

# Effect of a Nursing Intervention Program on Self-esteem and Self-efficacy of Children Undergoing Hemodialysis

<sup>1</sup>Zeinab Loutfi, <sup>2</sup>Ghada Mourad, <sup>3</sup>Maaly el malky, <sup>4</sup>Ahmed Gomaa Zaki El Far

<sup>1</sup>Professor of psychiatric mental health nursing faculty of nursing, Ain shams university

<sup>2</sup>Professor of psychiatric mental health nursing faculty of nursing, Ain shams university

<sup>3</sup>Assistant Prof., of psychiatric mental health nursing faculty of nursing, Menoufia university

<sup>4</sup>master degree in psychiatric nursing, Faculty of Nursing, Ain Shams University

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**Abstract:** Self-esteem of children is how children value themselves, while self-efficacy is a child's belief in his or her ability to succeed in a particular situation; this study is about effect of nursing intervention program on self-esteem and self-efficacy of children undergoing hemodialysis. Aim of the study : This study aimed to evaluate the effect of nursing intervention program on self-esteem and self-efficacy of children undergoing hemodialysis. Setting: At children hemodialysis unit in menoufia university hospitals. Design: A quasi-experimental design (Pretest/ Posttest design). Subjects: A convenience sample of all available children who are undergoing hemodialysis in the previous setting (no=58) were included in this study. Tools: three tools were used 1- Interview questionnaire sheet. 2- Self-esteem scale. 3- Self efficacy scale. Results: reveals that only (14%) of the sample has high self-esteem in pre intervention ,which increased to( 84%) in the post intervention then increased to (86%) during follow up, only (12%) of the sample has high self-esteem in pre intervention ,which increased to( 94%) in the post intervention then decreased to (88%) during follow up and there is a positive high significant correlation between self-esteem and self-efficacy . Conclusion: Children undergoing hemodialysis have low levels of both of self-esteem and self-efficacy pre intervention program , There is an increasing and enhancement of levels of both of self-esteem and self-efficacy of children undergoing hemodialysis post intervention program , in follow up and There is a strong positive correlation between self-esteem and self-efficacy among children undergoing hemodialysis pre and post intervention program. Recommendations: An educational program and training program for health care givers, parents and teachers about how to foster both of self-esteem and self-efficacy and to relieve psychological distress. Also Media attention to the phenomenon of low self-esteem and low self-efficacy in children undergoing hemodialysis and provide broadcast awareness programs help to solve the problems of this phenomenon.

**Keywords:** Self esteem; Self efficacy; Hemodialysis; Children.

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## 1. INTRODUCTION

Self-esteem is a concept used to describe a personality variable that captures the way a child generally feels about him or her-self, or the way a Child may evaluate his abilities and attributes. Self-esteem ranges from very high to extremely low. A child with high self-esteem generally has a fondness or love for himself, whereas a child with low self-esteem may have negative feelings toward himself, Chronic illness Such as (Chronic Renal failure) may be a risk factor for low self-esteem; however, previous meta-analyses are inconclusive whether children with a chronic illness such as (chronic renal failure) have lower self-esteem than their healthy peers. The lowest levels of self-esteem were observed in children with chronic fatigue syndrome associated with chronic renal failure. psychosocial interventions for children with chronic illnesses should be offered for children with low self-esteem ( **pinquart , 2017**).

Self-efficacy is the belief that a child are capable of performing a task or managing a situation. A child with high self-efficacy believes they have the skills to help them steer through life and reach their goals. Perhaps most importantly, self-efficacy is about learning how to persevere when one does not succeed. Higher self-efficacy is linked to better ability to think productively by applying positive thinking skills when facing a challenge ,higher motivation ,stronger effort put into an activity or task ,greater resilience and lower vulnerability to stress and depression. While lower self-efficacy is linked to tendency to shy away from difficult tasks ,lower aspirations and poor commitment to goals ,pessimistic attitude towards obstacles and greater vulnerability to stress and depression (**Harter , 2018**).

