Effect of Social Platform Program on Mothers' Caring regarding Feeding of the Children with Cerebral Palsy

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Abstract

Feeding and eating are important activities that allow individuals to maintain adequate growth in children with cerebral palsy. **Aim**: The study aimed to evaluate the effect of social- platform program on mothers' caring regarding feeding of the children with cerebral palsy. **Material and methods: Design**: A quasi-experimental research design was adopted for this study. **Setting:** This study was applied in Egypt at Mansoura City. **Sample:** - A total sample of 200 mothers through the non-probability purposive sampling technique was selected using an online questionnaire via Google Form. Participants were equally and randomly allocated to a study and a control group, (with 100) patients for each one. **Tools:** Three tools were used: Tool I: Mother's knowledge assessment questionnaire regarding cerebral palsy, Tool II: Mother's reported practice regarding feeding children with cerebral palsy, and Tool III: Mother's satisfaction with the social-based program**. Results:** The study findings demonstrated that the majority of investigated mothers' knowledge and feeding practices were satisfactory and improved after the online social-based program compared to before the social-based program. The study result portrays that (80%) of the mothers in the experimental group compared to (70%) of them in the control group were of the same age from 20- ≤ 30 years old with a mean age (25.21 ± 2.02) (26.61 ± 3.43) respectively. **Conclusion:** The study concluded that an social- platform feeding program for children with cerebral palsy improved their mothers' knowledge and practice. The study and control groups differed statistically significantly. **Recommendations:** Provide mothers with a well-planned social-platform program to increase their knowledge and practice of feeding children with cerebral palsy.

Keywords: cerebral palsy, children, mothers, social platform program.

Introduction

Cerebral palsy (CP) is a common developmental disability. It is a neurological illness that consists of a group of disorders that impairs a child's capacity to control his or her body motions. Due to poor brain development, the legs and hands may deteriorate. CP is regarded as the most severe form of physical disability affecting children **(Ferre et al., 2020).**

CP is a persistent posture and movement problem caused by brain injury in a baby or early kid. CP is a term used to represent a group of problems caused by faulty brain development or brain damage that happens around the time of birth or early in life. The word "Cerebral Palcy" refers to a group of permanent mobility difficulties that do not worsen over time. They create physical handicap, primarily in the areas of body movement. There may also be issues with sensation, depth perception, and communication abilities. In around one-third of instances, there is difficulty with cognition and seizures **(Sawatzky, 2015).**

There are subtypes of CP, including those marked by spasticity, poor coordination, or both. CP can be caused by injury to the areas of the brain that control movement, which typically occurs during the prenatal or perinatal period, particularly in premature newborns **(Hayles, Harvey, Plummer, and Jones, 2018).** Prenatal reasons include placental separation, haemorrhage, maternal illness, and nutritional deficits, whereas perinatal causes include anoxia before, during, and after birth, with 10% to 20% occurring after birth. Head trauma, infection, and cerebrovascular accident are

common postnatal causes **(Zarei & Gilanian, 2019).**

Caring for a child with CP is difficult and time-consuming. Mothers caring for children with CP confront a variety of scenarios that might have a negative impact on their social well-being. Demanding caring responsibilities may also result in "an imbalance in their daily activities when compared to mothers with healthy children." This imbalance is likely to cause physical and mental suffering, compromising their social functioning **(Molinaro et al., 2017).**

Mothers of children with CP are essential members of the professional team; their most significant duty is a lifelong dedication to their children. They may feel helpless, therefore they require knowledge, assistance, and support in the rehabilitation program, as well as learning to manage the practical difficulties, which can disrupt the developing relationship with their children **(Terwiel et al., 2019).**

Feeding difficulties are frequent in children with CP, with studies suggesting that between 21 and 58% of children with CP had some kind of feeding difficulty **(Benfer et al., 2019).** Breast, bottle, tube, and/or oral feeding may be used to feed children with CP. CP is the most common cause of motor impairment in children in their early childhood **(Michael-Asalu, Taylor, Campbell, Leela, and Kirby, 2019).**

