular school attendance as a result of an affection by the chronic disease with all its consequences and its resulting feeling of anxiety, will affect children's scholastic achievement and consequently the level of education. The researchers' opinion is supported by **Grover et al., (2006)** [24] who reported the effect of psychosocial outcomes among anxious children on their school grads, and mentioned that highly anxious children were significantly more likely to score lower on measures of academic achievement. However the scholastic achievement considered a millstone in the children's social life.

Concerning the relation between depression and socio-demographic characteristics of the studied children, the results of the present study reflected that, there was a statistical significance difference found between age and school grade of children suffering from diabetes mellitus and epilepsy and their depression. This result is highly supported by **Craft, (2000)** [25] who illustrated that the experience of diabetes and epilepsy in childhood endanger the general health and psychological well being of the child, the physical risk arise from physical complications of aggressive treatment and the psychological threat from having a serious disease .The older male children showed more depression and may lose interest in himself compared with younger children, this result is highly supported by **Lahey, (2008)** [26] who study the gender differences in cognitive vulnerability to depression and behavior problems in pediatrics and found that, boys showed higher rates of depression than girls and also the older children. Adolescent with chronic disease must cope not only with complex normative developmental tasks but also with the stress related to chronic diseases Consequently, dealing with the chronic illness may be more difficult while, they may be at greater risk for adjustment problems as depression (**Newackeck, et, al., 2003**) [27]. Children suffering from epilepsy were having the highest mean scores of depression; this result is highly supported by **Salah, (2005)** [28] who found that, about one fifth of the studied children suffering from epilepsy showed psychological behavioral problems are common in children with epilepsy and can come more serious than the seizures. Much of behavioral difficulties, especially depression, anxiety and aggressive behavior have been attributed to the child's reaction to parental rejection, feelings of guilt, frustration, depression, and can contribute to antisocial behaviors. According to **Austin et al., (2002)** [29] who stated that about 21% - 60% of children with epilepsy have behavior difficulties, a rate which is much higher than 10% found in the general population of children. These difficulties are found in children

with recent onset of epilepsy and in those who have epilepsy for several years as well as in children with different types of epilepsy. Depression and anxiety disorders are additional behavior problems found in children with epilepsy, their depression may be expressed through irritability, anger, oppositional behavior and aggression.

In relation to socio-demographic characteristic of the chronically ill children namely age, gender and school grade and their self-esteem. It was found that, there is no statistical significant difference between ages, gender and school grade of the chronically ill children and their self-esteem which is contradict with **Adel, (2004)** [30] who study in psychological effect of chronic illness in pediatric nursing and found that, low self-esteem increase with age. The results of the present study revealed that the older chronically ill child had lower the sense of self-esteem; it could be related to an increase in children's awareness related to chronic illness or its treatment and the experience of altered body image resulting from the disease and its treatment. Also the researcher found that half of boys had low self-esteem which is may be due to inability of boys to adjust body structure losses like girls, for example, a girl can hide loss of hair as side effect to treatment by covering head while boys cannot do that all the time so they feel rejected from others and feel inferior to others. All these feelings lead to low self-esteem. Also **Wilma, (2003)** [31] who stated that chronic illness viewed as destructive to self and to others. As regards to relation between psychological assessment namely anxiety, depression, loneliness, low self esteem and educational level of the chronically ill children. It was found that, there is statistical significant difference between educational level of the chronically ill children suffering from chronic heart diseases, diabetes mellitus, asthma, epilepsy and renal failure and their anxiety, depression, loneliness and low self esteem. This finding is supported by **Jackson, and Vessey, (2004):** [32] who found that, a crucial developmental task for children is to move beyond the family environment into school community, where social competence, academic achievement and regular attendance are important goal which is disrupted by the chronic disease leading to feelings of anxiety, depression, loneliness and aggressive behavior.

Conclusion

Children suffering from chronic diseases are facing many psychological problems resulting from the disease process and its long lasting consequences. These psychological problems include anxiety, depression, loneliness, and low self esteem that increase the burden imposed on the affected children, their mothers and the community as well. The pediatric nurse has a major role in assessing these psychological

problems experienced by children suffering from chronic diseases and their mothers and helping them to cope positively.

Recommendations

- Identify stressors related to the children's chronic disease and provide support to the affected children, mothers and families based on their actual needs assessment.
- Emphasize the importance of co-operation and co-ordination between policy makers, health services providers as well as social workers and mass media to help to chronically ill children and their mothers overcome their feeling of stress and cope positively with the chronic diseases.
- Periodic training programs for the chronically ill children and their mothers about their disease management and control to improve their knowledge and consequently their methods of coping.
- Emphasize the importance of more prospective studies to shed light on the chronically ill children suffering from chronic diseases to help them manage their diseases and its related stressors.

