

Effect of Nursing Guidelines on Caregiver Adjustment with Their Mentally Disabled Children

Fatma Mohamed Abdelhady Daleep¹, Amal Mohamed El Dakhakhny², Bataa Mahmoud Mohamed³

¹ Nursing Teacher at Technical Institute of Nursing, Faculty of Nursing, Menoufia University

² Professor and Head of Pediatric Nursing, Faculty of Nursing, Zagazig University

³ Lecturer of Pediatric Nursing, Faculty of Nursing, Zagazig University

Corresponding author: Fatma Mohamed Abdelhady Daleep, E-mail: fatmamohamed887@yahoo.com

Abstract:

Background: Mental disability (MD), also known as general learning disability and mental retardation (MR), is a generalized neurodevelopmental disorder characterized by significantly impaired intellectual and adaptive functioning. **Aim of study:** The aim of this study is to evaluate the effect of nursing guidelines on caregiver adjustment with their mentally disabled. **Design:** A quasi-experimental design was utilized in this study. **Setting:** Data was collected from the School of Intellectual Education in Shibin- Elkome, Menoufia Governorate. **Subjects:** The study was conducted on purposive samples of 150 MD children and their caregiver who attend with every child. **Tools of data collection:** Four tools were used, first, structured interview questionnaire for children and their caregiver. Second tool was a Family Impact of Childhood Disability (FICD) Scale according to their adjustment: (Pre and Post format). Third tool was Activities of daily life (ADL): (Pre and Post format). Forth, an observational checklist based on Orem's Self-care. **Results:** 50% were in age group from 9-12 years old, followed by 28.5% from 6-9 years old and 62.7% were male. 70.7% suffered from mental disabilities since birth. There were a highly statistical significant differences of the studied caregiver knowledge before and after implementation of nursing guidelines at P value (0.000). There was a highly statistical significant difference regarding care of the child. There was a highly statistical significance positive correlation between caregiver total knowledge, adjustment and total child self-care after implementation of nursing guidelines at P value (0.000). There was a highly statistical significance positive correlation between total knowledge score and caregiver demographic characteristics after implementation of nursing guidelines at P value (0.000). **Conclusion:** It could be concluded that the intervention guidelines significantly improved caregiver knowledge and adjustment with their mentally disabled children. **Recommendations:** It is recommended that periodic evaluation and validation of the training given, and training programs should be included both theoretical and practical.

Keywords: Nursing Guidelines, Caregiver Adjustment, Mentally Disabled.

Introduction

Mental health is vital to overall personal wellness. Mental health encompasses emotional, psychological, and social well-being, influencing cognition, perception, and behavior. Likewise determines how an individual handles stress, interpersonal relationships, and decision-making. Mental health includes subjective well-being, perceived self-efficacy, autonomy, competence, intergenerational dependence, and self-actualization of one's intellectual and emotional potential, among others (Riepenhausen et al., 2022).

Mental health is an individual's capacity to feel, think, and act in ways to achieve a better quality of life while respecting the personal, social, and cultural boundaries. Impairment of any of these are risk factors for mental disorders, or mental illnesses, which are a component of mental health. Mental disorders are defined as the health conditions that affect and alter cognitive functioning, emotional responses, and behavior associated with distress and/or impaired functioning (Jakovljevic et al., 2019).

Disability is an umbrella term, covering impairments, activity limitations, and participation restrictions. Impairment is a problem in body function or structure; an activity limitation is a difficulty encountered by an individual in executing a task or action; while a participation restriction is a problem experienced by an individual in involvement in life situations. The term “disability” encompasses a wide range of situations, from minor disabilities, like diminished vision or hearing, to severe disabilities, such as inability to move around or brain dysfunctions (Tariq & Hussain, 2022).

Defining disability is not an easy task, and is becoming clear that no single definition can cover all aspects of disabilities. According to the International Classification of Impairment, Disability and Handicap (ICIDH, 1980), disability is interference with activities of the whole person in relation to the immediate environment. A person with disability may be unable to perform certain functions as well as most other people. The disability may be physical; may involve senses, including seeing or hearing; may involve finding difficult or impossible to think clearly; or may involve mental health. Many people with a disability have full abilities in other areas (Bickenbach, 2019).

Disability in childhood can have a lifelong impact on a person's physical, mental and emotional health, as well as their social situation. Children with disability may have special needs, particularly regarding health and education and may need to negotiate significant social and environmental barriers in order to fully participate in everyday life (Legano et al., 2021).