CP is an umbrella term for a disorder that affects mobility and posture; however, the level of disability varies between children, and musculoskeletal function may decline over time. Motor dysfunction in CP frequently affects swallowing and chewing muscles, resulting in dysphagia and feeding issues such as poor sucking from a teat or drinking from a cup **(Boel et al., 2019).** This can cause children to vomit, 'gagging,' drool excessively, or aspirate feed, with children with severe motor disability being the most impacted. Children with these deficits have a significant morbidity rate, typically due to respiratory issues caused by recurrent food or fluid aspirations **(Blackmore et al., 2018).**

The capacity to feed oneself or sit in an upright position alone, regardless of age, can be compromised by CP, so these youngsters require ongoing feeding assistance from caretakers **(Benfer et al., 2019).** These feeding issues can contribute to undernutrition in children with CP, affecting growth (weight and height), and leading to poor overall health and an increased risk of infections **(Reyes, Salemi, Dongarwar, Magazine, and Salihu, 2019).**

Feeding difficulties and mealtimes are regarded as stressful experiences for caretakers of children with CP. Concerns expressed by caregivers about child feeding have included fear of their child choking while feeding due to an impaired or hyperactive gag reflex and uncoordinated swallowing; concerns about the child's nutritional status and health, as many caregivers considered their child underweight; financial costs associated with feeding, and a lack of enjoyment in feeding their child **(Andrew, Parr, and Sullivan, 2018 & Sullivan et al., 2017).**

Social support, such as family and friends, may be an effective stress buffer in this demographic. Caregivers who were appropriately supported reported reduced caregiver strain and higher well-being than caregivers who felt inadequately supported. The caregiver's "significant other," as well as family and friends, are crucial sources of support **(Wang Huang, and Kong, 2020).**

The digital revolution has offered new potential for improving access to high-quality health therapies. There is rising evidence that technology-assisted psychological therapy is effective in the treatment of disorders. Because it saves money and time, internet treatment may be widely accepted. Various social media applications are employed as teaching approaches in school, increasing the mothers-centered option and allowing them to become more connected with one other in the learning process **(Holmes et al., 2018).**

Additionally, it increases the fidelity or realism, of case studies or simulations; it provides a current and innovative way of communicating with mothers to promote learning through discussions and photo or video sharing; and it provides the opportunity for mothers to autonomously direct, self-evaluate, and self-reinforce behaviour that

supports their learning **(Podina, Mogoase, David, Szentagotai, and Dobrean, 2019).**

Significance of the Study

The most prevalent motor disability in children is CP. Global population-based research give CP prevalence estimates ranging from 1.5 to more than 4 per 1,000 live births or children of a specific age range. There are around 3.4 million children with disability in Egypt. In Egypt, the prevalence of CP is from two to three per 1000 live births; however, this number rises to 40-100 per 1000 live births in kids born prematurely or with low birth weight. In Egypt, an estimated 76.117,46 children have CP **(World Health Organization [WHO], 2019).**

Feeding difficulties are highly frequent in children with CP, with 30 to 80 percent of challenged adults having trouble feeding. Malnutrition is caused by a mix of conditions that result in lower food and nutrient intake, either directly or indirectly. In neither study was support specifically investigated. Support for carers with feeding their child with CP, both oral-fed and tube-fed, requires further investigation. Health professionals, early interventionists, and educators cannot find suitable and timely support interventions for these families unless they understand the personal impact feeding issues have on caregivers.

The technological revolution has created new opportunities for increasing access to effective therapies for medical diseases. There is new evidence that technology-assisted therapy is useful for health problems. Online treatment may be readily accepted since it can save money while also providing the benefits of flexibility in place, time, and cost. Furthermore, technology-enabled home education helps persons with chronic diseases to combine pathology management with their daily social lives **(Song, et al., 2019).** As a result, the researchers were eager to to evaluate the effect of the social- platform program on mothers' caring regarding feeding of the children with CP.

Operational Definitions

Social-platform program. Is web-based communication tools that enable people to interact with each other by sharing and consuming information. Available social media in this article are Mobile phones, Messenger, and WhatsApp (Gonzlez-Padilla & Tortolero-Blanco, 2020).

