

Psychological Problems, Quality of Life and Coping Strategies among Parents of Children with Congenital Heart Diseases

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Abstract

Background: Congenital Heart Diseases are one of serious disabilities seen among children. CHD are emerging health problems in our country which negatively affect on psychological status of their parents, impair their quality of life and hence their coping strategies. **Aim of the study:** This study designed to evaluate coping mechanisms, quality of life, and psychological issues among those who have CHD children. **Research designs:** The study's goals were accomplished using a descriptive correlational design. **Research setting:** Benha University Hospital's cardiology outpatient clinic in Benha City, Qalyubia Governorate, was the setting for the study. **Sample:** Parents of 150 children with congenital cardiac problems were selected purposefully from the previously described situation. **Tools for gathering data:** To collect data, four tools were employed; **1st tool:** A sheet of well-structured interviewing questionnaire, **2nd tool:** Depression, Anxiety and Stress Scale (DASS), **3rd tool :** Quality of Life Scale and **4th tool:** Coping Strategies scale. **Results:** Results revealed that higher than half of the parents who were evaluated suffer from mild to serious psychological issues (depression, anxiety and stress). Additionally, higher than half of them have low levels of overall coping mechanisms, and less than two-thirds of them have low level of overall quality of life. **Conclusion:** According to the study's findings, parents who have CHD children are more likely to suffer from mental health concerns such stress, anxiety, and depression, which have a detrimental impact on their quality of life and coping mechanisms. **Recommendations:** To lessen their psychological issues and improve their quality of life and coping mechanisms, all parents who have children diagnosed with congenital heart diseases should participate in a psycho-educational training program.

Key words: Psychological Problems, Quality of Life, Coping strategies, Congenital Heart Diseases.

1. Introduction

Congenital Heart Diseases (CHD), defined as anatomic malformations of the heart or major vessels that arise during intrauterine development. Atrial Septal Defects (ASD) and Ventricular Septal Defects (VSD) are common types of CHD. Congenital Heart Diseases (CHD) are considered as a standout among the most devastating chronic disorders in children. They considered the most frequent infants' admission to a pediatric critical care unit for many reasons, infant mortality, and disease-related disabilities in children under the age of five years. [1]

The parents' psychological well-being is significantly impacted by the CHD diagnosis. As a result, clinical symptoms of anxiety, stress, depression or sadness were observed by 25–50% of parents of children with severe CHD. Families go through a great deal of stress when it comes to child caregiving, which places a strain on their emotional, financial, and family resources regardless of the kind of CHD and the age of the child. Additionally, having a child with CHD in the family may make the other siblings anxious. So, it might have an impact on the entire family. [2]

Psychological problems are common among parents who have kids with congenital heart diseases due to frequent hospitalizations of their children and financial burdens on them. Therefore, it is crucial for them to be knowledgeable about them and how to cope with them and manage their effect on their quality of life. [3]

The standard of living for parents of children with CHD was severely diminished, and this was due to a number of issues, primarily those that were connected to the child's clinical condition and potential fatal sequel. Congenital heart diseases not only affect parents' psychological and social lives, nonetheless, all aspects of

quality of life, which causes parents' impaired QoL to alter their routines or prevent them from finishing their regular daily tasks.[4]

It's crucial for parents to have coping mechanisms in place for times of stress, such when their child is ill. The definition of coping strategies used in this study is a dynamic process that involves not just using the family's existing resources but also creating new resources and habits that will be used to strength the family, lessen the effects of stressors, and help to return to normal health can be seen. The family, and especially the parents, are responsible for providing the sick child with the care and assistance they need when they are affected by illness or a handicap. [5]

Psychiatric mental health nurse is considered the main person who provides psychological care, perform health counseling and teaching to assist all parents of children with CHD toward an optimum state of psychological health because nurses have more face to face interactions with those parents in treatment settings, they are in a unique position to affect those parents and their well-being. Also, psychiatric nurse can help them become accustomed to their problems by reducing depression, anxiety, stress, enhancing good quality of life and providing emotional support. Therefore, awareness of psychological problems can affect the care of these children and their quality of life among parents due to low coping with the situation.[6]

Significance of the study.