Disability is common as about 1 in 50 children has a disability. There are many types of disability, including disabilities that children are born with, disabilities that develop after birth, and disabilities that are caused by injury. Children with disability may have special needs and require early intervention and as much support as possible (Su et al., 2020).

Mental disabilities are usually mental disorders that affect the behavior and emotional state of the individual. Some mental disorders have severe symptoms while others are mild or moderate. Common disabilities such as autism, Down syndrome and intellectual and physical disabilities create challenges with thinking, behavior and skill development (Khan et al., 2020).

The World Health Organization WHO (2020) reports that the overall prevalence of mental disability is 1-3%. According to the World Health Organization (WHO) intellectual or mental disability means a significantly reduced ability to understand new or complex information and to learn and apply new skills (impaired intelligence), results in a reduced ability to cope independently (impaired social functioning) and begins before adulthood, with a lasting effect on development (Mazza et al., 2020).

Mental retardation refers to a condition which is marked by subnormal intellectual functioning and adjustment difficulties which occur before a person is eighteen years of age. Disability associated with mental illness is a major contributor to the global burden of disease. Any condition of the mind that has a long-term effect on a person's normal day-to-day activity (Russell Jonsson et al., 2023).

A mental disorder is characterized by a clinically significant disturbance in an individual's cognition, emotional regulation, or behavior. Usually associated with distress or impairment in important areas of functioning. There are many different types of mental disorders. Mental disorders may also be referred to as mental health conditions. The latter is a broader term covering mental disorders, psychosocial disabilities and (other) mental states associated with significant distress, impairment in functioning, or risk of self-harm (Granlund et al., 2021).

Aim of the study: Was to evaluate the effect of nursing guidelines on caregiver adjustment with their mentally disabled at School of Intellectual Education in Shibin- Elkome, Menoufia Governorate.

Research Hypothesis:

- Caregiver knowledge post intervention guidelines will be improved than pre intervention guidelines.
- Caregiver regarding adjustment will improve post intervention guidelines than pre intervention guidelines.
- Caregiver outcome will improve post intervention guidelines than pre intervention guidelines.

Research design: A quasi experimental design was conducted to achieve the aim of the study.

Setting: The study was conducted at the School of Intellectual Education in Shibin- Elkome, Menoufia Governorate.

Subjects: Purposive samples were 150 MD children and their caregivers who attended the previously mentioned settings.

They were randomly selected from two groups (mother and children).

Tools of data collection:

Tool I: Questionnaire interview sheet (pre and post format).

Questionnaire interview sheet was designed and written in a simple Arabic language. It consists of the following data:

Part (I): Characteristics of both caregiver and children composed of two sub parts as the following:

- 1) **Personal characteristics of the studied children such as;** age, gender, residence, school grade, family number, Kinship between parents and level of education of the child.
- 2) **Personal characteristics of the studied caregivers such as;** age, gender, level of education, relation to child and his or her job.

Part (2):

- 1) **Medical history of the studied children included;** history of disabilities, onset and duration of disabilities, risk factor, signs and symptoms of the disabilities, family history, taking any medication and side effect of this medication and family history of liver disease.
- 2) **Characteristics of the child's life style such as;** diet before and after disabilities, exercise, allowed fluids, elimination habits, urination habits and medications.

Part (3): Caregiver Knowledge about mental disabilities (MD) (pre and post format).

The three parts were concerned with caregivers' knowledge about mental disabilities (pre and post format)

The score totaled marks (36) distributed as follows:

Definition of mental disabilities	(3marks)
Risk factor for mental disabilities	(3marks)
Causes of mental disabilities	(9marks)

Signs and symptoms of mental disabilities (6marks)

Classification of mental disabilities (4 marks)

Health method for maintain health body (7marks)

Sources of information about mental disabilities: (4 marks)

Scoring system for each knowledge item:

Scoring items	Score
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Correct complete answer	2
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Correct incomplete answer	1
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Wrong or don't know answer	0
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Scoring system:

The obtained total knowledge from caregivers were categorized as good, average and poor. The responses were evaluated using the model answer sheet prepared by the researcher. Accordingly, the total scores were calculated: for caregivers as; less than 50% considered poor, from 50% to 75% considered average and more than 75% considered good. According to the answers obtained from caregivers about knowledge, zero degree was given to each wrong or don't know answer, one degree was given to each correct incomplete answer and two degrees were given to each correct complete answer.