Self-efficacy is the degree to which a Child believes that he or she can attain a goal. It is also an important part of treatment for mental health disorders, as a high degree of self-efficacy correlates with a higher chance for treatment success. Self-efficacy, a widely used psychological concept, has been recognized as an essential prerequisite of effective self-care of chronic disease Such as Chronic renal failure (**Yuan,2017**).

Self efficacy is different than self-esteem, which is a general regard for one's overall worth. Self-esteem is an opinion one holds about one's self-worth or self-value. It certainly influences self-efficacy. However, high self-esteem alone does not give a child an optimistic attitude and willingness to persist when experiencing resistance. A child develops these characteristics through self-efficacy. They believe they are capable to continue during setbacks – the key to achieving success. Education researchers consistently note that a child with higher self-efficacy works harder, is more optimistic and less anxious, and perseveres more; self-efficacy shapes one's motivation and sense of personal accomplishment. As a result, it significantly influences a child's success or failure (**Kelly , 2017**).

Self-efficacy and self-esteem are two terms, often mistaken for one another that are closely connected. When self-efficacy is high, self-esteem tends to be high as well, and likewise when self-efficacy is low, self-esteem tends to be low too. The opposite direction is true, also, that levels of self-esteem affect the levels of self-efficacy. Many times, they both are affected by outside sources instead of each other, but even in this case they are usually either both positively affected or both negatively affected. It is rare that self-esteem and self-efficacy have a negative correlation. The terms self-efficacy and self-esteem are commonly used interchangeably or confused with each other, but they do have different definitions. Self-efficacy is defined as how confident a child is in his or her own abilities, either in general or directed toward a specific task or activity. Self-esteem is more a child's idea of his or her own self-worth, which can be related or unrelated to his or her abilities. The often strong connection between self-efficacy and self-esteem exists because children who have high self-efficacy and believe strongly in their own capabilities also tend to have a high feeling of self-worth, because they are so capable. Likewise, children who naturally feel they have a higher self-worth tend to also believe themselves to be capable of either doing the necessary tasks or learning how to do them. This also works in the reverse, with low self-efficacy and self-esteem being interconnected. Also, past events are a big determinant of levels of self-efficacy and self-esteem (**Ali, 2018**).

#### **Significance of the study:**

According to **Buyan, Türkmen (2015)** there are many reports of chronic physical illnesses such as chronic renal failure contributing to a decline in children's self-esteem and self-efficacy, Studies showed that children with chronic kidney disease revealed that the development process of self-esteem and self-efficacy suffers from maladaptation caused by physical disorders, and as a result, positive social activities are limited and social maladaptation gets worse. So evaluating children's self-esteem and self-efficacy undergoing hemodialysis can be an effective method for understanding their past and present circumstances, and useful to treat children with psychosomatic disorders related to chronic renal failure. Children undergoing hemodialysis have low levels of self-esteem and self-efficacy. There is a great interest in Planning a nursing intervention program and training program to the children undergoing hemodialysis to help them to enhance their self-esteem, self-efficacy.

#### **Aim of the study:**

Evaluate the effect of nursing intervention program on self-esteem and self-efficacy of children undergoing hemodialysis through:

- Assess levels of both of self-esteem and self-efficacy of children undergoing hemodialysis (Pretest).
- Apply educational program to improve self-esteem and self-efficacy among children undergoing hemodialysis.
- Evaluation of the nursing intervention program.

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- Assess levels of both of self-esteem and self-efficacy of children undergoing hemodialysis after program implementation (Posttest).

**Research Hypothesis:**

The implementation of the nursing intervention program will have a positive effect on both of self-esteem and self-efficacy of children undergoing hemodialysis.

**2. SUBJECTS AND METHODS****Research Design:**

Quasi-experimental design (Pre test/ Post test design).

**Setting:**

The study will be carried out on children undergoing hemodialysis at the hemodialysis unit of menoufia University hospitals.

**Subjects:**

In the predetermined setting during the time of data collection, a convenient sample of all available number of chronic renal failure children who are undergoing hemodialysis. Their number is about (58 child), their age ranging from 6 to 12 years old.