Congenital cardiac illnesses are considered as one of the most common congenital ailments, around 0.8% to 1.2% of live births globally affected, with a mean incidence rate of 17.9\1000 for males and 16.6\1000 for females. In Egypt, the incidence rate of live birth is 3.5-

17.5\1000. If adequate intervention is not provided, nearly 34% of neonates with a significant CHD die in the first month of life.[7].

Additionally, the statistics division at Benha University Hospital predicted that in 2021, there would be (245) children who suffer from congenital cardiac problems.

Congenital Heart Diseases are major diseases that associated with many psychological problems and affected negatively all domains of quality of life not only for affected children but also their parents or caregivers. From the time of the diagnosis until the newborn is hospitalized for follow-up cardiac care or surgery, parents of children born with CHD encounter a wide range of psychological issues. This has an impact on them, but it also puts their kids at risk for neurodevelopmental delays, which can lead to problems with speech, fine and gross motor skills, and academic performance. Therefore, this study goal was to evaluate the psychological issues, overall quality of life, and coping mechanisms among parents who have kids diagnosed with congenital heart diseases.[8]

2. Aim of the study

In this research, the psychological issues, coping mechanisms, and quality of life of parents who have a children suffer from congenital heart diseases will be evaluated.

Research questions

- 1- What mental health issues do parents who have a children suffer from congenital heart diseases experience?
- 2- What are the problems found in psychological status, quality of life and coping strategies for parents of children diagnosed with Congenital Heart Diseases?
- 3- Is there a relationship between problems of the psychological status, quality of life and coping strategies for parents of children diagnosed with Congenital Heart Diseases?

3. Subject and Methods

The current study's subject and procedures were created using four primary designs:

- 1-Technical Design
- 2-Operational Design
- 3- Administrative Design
- 4-Statistical Design

I-Technical Design:

The study design, research subject, research setting, and data collection tools are all included in this technical design.

- Research Design.

This research was done by using a descriptive correlational design.

- Research Setting.

The study was done at outpatient clinic of cardiology in Benha University Hospital, which is under supervision of the Ministry of High Education, in Benha City, Qalyubia Governorate.

Research Subject:

An intentional sample of 150 parents of children with congenital cardiac problems was chosen from the

mentioned context based on the listed below inclusion and exclusion criteria:

Inclusion criteria:

- Parents (Fathers or mothers) whose children diagnosed with congenital heart diseases.
- Parents who agree to take part in the research.

Exclusion criteria

- Parents of children with other heart diseases.
- Parents with a background in neurological conditions.
- Parents who have a background in psychiatric disorders.
- Parents who have hearing and vision impairment.

Four tools: were employed to gather data in order to accomplish the study's objectives:

Tool I: A Sheet of structured Interviewing Questionnaire.

The researcher created a sheet of structured interviewing questionnaire, which has two parts, its basis on a scientific study of the literature, to evaluate the socio demographic traits and clinical information of the investigated parents and their affected children.

Tool II: A Scale of Depression Anxiety Stress (DASS).

The researcher modified [9] scale of depression, anxiety, and stress. The DASS contains 21 items and assesses the frequency of actions or the strength of emotions, its basis on three subscales: depression is (DASS-D), anxiety is (DASS-A) and stress is (DASS-S). The items, Its scores were on a four-point scale, with zero being "did not apply to me at all," one being "somewhat applied to me," two being "considerably applied to me," and three being "extremely applied to me." More severe levels of sadness, anxiety, and stress are indicated by higher scores.

Scoring system for DASS:-

- * Depression ranges from being normal is (0–9), mild is (10–13), moderate is (14–20), severe is (21) and more.
- * Anxiety: mild is (8–9), moderate is (10–14), severe is (15+), and normal is (0–7).
- * Stress levels range from mild is (15-18), moderate is (19-25), severe is (26-28), and more.

Tool III: - Quality of Life Scale (QOLs)

The researcher modified a scale developed by WHO [10] to measure the standard of living for parents of children born with heart diseases that are congenital. There are 26 items total on this scale, divided into four categories: physical (6 things), psychological (9 items), social (3 items), and environmental (4 items) (8 items). Responses were scored on a 3-point Likert scale with the labels No (3), Sometimes (2), and Yes (1); however, questions 1, 2, and 11 are graded in reverse. Higher scores represent a high level of life quality.

Scoring system of quality of life scale.