Scoring for level of total knowledge for caregivers:

Scoring items	Score
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More than 75%	Good
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50% to 75%	Average
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Less than 50%	Poor
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Tool II: Family Impact of Childhood Disability (FICD) Scale according to their adjustment :(Pre and Post format)

It were originally developed by Seshadri, (2000), it was used to measure the adjustment of caregiver it consisted of 30 items.

Scoring and scale rating each item was rated on a four Likert Scale: Items was scored 0, 1, 2 and 3 for Substantial degree, Moderate degree, Mild degree and not at all respectively.

Total score of impact of mental disabilities of child on the family about mental disabilities (90 marks):

Unsatisfactory if less than 60%

Satisfactory if more than 60%

Tool III: Activities of daily life (ADL): (Pre and Post format)

This tool was concern with assessment of child dependency. It developed to assess the activities of nutrition, mobilization, walking, clothing, bathing, elimination, and communication. The responses were on a three-point Liker scale: dependent, partially dependent, and independent. (Pre and post format) it included 7 items:

The total score was (14) marks and distributed as follows:

Nutrition	(2marks)
Mobilization	(2marks)
Walking	(2marks)
Clothing	(2marks)
Bathing	(2marks)
Elimination	(2marks)
Communication	(2marks)

Scoring system for activities of daily life:

Scoring: Items was score 2, 1 and zero for fully independent, partially independent, and fully dependent respectively. For each area, the scores of the items were summed-up and the total divided by the number of the items, giving a mean score for the part. These scores were converted into a percent score. The child was considered independent if the percent score was 75% or more, partially dependent if less 50-<75%, and dependent if<50%.

Tool IV: An observational checklist: This tool was developed guided by Orem's Self-care:

This tool to assess basic self-care needs of the studied children. It was contained questions about children nutrition, fluids intake, elimination habits, hygienic care, activity and exercise, rest and sleep time, exposure to health hazards, and social interaction with others. Total score of self-care guidelines about mental disabilities (42 marks).

Scoring system:

Each item is rated on three levels Likert scale. Each step in the checklist was scored according to its ability to meet therapeutic demand by wholly compensatory, or partially compensatory and or supportive educative. The total evaluation was either: wholly compensatory, or partially compensatory and or supportive educative (depended or in depended).

For children:

Scoring items	Score
Supportive-educative	3
Partial compensatory	2
Wholly compensatory	1

Development of guidelines program:

A proposed guidelines sessions developed by researcher. It included 4 phases:

General objective of the guidelines sessions:

Guidelines sessions aim to improve the knowledge and practice for caregiver about how to take care of their mentally disabled children.

Specific objective of the guidelines sessions:

- At the end of the guidelines sessions, caregiver would be able to acquire good knowledge, definition, risk factor, causes, signs and symptoms, classification of mental disabilities and health method for maintaining health body as well as daily care activities which should be given for those children.
- Improve the caregiver adjustments according to child needs for caring for their children.
- Able to apply good practice regarding their care provided to the guidelines sessions which was developed through four phases as follow:

Assessment phase:

- The nursing guidelines were constructed for the assessment of caregiver knowledge and reported practice.
- The assessment was performed before the implementation of nursing guidelines by interviewing each caregiver individually to assess their knowledge and reported practice (pretest) after explaining the aim of the study and had their approval to participate in the study.

Planning phase:

- Based on the result obtained from the interview sheet and from pilot study and assessment phase as well as reviewing the related literature, the nursing guidelines was developed by the researcher.
- Detected needs, requirements and deficiencies were translated into the aim and objectives of nursing guidelines. The contents of the nursing guidelines were selected based on identified needs.
- Teaching methods were selected to suit teaching in small groups in the form of lectures, group discussion, and demonstration and re-demonstration. Teaching material were prepared as PowerPoint and handouts that covered theoretical and practical information.
- Guidelines contents:** It included: dependence of daily life activity as; (nutrition & fluid intake), (mobilization & rest), (walking & activity), (clothing & sleeping time), (bathing & hygiene care), (elimination habits), (communication & social interaction) and (health problem & exposure to hazards). A handout was developed for the parent of MD children as a suggested plan to help them caring for their children. It covered the required needs and dependency related to MD children.