Aim of the Study

This study aimed to evaluate the effect of the social- platform program on mothers' caring regarding feeding of the children with CP through:

- Assessing the mothers' knowledge about feeding of the children with CP pre and post- social-platform program among experimental and control groups.
- Assessing the mothers' practice regarding feeding of the children with CP pre and post- social- platform program among experimental and control groups.
- Developing and implementing social-platform program according to mothers' needs.
- Determining the association between mothers' knowledge and feeding practices pre and post- social- platform program.
- Find out the effect of the -social- platform program on mothers' caring regarding feeding of the children with CP in the study group.
- Assessing the mothers' satisfaction with the social- platform program.

Research Hypothesis

H_1: There is a significant improvement in knowledge and feeding practice among mothers who received the social- platform program, than those who did not receive the social- platform program.

Method

Research Design

A pre/post-quasi-experimental design was adopted for this study. A quasi-experimental design is one type of experimental design that is very similar to the true experimental design except there is lost one criterion which is control, manipulation, or randomization (Burns & Grove, 2012).

Variables under the Study

Social-based program demonstration on feeding is the independent variable. Mother's knowledge and practice in feeding of children with CP are dependent variables.

Setting

This study was applied in Egypt at Mansoura City

Sample

A total of 200 mothers were selected utilizing the non-probability purposive sampling technique from the beginning of May to the end of the same month 2020 by using an online questionnaire gathered from social media such as Facebook and WhatsApp groups. Participants were assigned to a study and a control group, each with (100) mothers from the previously chosen settings. The sample size comprised mothers who completed online tools using Google Form from the beginning of May to the end of the same month 2020 for approximately thirty days before the connection was closed.

For randomization, 100 mothers were labelled one and 100 mothers were labelled two. For each mother recruited for the study, mothers were asked to choose either number one or number two. As a result, if the intended mother chose number one, she was assigned to the research group, and if she chose number two, she was assigned to the control group.

Inclusion criteria. Mothers who are involved in the feeding of the children with CP. Their age of fewer than 60 years, mothers can read & write, already use social platforms such as Facebook and WhatsApp groups, accessibility via phone call, and willingness to participate in the study.

Exclusion criteria. The children with CP who have medical problems and children with the associated facial anomaly. e.g., cleft lip and palate. Also, mothers who have already participated in a similar kind of study.

Tools of Data Collection

Three tools were used.

Tool I: Mother's knowledge assessment questionnaire regarding CP, which included two parts**:**

Part 1: Demographic data of mothers: It included demographic characteristics of the studied mothers which consisted of items related to age, educational level, residence, and source of information.

Part (2): Mother's knowledge regarding cerebral palsy: This tool was adapted after reviewing the literature (**Reyes et al, 2019; Andrew et al., 2018; Sullivan et al., 2017**). It was designed to assess the level of mothers' knowledge about CP **(**pre and post**)**. There were 30 multiple choice and true/false questions in this tool. It included questions related to the definition, incidence, causes, types, risk factors, clinical manifestation, assessment, management, nursing care of CP**,** feeding problems, type of food, quantity, quality, and consistency of food, duration, and frequency of feed.

The scoring system: The total score of knowledge was 30 marks. Based on the researcher cut of point, knowledge level was categorized into three levels:

Poor. Incorrect answer, scores less than 50% of total scores (<15 marks)

Average. Correct but incomplete answer, scores from 50% to less than 70% of total score (15- <21 marks)

Good. Correct answer, scores from 70% and more of total scores (≥21)

The total answers were divided by the number of items for each area of knowledge, yielding a mean score. These results were then translated into a percentage. Higher the score mean greater the knowledge on feeding of the children with CP.

Tool II: Mother's reported practice regarding feeding of the children with CP (pre and post).

This tool was adapted after reviewing the literature (**Wang et al., 2020; Boel et al., 2019**). It contained (30) items, including feeding problems, food type, quantity, quality, and consistency of food, duration and

frequency of feeding, treatment of feeding challenges such as position, chewing, drooling, choking, feeding utensils, and hygiene practices

Scoring system

The scoring system: The total score of practice was 30 marks. Based on Ahmed &Youssef (2013) the cut of point practice level was categorized into three levels:

Poor. Not done, scores less than 50% of total scores (<15 marks)

Average. Correct but incomplete, scores from 50% to less than 70% of total score (15- <21 marks)

Good. Correct, scores from 70% and more of total scores (≥21)

For each area, the scores of the items were summed up, and the total was divided by the number of the items, giving the mean score for the part. These scores were converted to a percentage score.