- * < 60 % (1 - < 49 score) indicate low quality of life.
- *60% - < 75 % (49 - < 58 score) indicate moderate quality of life.
- *≥ 75% (≥ 58 score) indicate high quality of life.

Tool IV: Brief COPE Scale.

This scale developed by [11] and adapted by the researcher, it was used to examine the coping mechanisms employed by parents of CHD children. This measure has

28 items divided into four subscales: active avoidance coping subscale (10 items), problem-focused coping subscale (10 items), and religious\ denial coping subscale (10 items) (7items). Positive coping subscale (4 items), religious/denial coping subscale (4 items) (7 items). The responses are organised on a likert scale of three - point (1=never, 2=occasionally, and 3=always). Higher scores suggest an abundance of coping techniques.

Scoring system of COPE strategies scale is as follows :

*less than 50% (< 42 score) indicate low coping strategies.

* 50% - < 75% (42 - < 63 score) indicate moderate coping strategies.

*≥ 75% (≥ 63 score) indicate high coping strategies.

II- Operational Design:

-This study's operational design contains a preparatory phase, phase of validity and reliability of tools, a pilot study, and fieldwork.

Phase of preparation.

This phase involved a review of pertinent previous, local besides, current, and international literatures, as well as theoretical understanding of many parts of the study through the use of books, papers, the internet, and magazines to design data gathering techniques. This helped to design the study's data collection techniques. During this stage, the researcher must be visit the chosen location to become aware with the personal and study surroundings. The tools were created with the help of supervisors, and expert opinions were taken into account.

-Validity of tools.

To maintain their relevance, the instruments will be updated by 5 specialists in psychiatric and mental health specialties, comprehensiveness, clarity, and application, and any necessary changes will be made in response to their feedback. Some changes were made in the rephrasing of some sentences in the English and Arabic translations, as well as the rearranging of some sentences in the DASS scale, Quality of life scale, and Coping strategies scale to make data collection easier and more understandable for the study population.

-Reliability of tools.

The researcher used reliability to examine the instruments' internal consistency by administering them to the same persons under identical settings on one or more occasions. Using Alpha Cronbach reliability, responses from related tests were compared (test and re-test reliability), which was 0.90 for the scale of depression, anxiety, and stress (DASS), 0.92 for the scale of quality of life, and 0.93 for the Brief COPE scale. The reliabilities of these scales are supported by these scales.

-Pilot study.

A pilot research was conducted on 10% (15 parents) of the total population to examine the tools clarity to determine if they are clear for their intended purpose. The pilot was also used to predict how much time each subject would need to complete the questions and to detect potential difficulties during data collection. The pilot study's findings were used to make any necessary changes. This sample was not included in the final study sample.

-Field work / procedure of data collection

-The actual fieldwork for the data collection process lasted three months, commencing in early May 2022 and ending at the end of July 2022, with the following steps employed to begin and terminate the research.

- Before applying for the study, the researcher had a meeting with the director of Benha University Hospital to select the optimum appointment with the participants and illustrate the aim and objectives of the study. This was done when the dean of the Benha college of nursing granted official approval to the head of the Benha university hospital.

After introducing herself to the subjects, the researcher went over the purpose of the study with each one of them. Each and every participant who met the requirements for inclusion gave their verbal consent. To gather the necessary information utilizing the data collection techniques, an individual structured interviewing questionnaire sheet was administered to each parent. The typical time required for socio demographic characteristics was 15 minutes, scale of depression, anxiety and stress was around 15 minutes, about 15 minutes for scale of quality of life and scale of coping strategies 10-15 minutes, the time it takes to complete all tools between 50-60 minutes.

-The researcher gathered information from the study participants on three different days (Saturday, Sunday &Monday) per week at 9 am -1 pm. A minimum of four and a maximum of five parents were seen by the researcher each day.

III-Administrative Design:

The dean of Benha University's faculty of nursing granted the researcher official approval. To get this permission for data collection to carry out the planned study, a letter with the title and objective was sent to the Benha University Hospital director.

-Ethical considerations.

The study's subjects were made aware that participation was entirely optional, and the questionnaire sheet did not contain any personal information. Subjects were informed that the tools content was used solely for purposes of research and that they might refuse to take part in the study or withdraw at any moment without consequence. Each participant's anonymity and confidentiality were maintained and protected.