Implementation phase:

- The nursing guidelines of the study was carried out at the study settings.
- The total number of sessions were eight and covered the content of the guidelines.
- They were divided as follows; **Session one:** guidelines of nutrition & fluid intake. **Session two:** guidelines of mobilization & rest. **Session three:** guidelines of walking & activity. **Session four:** general appearance and appropriate clothes. **Session five:** guidelines of bathing & hygiene care. **Session six:** guidelines of elimination habits. **Session seven:** guidelines of good communication & social interaction. **Session eight:** health problem & exposure to hazards.
- Each group was subdivided into groups, with 5-7 parents in each group according to their children's condition and age.
- The duration of each session was around 30 to 40 minutes including periods for discussions.
- The researcher was available in the study settings two days per week, in the morning. The researcher started by introducing herself to each parent accompanying the MD child. The researcher gave them a brief idea about the study and its purpose, and asked for their participation. Upon agreement, they were interviewed using the designed questionnaire form. Each caregiver was interviewed depending upon readiness and level of education.
- In the first session, the researcher welcomed the attending caregivers, thanking them, gave information about definition, risk factor, causes, signs and symptoms and classification of mental disabilities. A booklet and CD about MD were provided at the beginning to the first counseling

session. The second session included health method for maintaining healthy body as well as daily care activities which should be given for those children and guidelines of good nutrition. The third session included information regarding guidelines of walking and guidelines of mobilization. The fourth session was about guidelines of clothing and dressing training. The fifth session was about guidelines of bathing and hygiene training. The sixth session was about guidelines of elimination and toilet training. The seventh session guidelines of good communication, social interaction, and plying. The eighth session guidelines about health problems & exposure to hazards and how to deal with this problem.

- The researcher started each session with a summary of the previous one.
- Sessions were explained in Arabic simple language.

Evaluation phase:

- In this phase, every caregiver of the studied sample was interviewed individually and immediately after implementation of nursing guidelines to assess their knowledge using a post test.
- After completion of the guideline's contents, the post-test was done using the same form of the pretest to assess the change in caregiver knowledge, awareness of needs, and practice regarding care of their children.
- This study was carried out for eight months during the period from October 2021 to may 2022.

Pilot study:

A pilot study was conducted on 15 children and caregivers (10% of the sample) after developing the instruments and before starting the data collection to assess the study tools for the applicability, consistency, clarity and the feasibility of the study tools to estimate the needed time to fill the tools. The results of the data obtained from the pilot study helped in modification of the tools, items were then corrected or added as needed. Children and caregivers who shared in the pilot study were excluded from the main study sample.

Field work:

After identifying the caregiver, who fulfilled the criteria of the study, they were requested to participate in the study. The aim of the study was explained briefly to all caregiver who agreed to participate in the study. They met the researcher at their available time.

The study was carried out for eight months during the period from October 2021 to May 2022.

Statistical analysis:

All collected data were organized, categorized, tabulated, entered, and analyzed by using SPSS (Statistical Package for Social Sciences); a soft-ware program version 20, which was applied to

frequency tables and statistical significance. Associations were assessed by using the arithmetic mean, standard deviation (SD), chi-square, t-test, Z test, and coefficient correlation (r) to detect the relations between variables.

Non-significant (NS) $p > 0.05$

Significant (S) $p \leq 0.05$

Highly significant (HS) $P < 0.001$

Extremely high $P < 0.0001$

After data were collected it was revised, coded and fed to statistical software IBM SPSS version 20. The given graphs were constructed using Microsoft excel software.

All statistical analysis was done using two tailed tests and alpha error of 0.05. P value less than or equal to 0.05 was considered to be statistically significant.

Results:

Table (1): Characteristics of the Studied Children (N=150)

Characteristics	No.(150)	%
Age / years		
6-	42	28.0
9-	75	50.0
12-	18	12.0
15-18 years	15	10.0
Min –Max	6-18	
Mean ±SD	10.92±2.58	
Gender		
Male	94	62.7
Female	56	37.3
Residence		
Rural	79	52.7
Urban	71	47.3
Number of family members		
Three	26	17.3
Four to six	62	41.3
Seven to more	62	41.3
Kinship between parents		
Yes	66	44.0

No	84	56.0
In cases of yes what is the degree (n=66)		
First degree	66	100.0
School grades		
Primary	60	40.0
Preparatory	90	60.0
Regular attendance to school		
Yes	75	50.0
No	75	50.0
Causes of Absenteeism from school (n=75)		
The effect the disabilities	40	53.3
Loss desire for learning	22	29.3
Inability to achieve school activities	53	70.7

Table (1) showed characteristics of the studied children. It was revealed that 50% were in age group from 9-12 years old. Those who aged from 6-9 years constituted 28.5% with mean age 10.92 ± 2.58 years. As regard gender, 62.7% of the studied sample were males. Also, 52.7% lived in rural area and 41.3% had family number of four to more family members and had no kinship relation between parents. Meanwhile, 60% of the studied children were in preparatory school. Regarding attendance to school, the same table showed that 50.0% was not attended because inability to achieve school activities as reported by 70.7% of causes for not attendance to school.