**Tools of data collection:**

Tools for collecting data of the present study will include the following:

1- Interview questionnaire sheet will be developed by the researcher based on literature review will be consisted of:

a- Demographic data of children such as (Age, Sex, etc...)

b- History of the disease.

2- Self esteem scale to assess self esteem of children undergoing hemodialysis. It will be adopted from **(Rosenberg, 1965)** . The scale is a ten item likart scale with items answered on a four point scale from strongly agree **(SA)** = (4) to strongly disagree **(SD)** = (1). Scoring system: SA=4, A=3, D=2, SD=1. The sum of the scores will range from (10 to 40).The higher the score, the higher the self-esteem.

3- Self efficacy scale to assess self-efficacy of children undergoing hemodialysis. It will be adopted from **(Lorig K, Stewart A, 1996)**. The scale is a 30 items scale with items answered on a four point scale from strongly Confident **(SC)** = (4) to strongly not confident **(SNC)** = (1). Scoring system: SC=4, C=3, NC=2, SNC=1. The sum of the scores will range from (30 to 120). The higher the score , the higher the self-efficacy.

**Pilot study:**

It will be conducted for 10% from total sample to evaluate the applicability, clarity & feasibility and content validity of the tools used according to pilot study results, the modifications used be done.

**Field work (Procedure) :**

-The researcher will collect the data by interviewing the children.

-The children will be interviewed in the hemodialysis unit of menoufia university hospitals.

-Assessing both of self-esteem and self-efficacy in pretest using the study tools by the researcher.

- Based on the results of data collected the program will be planned and constructed.

-The nursing intervention program will be implemented upon 12 sessions given in average one session in a week for 3 months , the first for introduction , the last for conclusion and evaluation and 10 sessions for applying the program.

- Assessing the effect of the implemented program on both of self-esteem and self-efficacy of children using the tools of the study (Post-test) by the researcher.

**Ethical consideration:**

An oral consent will be taken from the children and from their parents to participate in the study after explaining the objectives of the study, it will have not any harmful effect on them, the information will be confidential and they can withdraw from the study at any time.

**3. RESULTS**

1- Table (1) Shows levels of self-esteem among studied sample. it reveals that there is a highly statistically significant in all items related to self-esteem levels. While the table reveals that only (14%) of the sample has high self-esteem in pre intervention ,which increased to( 84%) in the post intervention then increased to (86.%) during follow up.

2- Table (2) shows levels of self-efficacy among studied sample. It reveals that, there is a highly statistically significant in all items related to self-efficacy levels. While the table reveals that only (12%) of the sample has high self-esteem in pre intervention ,which increased to( 94%) in the post intervention then decreased to (88%) during follow up.

3- Table (3) shows Correlation between self-esteem & self-efficacy among studied sample. It reveals that there was highly statistical significant positive correlation between Self-esteem levels of children undergoing hemodialysis and Self efficacy levels of them during pre, post and follow up phases of intervention ( $P \leq 0.001$ ).

**Table (1): levels of self esteem among studied sample**

Self esteem Levels	Pre		Post		Follow up		Chi-Square	
	N	%	N	%	N	%	X2	P-value
High Self esteem	7	14%	42	84%	43	86%	83.01	<0.001*
Moderate Self esteem	3	6%	2	4%	5	10%	75.79	<0.001*
Low Self esteem	40	80%	6	12%	2	4%	62.52	<0.001*
<b>Total</b>	50						100%	

**Table (2): levels of self efficacy among studied sample**

Self efficacy Levels	Pre		Post		Follow up		Chi-Square	
	N	%	N	%	N	%	X2	P-value
High Self efficacy	6	12%	47	94%	44	88%	88.09	<0.001*
Moderate Self efficacy	3	6%	1	2%	3	6%	72.56	<0.001*
Low Self efficacy	41	82%	2	4%	3	6%	67.43	<0.001*
<b>Total</b>	50						100%	