III-Statistical Design:

Using a personal computer, the data acquired from the investigated sample was updated, coded, and input (PC). For statistical analysis, the Statistical Package for Social Sciences (SPSS) version 25 was utilized and computerized data entry. Quantitative data was expressed as frequencies and percentages, whereas categorical data was expressed as the arithmetic mean (X) and standard deviation (SD). Utilizing descriptive statistics, the data were presented. Comparisons between qualitative variables were made by using the Chi-square test (X²). The degree and direction of the relationship between three ranking values are measured by the Spearman correlation.

4. Results:

Table (1) demonstrates the socio demographic characteristics of the parents who studied, more than half (52.0%) of the studied parents were aged 20 - < 30 years with mean \pm SD of age is 32.3 ± 7.16 years. Regarding sex and marital status, the vast majority of them was females and married (90.0% & 93.3%, respectively). Also, more than half (53.3%) of them had secondary education (diplome). Less than three quarters (72.0%) of them lived at rural areas. In addition, less than two-thirds (63.3%) of the studied parents mentioned that, their income wasn't not enough.

Table (2) reveals clinical data of the affected children, more than two-thirds (69.3%) were aged <1 year at onset of the disease. As regard to severity of disease, higher than two-thirds (67.3%) of them had moderate level. Also, less than half (41.3%) of them were previously hospitalized as more than half (51.6%) of them were admitted one time to hospital. Also, more than three-quarters (77.3%) of the affected children had family history for the same disease as less than three-quarters (73.3%) of them were relatives from the first degree.

Figure (1) presents the total level of depression, anxiety and stress scale among the studied parents. It reflects that, more than half of the parents who studied had moderate

level of total depression, anxiety and stress scale (52.0%, 53.3% & 56.7% respectively).

Figure (2) demonstrates the total quality of life among the parents who studied, less than two-thirds (64.7%) of the studied parents had low level of total quality of life. Also, one-quarter (25.3%) of them had moderate level. While, the minority (10.0%) of them had high level of total quality of life.

Figure (3) displays the total level of coping strategies among the parents who studied, more than half (57.3%) of the studied parents had low level of total coping strategies. Also, less than one-third (30.7%) of them with moderate level. While, the minority (12.0%) of the studied parents had high level of total coping strategies.

Table (3) shows that, a highly statistically significant positive correlation among total depression, anxiety and stress subscales among the parents who studied at ($P= 0.000^{**}$). Also, a highly statistically significant correlation which is positive between total quality of life and total coping strategies among the parents who studied at ($P= 0.000^{**}$). While, a highly statistically significant negative correlation between total depression, anxiety, stress subscales of the studied parents and their total quality of life and total coping strategies at ($P= 0.000^{**}$)

Table (1) Socio-demographic characteristics of the parents who studied (n=150).

Socio-demographic characteristics	Studied parents (n=150)	
	No.	%
1)Age (years)		
18 -< 20 Yrs	4	2.7
20-< 30 Yrs	78	52.0
30 -< 40 Yrs	42	28.0
40 -< 50 Yrs	20	13.3
≥ 50 Yrs	6	4.0
Mean \pm SD	32.3 \pm 7.16	
2)Sex		
Male	15	10.0
Female	135	90.0
3)Marital status		
Married	140	93.3
Divorced	7	4.7
Widowed	3	2.0
4)Education level		
Illiterate	6	4.0
Read and writes	10	6.7
Primary education	16	10.7
Preparatory education	20	13.3
Secondary education (diplome)	80	53.3
University education	16	10.7
Post graduate studies	2	1.3
5)Occupation		
Yes	46	30.7
No	104	69.3
5-A) if the answer is yes, what's the type of work? (n=46)		
Employee at government sector	16	34.8
Employee at private sector	20	43.5
Free works	10	21.7

6-Residence		
Rural	108	72.0
Urban	42	28.0
7- Income		
Enough	37	24.7
Not enough	95	63.3
Enough and save	18	12.0

Table (2) Clinical data of the affected children (n=150).