References

1. Wong, E. and Hockenberry, C. (2005): Case management for hospitalized children. Pediatric Nursing; vol.17 (1):15-20.
2. Miller, A.R., Recsky, M.A. and Armstrong, R.W. (2004): Responding to the needs of children with chronic health conditions in an era of health services reform. Canadian Medical Association. Journal, Ottawa; vol. 171(11): 1366-1367.
3. Rudolf, M. and Levene, M. (2004): Pediatrics and child health, 2nd ed., Excel typesetter, Hong Kong; 380-450.
4. Cooper, C. (2006): Continuing care of sick children. Examining the impact of chronic illness. Wiltshire Mark Allen Publishing Ltd.
5. Mu, P.F. (2005): Parental reactions to a child with epilepsy: Uncertainty, coping strategies and depression. Journal of Advanced Nursing;49(4):367-376.
6. Valentine, F. and Lowes, L. (2007): Nursing care of children and young people with chronic illness, 1st ed... Blackwell Publishing Ltd, Oxford; p. 77-78.
7. Behrman, E., Kliegman, M. and Jenson, B. (2004): Nelson textbook of Pediatrics, 17th ed., Saunders, United States of America; 123-124.
8. Falvo, D.(2005): Medical and psychological aspects of chronic illness and disability,3rd ed., Jones and Bartelt Publishers, Boston ; pp.1-2
9. Schmidt, S., Petersen, C. and Bullinger, M. (2008): Coping with chronic disease from the perspective of children and adolescents a conceptual framework and its implications for participation. Child Care Health Development; 2a(1):63-75
10. Kovcas, M. (1983): *Children's Depression Inventory. Manual, North Tonawanda, NY: Multi- Health Systems.*
11. *Abdel-Fattah, G. (1988): Children Depression Inventory. Dar El-Nahda El-Masryia, Cairo.*
12. *Abdel-Hamid and El-Nail (1991): Children Manifest Anxiety scale. Dar El-Nahda El-Masryia, Cairo.*
13. *Castaneda, S. (1956): The Children's from of Manifest Anxiety Scale: Society for Research in Child Development.*
14. *Rasel (1980): Children Loneliness Scale. Dar El-Nahda El-Masryia, Cairo.*
15. *Al-Behery A.A. (1985): (UCLA) Loneliness Scale. Dar El-Nahda El-Masryia, Cairo.*
16. *Smith, C., (1967): Self –esteem Inventries, Consulting Psychologists Press. Palo Alto ,CA*
17. *EL-Dosoki, A.M. and Mosa A.F. (1987): Self-Esteem Inventory. El-Nahda El-Masryia, Cairo.*
18. Brown, R.T. (2008): Single parenting with chronic illness: An understudied phenomenon, Journal of Pediatric Psychology; 33(4):408-421.
19. Gurney, J.G. and Bondy, M.G. (2006): Epidemiology of childhood In: Pizzo P.A., Poplack D.G., (eds.). Principles and practice of asthma in pediatric, 5th ed., Philadelphia, Lippincott.
20. Mahmud, J.F. (2005): Adaptation of mothers having children with chronic illness, Master thesis Pediatric Nursing, Faculty of Nursing, Suez Canal University.
21. Badri, M.M. (2008): Stressors and coping styles of the children with chronic illness and their mothers, Master thesis, Pediatric Nursing, Faculty of Nursing, Ain Shams University.
22. Abu-El-Saad, F.E., (2004): adaptation teaching program for the care of leukemic school age children, Pediatric Nursing, Doctorate degree, Faculty of Nursing, Ain Shams University. pp 35-50
23. Schiller, J.S., Adams, P.F. and Nelson, Z.C. (2005): Summary health statistics for the U.S. Population: National health interview survey, Vital and Health Statistics Series 10, No 224, Washington, D.C., U.S. Government Printing Office; 1-7.
24. Grover, R.L., Ginsburg G.S., Ialongo, N. (2006): Psychosocial outcomes anxious first graders, a seven year follow up, depress anxiety. pp 410-420
25. Craft, A.W. (2000): Childhood medicine -mainly curable so where next, Acta Pediatr; 89:1.
26. Lahey, A., (2008): Gender differences in cognitive Vulnerability to depression and behavior problems in pediatrics, Journal of Abnormal Child Psychology; 01-April.
27. Newackeck, P.W., Wong, S.T., Galbraith, A.A. and others (2003): Adolescent health care expenditures: A descriptive profile, Journal of Adolescent Health; 32(6):3-11.
28. Salah, S. (2005): Stressors and coping patterns among mothers of school age epileptic children. Master Thesis, Psychiatric Nursing, Faculty of Nursing, Ain Shams University.
29. Austin, J.K., D.W., Caffrey, H.M., Perkins, S.M., Harezlak, J.and Rose, D.F.(2002): Recurrent seizures and behavior problems in children with first recognized seizures: A prospective study. Epilepsia, 43:1564-1573.
30. Adel, G.E.E. (2004): Psychological effect of chronic illness in Pediatric Nursing. Master Thesis, Pediatric Nursing, Faculty of Nursing, Ain Shams University.
31. Wilma, P (2003): Health and illness perspectives, chronic illness, 7th ed.; 71-85.
32. Jackson, M and Vessey, A.,(2004): Primary care of the child with chronic condition, 4th ed., Mosby U.S.A. pp 54.

1/20/2013