Tool III: Mother's satisfaction with the social-platform program: It comprised three comments about whether the social-platform program's contents were sufficient, satisfaction with the online social-based program, and whether the online social-based program improved mothers' knowledge and reported habits.

Procedure of Data Collection

Preparatory phase: The researchers researched current and prior available literature to develop data collection methods and design the online social-based application. It entailed reviewing current and previous available literature as well as theoretical understanding of many parts of the study through the use of a booklet, articles, the internet, publications, and magazines to construct data gathering instruments.

Validity of the Tools: Face and content validity of the tools for clarity, comprehensiveness, appropriateness, and relevance by a board of five experts professors in Neurology and five experts professors in pediatric nursing with more than ten years of experience in the fields were assessed; the board ascertained the face and content validity of the tools. According to Guven and İsler (2015) this number of experts and school personnel were enough to offer a feedback for content validity of the designed protocol.

Reliability of the Tools: Reliability was assessed through Cronbach's alpha reliability test α=, 897% which revealed that the first tool, consisted of relatively homogenous items as indicated by high reliability, α=, 883% which revealed the reliability of the second tool, reliability of the third tool was α=, 913%.

A pilot Study

A pilot study was done on 10% of the sample once the tool was developed (20 mothers). It was done to detect any ambiguity in the tools, verify item transparency, and establish the time required for data gathering. The results of the pilot study were used to develop the final form of the tools, which included the clarification and testing of the practicality of the research process. Mothers included in the pilot study were excluded from the study to prevent sample contamination.

Ethical Considerations:

To conduct this study, Approval obtained from Mansoura Faculty of Nursing Research Ethics Committee (Reference No. 0264). Before beginning the questionnaire, the researcher informed the moms that participation in the study was voluntary, that they might refuse to participate at any time, and that they could withdraw from the study at any time without explanation. They were also assured that their information would be kept confidential and used strictly for research purposes.

Implementation of the study was carried out in four phases (assessment, planning, implementation, and evaluation phases).

Assessment phase: The study was conducted utilising an online Google form spreadsheet. The mothers who took part were given a link to collect data, which included an online questionnaire. This link was posted on Facebook and WhatsApp groups. On the first page of the questionnaire, the moms were educated about the study's history, objectives, and expected outcomes. The URL https://docs.google.com/forms/dle/1FALPQLsd

was emailed to all of the mothers who were studied in order to determine their knowledge and reported practice (pre- social platform program).

Mothers completed the online tools in roughly 15-20 minutes on average. The purpose of the study, the tools' components, and how to complete the online questionnaire were all explained to moms who took part in the study. Following a description of the study's purpose, the researchers distributed program materials to the participant mothers via WhatsApp and Facebook groups.

Planning phase. During this phase, the researchers presented to mothers the significance of the social-platform program, whose content was accessible to mothers via a WhatsApp application and feedback groups. The social-platform curriculum was developed based on a study of the real educational mother's knowledge level in the pretest. The program booklet's material was created in simple Arabic language and was compatible with the associated literature based on their level of knowledge.

Social-Based Program

A planned social- platform program for feeding children with CP was developed, which included definition, incidence, causes, types, risk factors, clinical manifestation, assessment, management, nursing care of cerebral palsy, feeding problems, type of food, quantity, quality, and consistency of food, duration and frequency of feed, management of feeding difficulties such as position, chewing, drooling, choking, feeding utensils, and hygienic practices.

The researchers gathered patients' phone numbers from each mother and analyzed the availability of internet connection to speak with the researchers via WhatsApp group. The researchers created a WhatsApp group to contact with mothers on a regular basis and to provide the contents of the social-platform program (booklet, videos, and illustrative pictures).

Implementation Phase. The actual fieldwork lasted 30 days, commencing in early May and ending at the end of the same month in 2020. The researchers began by introducing themselves to the mothers being investigated and explained the nature and goal of the study. Participants were needed to fill out and submit an online Google Form. The link to the Google form was distributed to mothers via Facebook and WhatsApp groups. Before the online films and presentation, each woman was examined using an online questionnaire as a (pretest) to collect baseline data. The initial page of the online questionnaire taught moms about the study's objective and expected outcomes, the contents of the instruments, and how to answer. The researchers met the study participants online via Zoom meetings (phone calls) during this phase.