Clinical data	Affected children (n=150)	
	No.	%
1)Age at onset of disease (years).		
< 1 Year	104	69.3
1 -< 3 Yrs	24	16.0
3 -<5 Yrs	10	6.7
5-< 7 Yrs	7	4.7
≥ 7 Yrs	5	3.3
Mean ± SD	1.65 ± 0.81	
2) Severity of disease.		
Mild	22	14.7
Moderate	101	67.3
Severe	27	18.0
3) Previous hospital admission.		
Yes	62	41.3
No	88	58.7
3-A) If yes, how many times of the hospital admission? (n=62)		
One time	32	51.6
Two times	16	25.8
Three times	9	14.5
Four times or more	5	8.1
4) Type of congenital heart diseases of affected child.		
Valves stenosis	8	5.3
Congenital atrial septal defect	50	33.3
A congenital defect in the ventricular duct	66	44.0
Narrowing of the aorta	4	2.7
Hypoplastic left – sided heart syndrome	3	2.0
Patent ductus arteriosus	19	12.7
5) Suffering from any other diseases?		
Yes	130	86.7
No	20	13.3
6) Follow up at outpatient clinics.		
Every day	0	0.0
Every week	44	29.3
Every month	106	70.7
7) Family history for the same disease?		
Yes	116	77.3
No	34	22.7
7-A) If yes, what is the degree of relationship? (n=116)		
The first degree relatives	85	73.3
The second degree relatives	31	26.7

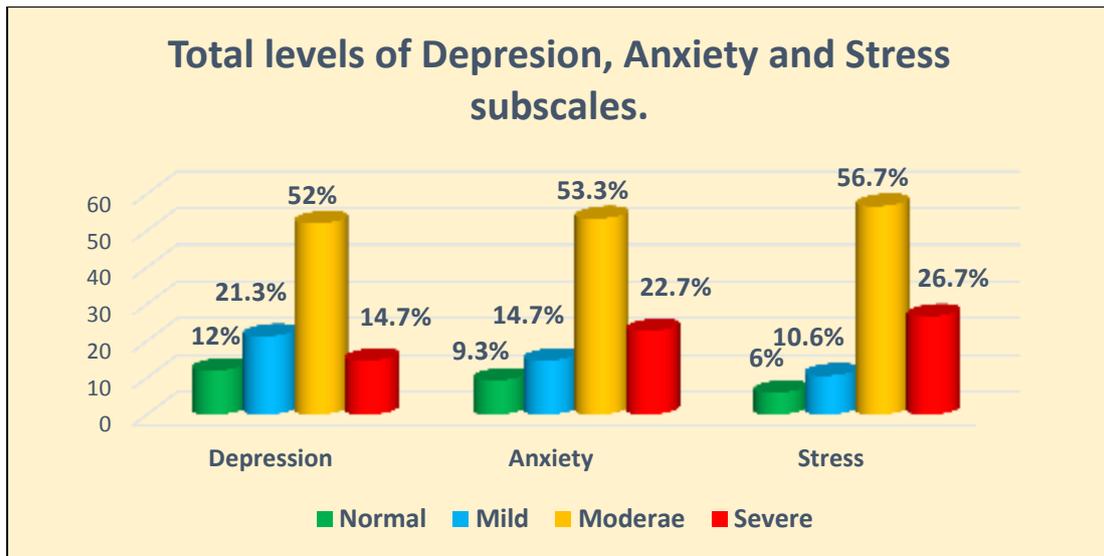


Fig. (1) Total depression, anxiety and stress among the parents who studied (n=150).