**Table (3): Correlation between self esteem & self efficacy among studied sample**

Pearson Correlation coefficient							
self-esteem & self-efficacy							
Levels	Pre intervention		Post intervention		Follow up		P-value
	Self Esteem	Self Efficacy	Self Esteem	Self Efficacy	Self Esteem	Self Efficacy	
	r	r	r	r	r	r	
<b>High Levels</b>	0.980	0.944	0.988	0.976	0.898	0.866	<0.001*
<b>Moderate Levels</b>	0.755	0.743	0.655	0.598	0.733	0.735	<0.001*
<b>Low Levels</b>	0.698	0.676	0.581	0.545	0.678	0.685	<0.001*

#### 4. DISCUSSION

Self-esteem is how children value themselves; it is how they perceive their value to the world and how valuable they think they are to others. Self-esteem affects their trust in others, their relationships, and their work – nearly every part of their lives. Positive self-esteem gives them the strength and flexibility to take charge of their lives and grow from their mistakes without the fear of rejection. Self-esteem is a concept used to describe a personality variable that captures the way a child generally feels about himself or the way a Child may evaluate his abilities and attributes. Self-esteem ranges from very high to extremely low.

self-efficacy is "the belief in child's capabilities to organize and execute the courses of action required to manage prospective situations." In other words, self-efficacy is a child's belief in his or her ability to succeed in a particular situation. These beliefs as determinants of how children think, behave, and feel. Self-efficacy is the degree to which a Child believes that he or she can attain a goal. It is also an important part of treatment for mental health disorders, as a high degree of self-efficacy correlates with a higher chance for treatment success. Self-efficacy, a widely used psychological concept, has been recognized as an essential prerequisite of effective self-care of chronic disease Such as Chronic renal failure *Yuan,(2017)*.

Self-esteem is more a child's idea of his or her own self-worth, which can be related or unrelated to his or her abilities. The often strong connection between self-efficacy and self-esteem exists because children who have high self-efficacy and believe strongly in their own capabilities also tend to have a high feeling of self-worth, because they are so capable. Likewise, children who naturally feel they have a higher self-worth tend to also believe themselves to be capable of either doing the necessary tasks or learning how to do them. This also works in the reverse, with low self-efficacy and self-esteem being interconnected. Also, past events are a big determinant of levels of self-efficacy and self-esteem *Kelly,(2018)*.

The present study has been designed aiming to Determine the levels of both of self esteem, self Efficacy and Is there a relationship between self esteem and self efficacy among children undergoing hemodialysis pre and post intervention program.

Regarding to the level of self esteem in the studied sample , the present study revealed that more than three quarters of children under going hemodialysis have low self esteem pre intervention program . this may be due to the physical effects of kidney disease can make children feel depressed and powerless. Learning and growth problems may contribute to low self-esteem. Also feel inferior to others. They believe that they don't measure up to some standard that others meet. Frequently they feel that some flaw within them means that they are not worthwhile or deserving. tendency to be impatient or easily irritated by mistakes, flaws, or inadequacies. Feelings of unhappiness, inability to function in life may contribute to low self esteem. this result agrees with *Jane ,(2016)* who found that more than half of children on hemodialysis of his study have psychological distress, self reported depression and low self esteem.

In regards to the effect of the intervention program on self-esteem of children undergoing hemodialysis ,the result of the present study revealed an improvement in the level of self-esteem of children undergoing hemodialysis post program than before with positive statistically significant difference in all items. The researcher attributed this result to the effectiveness of the management program and this result was consists with a study done by *Edberg, (2017)* who investigate the effectiveness of intervention program for improving levels of self-esteem for children with chronic renal failure and undergoing hemodialysis . Clarify that, intervention program have a beneficial effect on children psychological status.

As regard to the level of self-efficacy in the studied sample , the finding of the present study shows that more than three quarters of the sample have low self-efficacy pre management program . this may be due to fatigue. Fatigue is a subjective symptom characterized by tiredness, weakness, and lack of energy. Fatigue is also one of the most debilitating symptoms reported by hemodialysis children. Children with chronic renal disease, regardless of whether they are pre dialysis or receiving either hemodialysis, are reported having high levels of fatigue and are often unable to engage in normal daily activities so fatigue has a negative effect in child self efficacy. This result supports *Chen et al., (2015)* who mentioned that fatigue is positively correlated with low self efficacy ,depression and negatively correlated with Quality of life .