Participants in the control group not received the program. All participants filled out the study instruments before, immediately, and one month after the onset of the study intervention.

Following the creation of the WhatsApp group, the researchers delivered text and voice messages outlining the objectives of the online social-based program materials.

- On one day (Tuesday) each week, the researchers decided to build a WhatsApp meeting chat session and upload the contents of each portion of the social-based programme. Mothers were also asked to be on time to allow for open conversation among all group members.
- Sessions in Arabic were held to ensure that all study topics were grasped, which included: (six sessions) (four theoretical and two practical sessions). Each theoretical and practical lesson lasted 40-50 minutes and was held twice a week. Mothers who participated in the pre-test received the booklet through a Google Form as well as Facebook and WhatsApp groups.

The content of the social-platform program is presented as follows. Four theoretical and two practical sessions.

The first session. An introduction session focused on creating rapport between the researchers and the moms participating in the study, as well as an explanation of the program's aim.

Second session. Education about the definition, occurrence, causes, and typs of CP.

Third meeting. Education on CP risk factors, clinical manifestations, and evaluation.

Fourth session. Education on CP management, CP nursing care, and feeding issues.

Fifth session. It included information on feeding issues, meal types, quantity, quality, consistency, length, and frequency of eating.

Session six. Included teaching on how to properly manage feeding challenges such as position, chewing, drooling, choking, feeding utensils, and hygiene procedures.

Phase of evaluation after two months, the tools were re-posted to the mothers on the Google Form for collection.

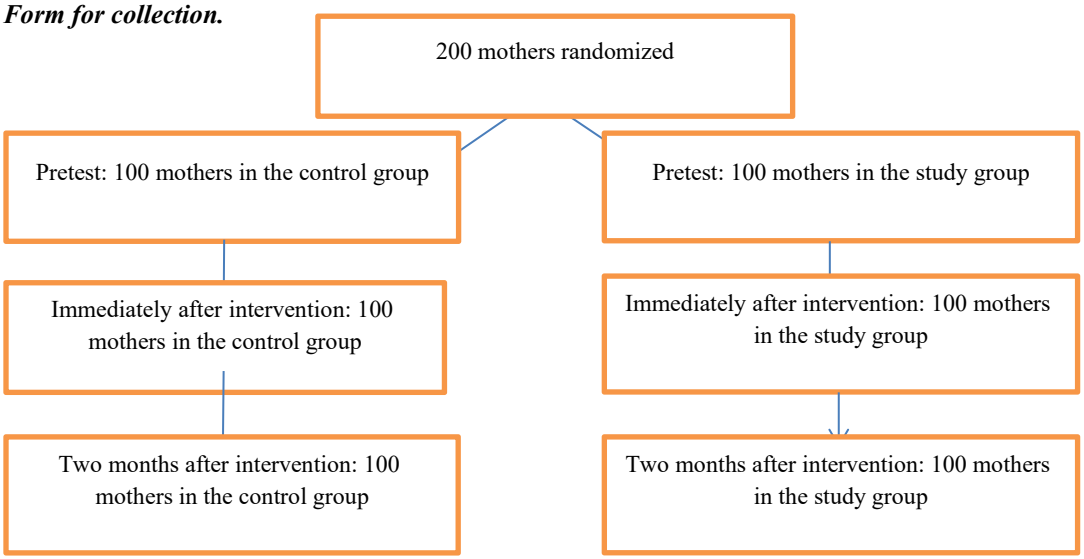


Figure 1. The flow diagram of this study

Statistical Analysis

Data entry and statistical analysis were performed using SPSS (Statistical Package for Social Sciences) for windows International Business Machines/IBM. Com, U.S.A, version 20. Data were presented using descriptive statistics in the form of frequencies and percentages for qualitative variables and mean and SDs for quantitative variables. Differences between two means tests (t-test) were used. Statistical significance was considered at P-value <0.05.

Results

Table 1 shows that 81% of the study group and 77% of the control group were of the same age from 30- ≤ to 40 groups with a mean age (of 25.21 ± 7.26) (26.61 ± 10.34) respectively. As regards the level of education, 52.0% & 46% of mothers in the study and control groups respectively had a university education. Concerning residence, 90% of mothers in the study and 87% of the control group were living in urban areas. There were no statistically significant differences between the study and control group mothers regarding all aspects of demographic data.