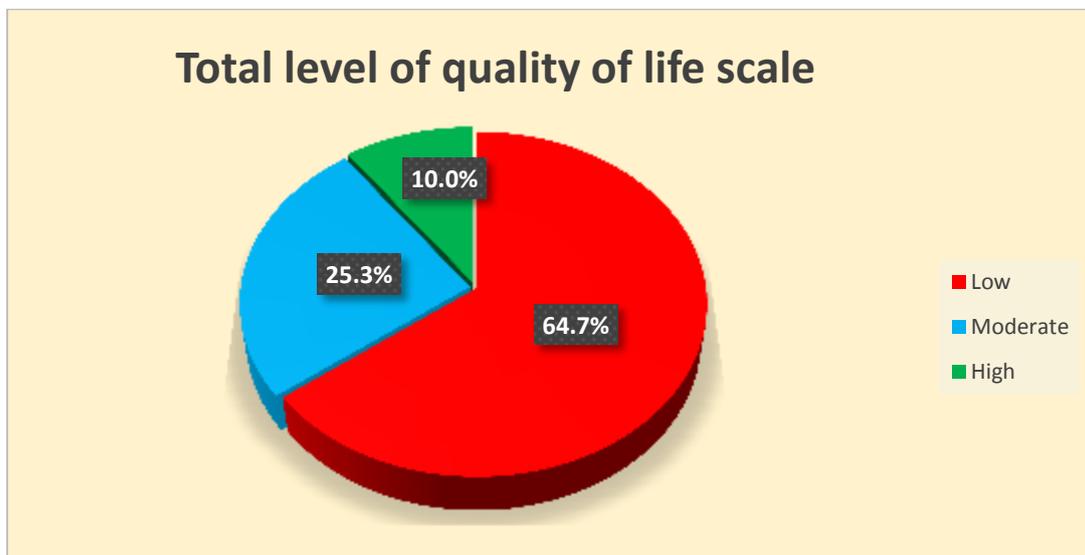


Fig. (2) Total quality of life among the parents who studied (n=150).



Fig. (3) Total coping strategies among the studied parents (n=150).

Table (3) Correlation between total depression, anxiety and stress scale, total quality of life scale and total coping strategies scale among the parents who studied (n=150)

Items	Total depression subscale		Total anxiety subscale		Total stress subscale		Total quality of life scale	
	r	p-value	r	p-value	r	p-value	r	p-value
Total depression subscale								
Total anxiety subscale	0.567	<0.01**						
Total stress subscale	0.550	<0.01**	0.617	<0.01**				
Total quality of life scale	-0.511	<0.01**	-0.575	<0.01**	-0.600	<0.01**		
Total coping strategies scale	-0.560	<0.01**	-0.537	<0.01**	-0.591	<0.01**	0.624	<0.01**

****highly significant at p < 0.01.**

5. Discussion

Congenital Heart Diseases (CHD) are the most prevalent birth abnormality, they affect millions of children each year throughout the world. CHD not only interfere with children's natural development by putting them at high risk for behavioral and neurodevelopmental problems but also pose difficulties for parents as they figure out how to control a child's medically complicated requirements. Also, parents are highly susceptible to mental health issues, including anxiety, depression and stress which negatively affect on their quality of life and hence their coping strategies.[12] So, this study was done to examine the problems of psychological status, quality of life and coping strategies among parents of children diagnosed with Congenital Heart Diseases.

Regarding the socioeconomic background of the parents that attended the study, the present study results showed that, higher than half of the parents who studied, range of their age is from 20 - < 30 years with mean age is 32.3 ± 7.16 years. According to the researcher, this outcome could be related to early marriage that is considered as a common tradition in rural community. This result was in accordance with[13], who represented that higher than half of the parents who studied, their age range is from 20-30 years with mean age is 32.48±6.47. On the contrast, this finding disagreed with [14]'study who mentioned that higher than half of the parents who studied and have children with CHD their age from 30-40 years with mean 35, 23±8.45 years.

As regard to sex and marital status of the parents who studied, the recent study's findings revealed that the majority of them were females and married. According to the study, this may be caused by females are the direct support of their children and responsible for caring of their child than males or might be because of mothers bear the brunt of the caregiving. Furthermore, mothers frequently responded more significantly to stress measures than fathers did, which is probably because a childhood handicap impacts the area of life that women associate with more strongly. This result was in the same line with

[15] who found that, most of his studied parents were females and married. Mothers with disabled children indicate that because they have to meet their children's demands for advocacy, education and service, their roles frequently go beyond those of a typical family.[16]

Concerning the level of education, Results of the present investigation reflected that more than half of them had completed secondary education (diplome). According to the researcher, this may be because the majority of the analyzed sample came from rural areas where there was a lack of focus on completing high school or could be as a consequence of cultural differences in the study population. This finding was in accordance with [17], who reported that higher than half of the studied parents of children with CHD were in secondary school (diplome). In contrast, [18]'s study found that higher percentage was for parents who were in a college.