In regards to *Wassner,(2015)* the effect of the management program on Self efficacy of children undergoing hemodialysis ,the result of the present study revealed an improvement in the level of children self-efficacy and positive

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remarks among children post program than before with positive statistically significant difference in all items. The researcher attributed this result to the effectiveness of the management program and this result was consistent with a study done by *Frauman (2017)* who investigate effects of behavior therapy techniques on the quality of life and self efficacy of children with chronic renal failure .

According to the relation between self esteem and self efficacy the study shows that there is a strong relationship between self esteem and self efficacy in children on hemodialysis. The study shows statistically high significant relation between self esteem and self efficacy pre management program. this may be due to pain. Pain is the most common symptom - discomfort of children which causes significantly low of both of self esteem , self efficacy and impaired quality of life of the children . The appearance of chronic pain in dialysis patients is usually in rate 37% to 50%, while 82% of them show a moderate to severe intensity pain. The etiology of pain is multi factorial and may be either due to the process of dialysis (puncture, muscle cramps, headaches) or due to the existence of accompanying systemic diseases and painful syndromes. this result match with *Chan & Steel , (2014)* who reported that Pain is the most common symptom - discomfort of children which causes significantly impaired both of self esteem and self efficacy of the children on hemodialysis as well the children quality of life . This is because the incidence of chronic pain is associated with the onset of affective disorders (anxiety, depression), social disorders (isolation, negligence) .

According to the relation between self esteem and self efficacy in children on hemodialysis post management program. the study shows that there is a strong relationship between self esteem and self efficacy in children on hemodialysis. The study shows statistically high significant relation between self esteem and self efficacy .this result may be due to The often strong connection between self-efficacy and self-esteem exists because Children who have high self-efficacy and believe strongly in their own capabilities also tend to have a high feeling of self-worth, because they are so capable. Likewise, Children who naturally feel they have a higher self-worth tend to also believe themselves to be capable of either doing the necessary tasks or learning how to do them. This also works in the reverse, with low self-efficacy and self-esteem being interconnected. Also, past events are a big determinant of levels of self-efficacy and self-esteem.

This result matching with *Ali , (2018)*, who explains that self esteem and self efficacy closely connected. When self-efficacy is high, self-esteem tends to be high as well, and likewise when self-efficacy is low, self-esteem tends to be low too. The opposite direction is true, also, that levels of self-esteem affect the levels of self-efficacy. Many times, they both are affected by outside sources instead of each other, but even in this case they are usually either both positively affected or both negatively affected. It is rare that self-esteem and self-efficacy have a negative correlation. the terms self-efficacy and self-esteem are commonly used interchangeably or confused with each other.

**5. CONCLUSION**

**The findings of the present study reached to the following conclusion:**

- \*Children undergoing hemodialysis have low levels of both of self-esteem and self-efficacy pre intervention program .
- \*There is an increasing and enhancement of levels of both of self-esteem and self-efficacy of children undergoing hemodialysis post intervention program and in follow up.
- \*There is a strong positive correlation between self-esteem and self-efficacy among children undergoing hemodialysis pre and post intervention program.

**6. RECOMMENDATIONS**

- 1-Replication of the current study on a larger sample is recommended to achieve generalization of the results and wider utilization of the designed program.
- 2-Plan an educational program and training program for health care givers, parents and teachers about how to foster both of self-esteem and self-efficacy in children undergoing hemodialysis.
- 3- Support system and service should be available and easily accessed to help children undergoing hemodialysis and their families.
- 4- Media attention to the phenomenon of low self-esteem and low self-efficacy in children undergoing hemodialysis and provide broadcast awareness programs help to solve the problems of this phenomenon.

**To further researchers:**

Further studied should be conducted on self-esteem and self-efficacy in children undergoing hemodialysis and its relationship with depression and anxiety.

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