Figure 2. Percentage distribution of the mothers regarding their previous training regarding CP (n = 200)

Figure 3. Percentage distribution of the studied mothers regarding their source of knowledge regarding cerebral palsy (N=200)

Table 2 shows that there was no statistically significant difference between control and study group subjects pre- social-platform program implementation regarding mother`s total knowledge. While there was a highly statistically significant difference between groups immediately, post, and post two months of the social- platform program

implementation in total knowledge with (**p≤ 0.001).

Figure 4 reveals that there was no statistically significant improvement in the control group regarding pre-total knowledge level (p≤ 0. 126), while, there was a highly statistically significant improvement among mothers in study group regarding their total knowledge level pre-immediately post and post-two months of the social- platform program implementation (**p≤ 0.001).

Figure 5 shows that there was a highly statistically significant difference between the knowledge level result of mothers' post-social-platform program implementation with a p. value = <0.01. It was observed also, that 2% only of mothers in the control group had a good knowledge level compared to 88% in the study group.

Table 3 represents the observation scores among the control and study group of caregivers on the feeding practice of children with CP. About position of the child during feeding shows that 87% were followed sitting upright position, the same 88% of children were taking pulses, cereals, meat, vegetables, and fruits in their food, 94% were taking food 5 times a day, and 82% of the children were taking normal food.

Also, it was observed that 80% were taking food for more than 30 minutes, all the children cleaned their mouths and utensils, all followed hygienic practices like hand washing, swallowing difficulty, and drooling faced 14% of the children, and other feeding problems like coughing and choking experienced by 7% of the children.

Figure 6 shows that there was a highly statistically significant difference and improvement between the feeding practices level result of mothers' post the social-platform program implementation with a p. value = <0.001. It was observed also, that 14% of mothers in the control group had good feeding practice levels compared to 82% in the study group.

Table 4 illustrates a significant correlation between the total knowledge and total practice scores of the studied mothers' pre and post-the social platform program.

Table 5 presents that all of the mothers 100% in the study group reported that the contents were enough and were satisfied with the social- platform program, Concerning its effect on knowledge, all of them 100% reported that it improved their knowledge and reported feeding practice, Finally, all of them reported that the social- platform program had many advantages such as active participation, participants can get a chance for live chat, participants can reach it at any place, and ease of users to stay in touch with teaching program providers.

Table 1: Frequency and Percentage distribution of the studied mothers regarding their demographic data in the study and control groups (N=200)

Demographic characteristics	Study (n=100)		Control (n=100)		Chi-square T-test	p-value
	No	%	No	%		
Age (in years)						
21-<30	19	19.0	23	23.0	0.267	0.771
30- ≤ 40	81	81.0	77	77.0		
(Mean ± SD)	25.21 ± 7.26		26.61 ± 10.34			
Educational level	25	25	35	35		
Read and Write	23	23	19	19	1.558	0.663
Primary school	52	52.0	46	46.0		
University education						
Residence	10	10.0	13	13.0		
Rural	90	90.0	87	87.0	4.256	0.037
Urban						