As regard to occupation, less than a third of the parents who studied were working as less than half of them were employed at private sector. From the perspective of the researcher, this outcome could be caused by being responsible for caring of child with CHD and need money for treatment and follow-up. This outcome was comparable to that of [19]'s study, who discovered that about a third of its sample was employed. In contrast to [20], who found that most of the analyzed sample was unemployed and in a stable economic situation. Additionally, the current study's findings showed that just around two-thirds of the surveyed parents made this claim, their monthly income was not enough and just around three quarters of them live at rural areas. According to the study, this may be because of the cost of treatment and follow up. which continues for long period of time. Additionally, the sample was obtained from the several remote areas-serving Benha University Hospital. These results were in line with a study conducted by [21], who found that most of the investigated parents of children with CHD were living in rural area and their income not enough. On the other hand, this result was disagreement

with the study by [22], who revealed that more than half of the parents who studied were from urban areas.

As regard to the clinical data of the affected children with CHD, more than two-thirds were aged less than 1 year at onset of the disease with mean age at disease onset was 1.65 ± 0.81 years. This could be because of a number of factors, according to researcher, CHD is the most common disease affecting especially neonates and infants. This finding agreed with that of [18], who found that higher than two thirds of the affected children were older. Less than 1 year with mean aged about 1.68 ± 0.88 . On the other hand, [23], who showed that, higher than two - thirds their age ranged from 5-10 years at onset of disease.

Concerning the congenital heart diseases severity among affected children, in excess of two-thirds of them with moderate level of severity. From the perspective of the researcher, this could be due to chronicity of CHD that progress quickly among the affected children. This result was in comparison to the study of [24] ' study, who disclosed that higher than two-thirds of his affected children had mild degree of severity of CHD.

Regarding the previous hospitalization, less than half of them were previously hospitalized. According to the study, this could be attributed to CHD is a chronic disease that need frequent hospitalization and follow up. This result was in accordance with [25], who revealed that, less than half of his affected children were hospitalized. On the contrast, [26], revealed that more than half of his affected children weren't admitted to hospital before.

As regard to type of congenital heart diseases, less than half and one-third of them suffered from congenital defects in the ventricular duct and congenital atrial septal defects. From the point of view of researcher, this might be due to many studies reported that the most common types of CHD affecting children were defects in the ventricular duct and atrial septal defects.

This result was in accordance with [25], who reported that, less than half and one-third of the children who studied suffered from congenital defects in the ventricular duct and congenital septal defects. On the other hand, [27], who reflected that less than half of the children who affected, suffered from tetralogy of fallot.

Regarding suffering from any other diseases, more than one-third of studied parents suffered from other diseases. From the perspective of the researcher, this may be because of the effect of CHD on the general health status of affected children. CHD can affect a child's heart structure and how it functions, which can affect how much blood flows through the heart and out to the rest of the body and cause a number of disabilities and other health issues. It may also significantly limit or prevent a child from engaging in any physical activity. This result was in accordance with [28], who reflected that, higher than one-third of his sample who studied suffered from other diseases.

Concerning the follow-up at outpatient clinics, more than two-thirds of them follow up at outpatient clinics every month. From the point of view of the researcher, this might be due to CHD is a chronic disease that need continuous follow-up for long period of time. This result

was similar with the study of [29], who found that nearly to three quarters of the sample who studied follow up at outpatient clinics every month.

Regarding family history, more than three-quarters of the affected children had positive family history as less than three-quarters of them were relatives from the first degree. From the perspective of the researcher, this could be due to heart diseases are genetic that run among families especially first degree of relatives. This result was consistent with the study of [30], who reported that nearly three-quarters of the studied sample were relatives from the first degree.

Higher than half of the investigated parents experienced moderate levels of depression, anxiety, and stress in terms of the overall distribution of these conditions. According to the researcher, these results may be explained by the fact that caring for a child with a developmental or chronic illness causes continual stress for the parents, even when the child is an adult. This would cause the parents to constantly be incompatible and their child's condition. Those parents are always under emotional pressure, including feelings of guilt or shame, anxiety, and stress, in addition to financial hardship. Additionally, they have more difficulties that necessitate their participation in extraordinary care.

These current study results were similar with the study of [31], who showed that in excess of half of the parents were under study who have children with CHD had moderate level of anxiety, stress and depression. Also, these results were in a similar vein with [26], who showed that higher than half of the sample who studied, had moderate level of depression, stress and anxiety.