Table (2): Characteristics of the Studied Caregivers (N=150)

Items	No.(150)	%
Accompanying the children for school		
Father	68	45.3
Mother	82	54.7
Age / years		
30-35	66	44.0
≥ 35	84	56.0
Mean ±SD	34.25±6.17	
Level of education		
Able to read and write	34	22.7
Primary education	47	31.3
Secondary education	14	9.3
University education	55	36.7
Job		
Working	125	83.3

Not working	25	16.7
Family income		
Sufficient	125	83.3
Insufficient	25	16.7

Characteristics of the studied caregivers was presented in table (2). It was found that 54.7% of mothers accompanied their children to school. Whereas the mean age of mothers was 34.25 ± 6.17 years. According to education, it was found that 36.7% completed university education and 83.3% was working. As regard to family income it was revealed that 83.3% of studied caregiver had sufficient income.

Table (3): Medical History of the Studied Children (N=150).

Items	No.(150)	%
Onset of the disease		
Since birth	106	70.7
After one year from birth	11	7.3
After five year from birth	33	22.0
Risk factors of disease		
Hereditary factor	114	76.0
Viral infection	30	20.0
Congenital defect	6	4.0
Signs and symptoms		
Delay talking	31	20.7
Change of mental status	4	2.7
Late of academic achievement	13	8.7
Dizziness, Drowsiness and Fever	1	0.7
All the above	101	67.3
Family history		
Yes	29	19.3
No	121	80.7
Take any other type of medication		
Yes	126	84.0
No	24	16.0
Drugs		
For nerves system disease	27	18.0
For sensory system disease	123	82.0
Side effect of drugs		
No	150	100.0

Table (3) Illustrated medical history of the studied children. It was found that 70.7% suffered from mental disabilities since birth. Also, as regards risk factors of disabilities it was found that 76.0% had hereditary risk factors. The same table showed that 67.3% of the studied children had delay talking (20.7%), change of mental status (2.7%), late of academic achievement (8.7%), dizziness, drowsiness and fever (0.7%) as the signs and symptoms of disabilities. In addition, 80.7% had no family history for disabilities. Regarding medication administration, it was found that 84.0% took medication for sensory system disease.

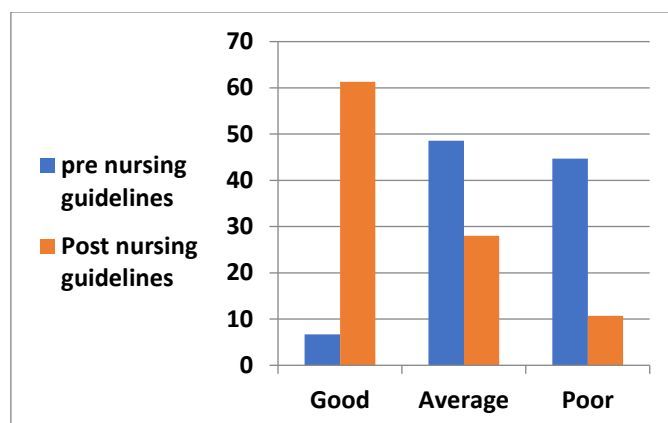


Figure 1: Total Knowledge Score of Studied Caregiver Pre and Post Nursing Guidelines (N=150)

Figure (1) Illustrated that there were differences between the studied caregiver knowledge about mental disabilities. It was found that 6.7% only had good knowledge score before implementation of nursing guidelines which improved to 61.3% after nursing guidelines. It was also found that 28% of caregiver had average knowledge score before implementation nursing guidelines compared to 48.6% after implantation of nursing guidelines.