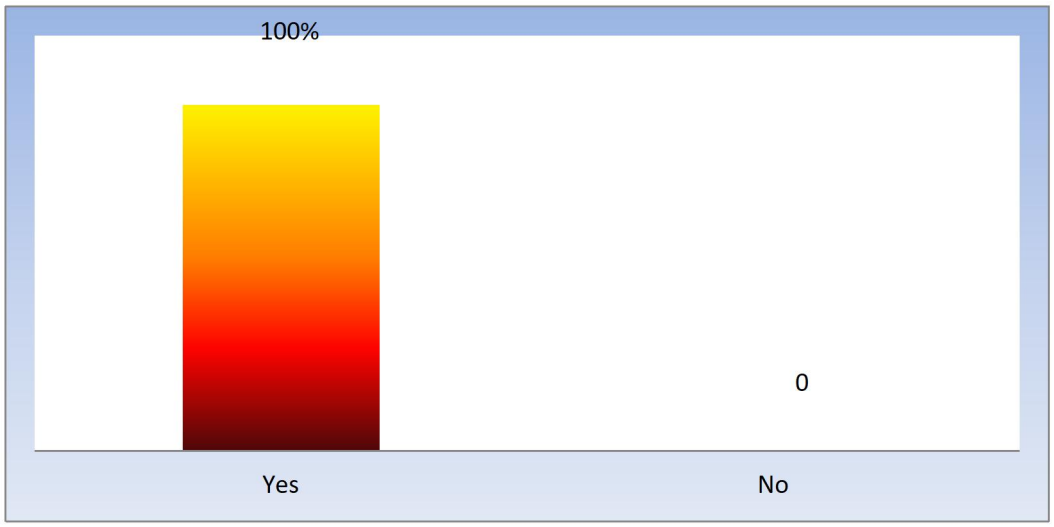


Figure 2: illustrates that all of the mothers were not received training regarding CP.

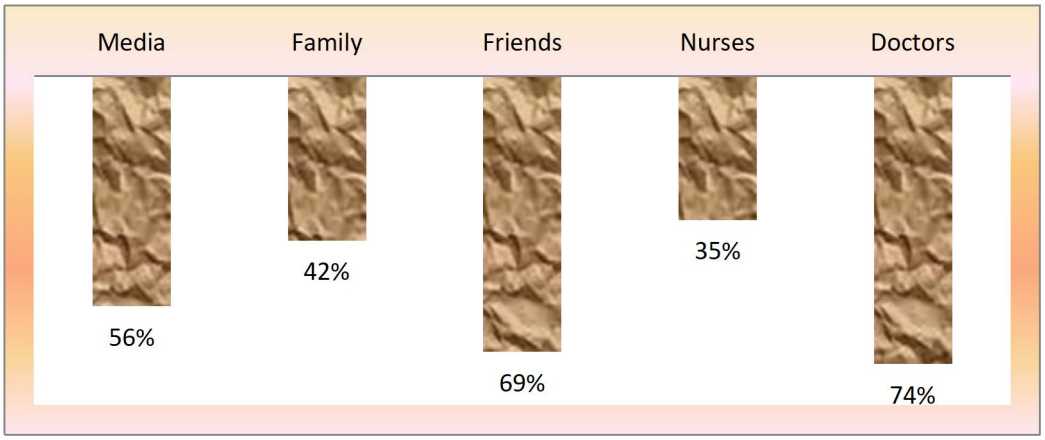
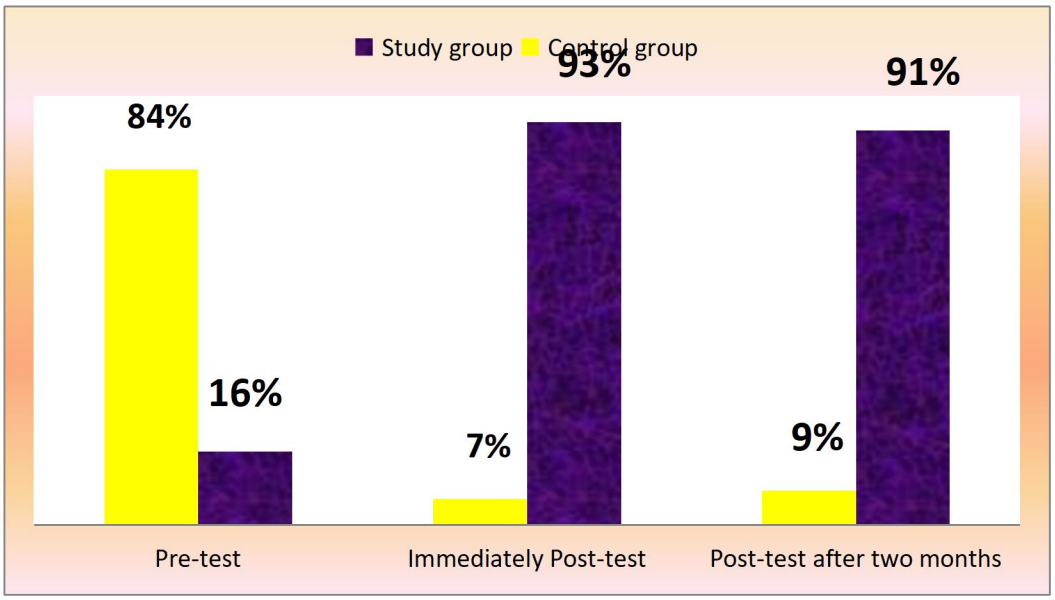


Figure 3: portrays that 74% of the mothers reported that their main source of information about knowledge regarding CP was doctors.