Less than two-thirds of the parents who were investigated reported a low degree of total quality of life in relation to their children who had CHD. According to the study, this may be because the parents' financial status was linked to a noticeably lower quality of life in terms of life force and emotional health, parental depression, stress, and anxiety can have a negative effect on caring for a child who has a chronic condition. The special burden and caregiving demands associated with a child's CHD also have a negative impact on the parents' general mental health and wellbeing as well as their quality of life.

The findings of the current study were consistent with those of [32]'s study, who discovered that approximately two thirds of the investigated parents had poor overall quality of life. On the other hand, these findings contrasted with those of [23]'s study, which showed that approximately three-quarters of the parents they looked at reported having an excellent quality of life.

In terms of overall coping strategy level, more than half of the parents in the study had a poor degree of coping strategies. Additionally, less than a third of them had intermediate level. From the researcher perspective, this could be due to parental stress was significantly related to other causes may be due to uncertainty, unclearness, and lack of information. Also, long period of hospitalization that require a lot of time from parents in caring of their children with CHD, burden of caring of other siblings in addition to caring of their sick child. All of these affecting

negatively on their coping strategies to bear their children's illness. These results were in accordance with [15], who revealed that almost two-thirds of the parents who investigated had a poor level of total coping techniques. On the other hand, these results were contraindicated with the study of [33], who stated that only around three-quarters of the parents he investigated had a greater degree of overall coping techniques.

Regarding the relationship between the total scale of depression, anxiety, and stress, total scale of quality of life, and total scale of coping methods among the examined parents, there was a highly statistically significant positive relationship between these three variables. From the perspective of the researcher, this could be due to exposure of studied parents to this difficult situation and their fear of losing their child due to chronicity of this disease, this increase level of anxiety which put them on stress and as a result of that increase level of depression. These results were consistent with [34] ' study, who discovered that a highly statistically significant correlation which was positive was between total depression, anxiety and stress among his studied parents.

Additionally, among the tested parents, a highly statistically significant link which was positive was found between overall quality of life and overall coping techniques. From the researcher perspective, this might be due to low level of coping with their children conditions, not understanding of the disease, frequent follow-up affecting in all aspects of quality of life. These outcomes matched those of the investigation into [18], who reported that a highly statistically significant correlation which was positive was found between total quality of life and total coping strategies among his parents who studied.

Additionally, the present study showed a highly statistically significant association which was negative was presented between parents' overall coping techniques and their depression, anxiety, and stress levels. From the perspective of the researcher, this might be due to failure of those parents in adaptation to their child illness and use effective coping strategies to cope with it lead to increase level of parents' impairment in psychological status such as depression, anxiety and stress due to burden from their children or lack of support, so impaired their quality of life. This result was in the same line with [35], who reflected that a highly statistically significant correlation which was negative was existed between total psychological problems and total coping strategies.

Furthermore, the present study showed that among the parents who were the subject of the investigation, there a highly statistically significant association which was negative was existed between total DASS and total quality of life. This indicates that parents' quality of life was significantly impacted when they experienced high levels of depression, anxiety, and stress. This could be as a result of a variety of factors, including the chronicity of the disease, the expense of treatment, follow-up, fear of death, developmental disorders of their affected children, and frequent hospitalization, all of which have a detrimental effect on all aspects of quality of life.

6. Conclusion

In light of the recent findings,

It is possible to draw the following conclusions about the study's parents of congenital heart disease children, higher than half of them had moderate levels of overall problems in psychological status (depression, anxiety, and stress, less than two-thirds had poor living quality in general, and higher than half had low levels of overall coping mechanisms. Additionally, a very statistically significant negative link was between the parents' overall quality of life and total coping mechanisms and their overall levels of sadness, anxiety, and stress. However, among the parents who were the subject of the study, a highly statistically significant association which was positive was found between overall quality of life and overall coping techniques.

7. Recommendations

Given the results of the current investigation, several suggestions were made:

- 1) Adoption of a psycho-educational training program for all parents of children diagnosed with congenital heart conditions in order to lessen their psychological issues and make their quality of life improved and coping mechanisms.
- 2) All parents of children with CHD should participate in counselling to help them live happier lives, improve their psychological health, and develop appropriate coping mechanisms.
- 3) Early detection of children with CHD should be encouraged through premarital and prenatal education programs.
- 4) Using the media to spread the word about CHD risk factors, how to prevent it, and how to get home care for kids who have it might improve parents' psychological issues.

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