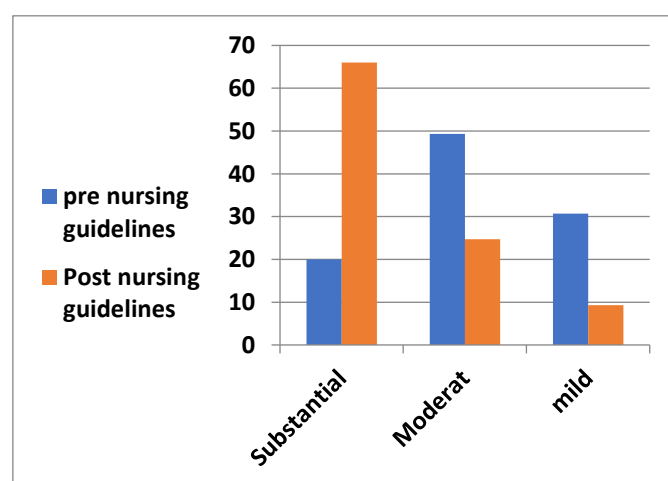


Figure 2: Total Adjustment FICD Scale of Studied Caregiver Pre and Post Nursing guidelines (N=150)

Figure (2) illustrated total adjustment FICD scale of studied caregiver pre and post nursing guidelines. It was found that 49.3% of the studied caregiver before implementation nursing guidelines had moderate degree adjustment which increased to 66.0% after implementation of nursing guidelines having substantial adjustment degree.

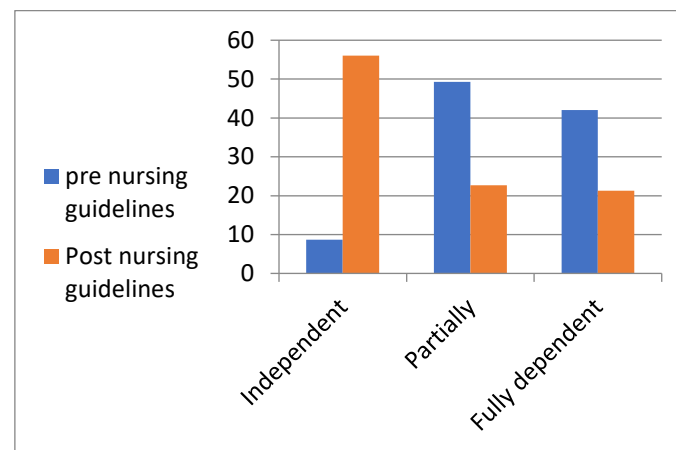


Figure 3: Total Self-Care Scale of Studied Children Pre and Post Nursing Guidelines (N=150)

Figure (3) illustrates total self-care scale of the studied children pre and post nursing guidelines. It was found that 49.3% of the studied children were partially depended self-care before implementation of nursing guidelines. The percentage increased to 56.0% after implementation of nursing guidelines as they became able to learn and perform self-care activities by themselves and adapted supportive educative self-care.

Table 4: Correlation between Total Child Self-Care Score and Onset of the Disability (N=150)

Items	Total self-care			
	Pre		Post	
	R	P-value	R	p-value
onset of the disability	0.599	0.043*	0.806	0.007*

Table (4) Clarified the correlation between total child self-care score and onset of the disability. There was a statistical significant correlation between total child self-care score and onset of the disability after implementation of nursing guidelines at P value (0.007)

Table 5: Correlation between Total Caregiver Adjustment Score and Onset of the Child Disability.

Items	Total parent adjustment			
	Pre		Post	
	R	p-	R	p-

		value		value
Onset of the child disability	0.252	0.377	0.467	0.031*

Table (5) Clarified that there was a statistical significant correlation between total caregiver adjustment score and onset of the child disability after implementation of nursing guidelines at P value (0.031).

Discussion:

Mental disability among children are described as serious changes in the way children typically learn, behave, or handle their emotions, which cause distress and problems getting through the day. Children with mental disability can have lower educational achievement, greater involvement with the criminal justice system, and fewer stable placements in the child welfare system than their peers. Parents as a caregivers occupy an important role in caring for a mentally-disabled child and in fulfilling tasks that parents of children without such conditions are not confronted with (Dey et al., 2019).

Furthermore, caregivers might experience negative emotions, such as worries and anxiety about whether someone else will assume the caregiving role for their child if they were no longer capable or around to do. Nurses provide care to intellectually disabled children and parents should undertake a variety of distinct roles and act as educators, consultants, advocates, and decision makers (Hosny et al., 2020).

The nursing guidelines intervention is a set of systematic intervention based on supportive, handling and upgrading the lives of mentally disabled children depending on participation, support from families and family needs. The nursing intervention focused on increasing family knowledge about disease, better adjustment to illness, communication and facilitating problem solving skills (Esther et al., 2018).

Medical History of the Studied Children

Regarding characteristics of the studied children, the current study revealed that more than two thirds suffered from mental disabilities since birth. This result was supported by Fakhry et al., (2018) who conducted a study entitled "Parental Patterns of Care for their Children with Mental Disability" and found that most of the studied children were diagnosed after birth.

This may be related to early detection during pregnancy, follow-up or discovery of symptoms during post-partum examination of the child.

In contrast, **Wakimizu et al., (2018)** who carried out a study about **"Family empowerment and associated factors in Japanese families raising a child with severe motor and intellectual disabilities"** reported that most of the studied children were diagnosed during preschool period.

The present study results showed that more than three quarters of the studied children had hereditary risk factors. These results were against **Li, (2020)** who conducted a study about **"The Cross-Sectional Study of Quality of Life of Caregivers of Mentally Retarded Children in District of Chongqing China"** and mentioned that less than fifth of the studied children had hereditary risk factors. This discrepancy may be related to difference between both studied subjects' socio-demographic characteristics and different settings.

The result of the present study disagreed with a study carried out by **Lima-Rodríguez et al., (2018)**, entitled **"Intellectual disability in children and teenagers: Influence on family and family health"** and stated less than one quarter of the studied children had inherited risk factors.

In addition, the current study demonstrated that more than two thirds of the studied children had signs and symptoms of disabilities as delay talking, change of mental status, late of academic achievement, dizziness, drowsiness and fever. These findings matched with a study conducted by **Rodrigues et al., (2019)** entitled **"A qualitative study about quality of life in Brazilian families with children who have severe or profound intellectual disability"** and reported that most of the studied children had signs and symptoms of disabilities as talking delay and late of academic achievement. The result of the current study may be due to the fact that the main characteristics of intellectual disability begin with the deterioration of psychomotor development.

Knowledge of the Studied Caregiver about Mental Disabilities

Related to knowledge of the studied caregiver about mental disabilities pre and post nursing guidelines intervention, the current study reflected that there were a highly statistical significant differences among the studied caregiver knowledge before and after nursing guidelines intervention about definition of mental disabilities, risk factor, causes, signs and symptoms, classification and health method for maintain healthy body. This was attributed to the effectiveness of nursing guidelines that improved caregivers' knowledge about mental disability.

This result was in accordance with **Mohammed et al., (2023)** who carried out a study about **"Effectiveness of Intervention Guidelines on Mothers of Children with Attention Deficit Hyperactivity Disorders (ADHD)"** and reported that there was a highly statistically significant difference regarding mothers' knowledge before, immediately after, and at follow-up phases of guidelines intervention on children having ADHD.

Also, this result agreed with a study carried out by Faheim et al., (2022) to assess **"Effect of Educational Program on Parents' Caring for their Children with Attention Deficit Hyperactivity Disorder"** and found that there was a highly statistically significant difference, regarding their knowledge before, immediately after, and at follow-up guideline intervention toward children with attention deficit hyperactivity disorder. **Adjustment of Studied caregiver**

Regarding the adjustment of studied caregiver's pre and post nursing guidelines intervention, the present study demonstrated that the caregivers were prone to moderate degree of impact adjustment before nursing guidelines intervention. While after nursing guidelines intervention all parents had a substantial degree of impact adjustment with highly statistical significant difference between pre and post intervention regarding all items of adjustment of studied caregiver. This result may be attributed to the effect of intervention of nursing guidelines that had a significant impact on the studied caregivers' adjustment.

Correspondingly, a study conducted by Abass et al., (2022) to assess **"Effectiveness of Psycho-educational Nursing Intervention on Feeling of Burden and Self-Efficacy among Caregivers of Mentally Retarded Children"** found that there was a highly statistically significant improvement in total mean score of feeling of burden and total mean score of self-efficacy post applied of the nursing guidelines than pre nursing guidelines.

Concerning total adjustment FICD scale of studied caregiver pre and post guidelines, the current study declared that almost half of the studied caregiver before nursing guidelines had moderate degree of adjustment, while about two thirds had substantial adjustment degree after nursing guideline intervention.

These findings were congruent with, Osman et al., (2018) who conducted a study entitled **"effectiveness of cognitive-behavioral program on reducing mother's burden of care of their children with autism disorder"** and mentioned that there was a highly statistically significant difference between pre and post nursing guidelines as regards the total scores of mothers' coping pattern to decrease their psychological and social stresses, which improved in post nursing guidelines.

Also, this result was compatible with MacKenzie & Eack, (2022) who carried out a study about **"Interventions to improve outcomes for parents of children with autism spectrum disorder"** and stated that less than half of the studied parents had moderate level of adjustment pre intervention which improved to be more than two thirds post interventions. Likewise, Hashem & Abd El Aziz, (2018) who conducted a study to evaluate **"The Effect of Nursing Intervention on Stress and Coping Strategies among Mothers of Children with Cerebral Palsy"** reported that the total mean score of mothers' coping strategies was low before nursing intervention while, this score improved after nursing intervention. The result of the current study may be due to reduction mother's stress and raising the coping strategies of mothers after applied nursing

guidelines. According to correlation between total child self-care score and onset of the disability, the present study declared that there was a statistically significant correlation between total child self-care score and onset of the disability after nursing guidelines intervention. The result of the present study may be due to early supportive self-care teaching. This result was in harmony with **Boutain, (2021)**, who carried out a study entitled **"Evaluation of a telehealth parent training program in teaching self-care skills to children with autism"** and reported that there was a statistical correlation between level of child self-care and onset of the disability post nursing guidelines intervention. The result of the present study may be due to successfully teaching parents affected in children behavior.

According to correlation between total parent adjustment score and child scholastics grade, the present study reflected that there was a statistical significance correlation between total parent adjustment score and child scholastics grade after nursing guidelines intervention. The result of the present study may be due to that mothers were able to deal with their bigger children because they were easy to communicate with them. These findings were supported with a study by **Mohamed et al., (2022)** who conducted a study to assess **"Psycho-educational Nursing Intervention for Improving Coping Strategies and Psychological Well-Being among Family Caregivers of Children with Down Syndrome"** and stated that there was a statistical significance correlation between caregivers' adjustment score and child scholastics grade after intervention. Also, a study conducted by **Sidig et al., (2022)** mentioned that there was a statistically significant correlation between caregivers' level of coping and child scholastics grade post nursing guidelines.

Concerning correlation between total caregiver adjustment score and onset of the child disability, the present study indicated that there was a statistical significance correlation between total caregiver adjustment score and onset of the child disability after nursing guidelines intervention. The result of the present study may be due to effectiveness of applying early nursing guidelines. These results agreed with a study conducted by **Saboula et al., (2018)**, as they mentioned that there was a statistical significance correlation between total parents' coping scores and children onset of disability post intervention. Likewise, **Mai & Chaimongkol, (2022)** reported that a significant positive correlation was found between the participants coping level and onset of the child disability after receiving the intervention.

Conclusion:

Based up the finding of the present study, it could be concluded that caregivers having children with mental disabilities before implementation of nursing guidelines had moderate degree of adjustment. Meanwhile, after implementation of nursing guidelines the adjustment degree improved. Also, there was a partial depended self-care before implementation of nursing guidelines. Actually, after implementation of nursing guidelines they learned and performed self-care activities by themselves and adapted supportive educative self-care with there was highly statistical sig-

nificant. In addition there was a high statistical significance positive correlation between total caregiver adjustment score and child characteristics after implementation of nursing guidelines.

Recommendations:

Upon the finding of the present study, the following recommendations can be suggested:

Recommendation for children:

1-Emphasizes on the importance of assessment of self-care activities for children with mental disabilities.

2-Designing educational training program for children with mental disabilities to improve their knowledge and self-care practices to be able to meet their demands.

3-Designing booklets regarding mental disabilities self-care to be available for children in their schools about nutrition, fluid, exercise and activities allowed for children with mental disabilities and self-care.

Recommendation for caregivers:

1-Designing educational training programs for caregivers whom had children with mental disabilities to improve their knowledge and practice of self-care to educate their children to meet their demands by themselves.

2-Teaching the caregiver the nature of disabilities and how to meet their children's needs.

3-Encourage caregiver social relationship to improve emotional adjustment.

4-Encourage caregiver and their children spiritual activities to improve self-satisfaction.

5-Guidelines adjustment should be emphasized to help parents to be more satisfied and understand the needed requirement.

Recommendation for school:

1-Increase teacher awareness of these children's illnesses and disabilities to support them, improve academic level and compensate them for the frequent absence days. Also, to give them more attention to enhance achievement.

2-Provide exercise programs and recreational activities proportion with health condition to improve children psychological state and quality of life.

3-Teach teachers how to encourage caregivers of these children to interact well with them, which improves their quality of life.

Recommendation for research:

1-Replication of the study on a large sample size and in different settings to assess self-care activities for children with mental disabilities.

2-Further studies are needed to apply self-care and care giver adjustment program for children with mental disabilities in different demographic areas.

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