Table 2: Comparison of mean score of patient's knowledge scores among study and control group pre, post immediately and post two months of the online social- platform program implementation (N=200)

Items	Study group (n=100)	Control group (n=100)	t-test	p-value
	Mean ± SD	Mean ± SD		
Total Knowledge	11.78 ± 2.07	12.83 ± 0.52	3.077	0.127
- Pre-test	26.03 ± 3.18	13.08 ± 1.30	26.883	<0.001**
- Immediately post-test - Post two months	27.63 ± 2.43	12.97 ± 0.42	22.642	<0.001**

Note. *p < 0.05, ** p < 0.001, Not significant (p > 0.05).



Note. *p ≤ 0.05, ** p ≤ 0.001, Not significant (p > 0.05).

Figure 4. Comparison between study & control groups regarding their knowledge pre, immediately post and post two months of social- platform program implementation

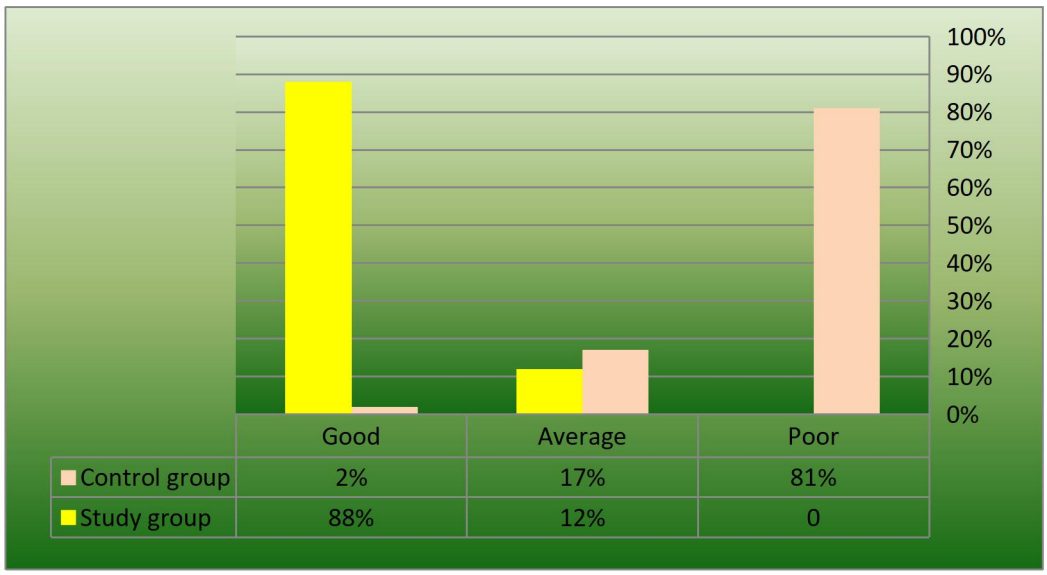


Figure 5. Comparison between study & control groups regarding their total knowledge level

Table 3: Comparison between study and control groups of mothers on feeding practice of cerebral palsy children

Items	Control group (n=100)		Study group (n=100)	
	Pre Observation.	Post observation	Pre-observation	Post-observation
	%	%	%	%
Position				
Sitting Upright	13.00	13.00	20.00	87.00
Semi sitting	47.00	40.00	50.00	-
Sitting leaning forward	40.00	46.67	30.00	13.00
Lying	-	-	-	-
Food items				
Pulses and cereals	74.00	67.00	67.00	12.00
Pulses and meat	-	-	-	-
Pulses, cereals, meat, vegetables, and fruits	26.00	34.00	34.00	88.00
Frequency of feeding				
Four times	22.00	22.00	26.00	-
Five times	22.00	22.00	20.00	94.00
Six times	-	-	-	-
Three times	56.00	56.00	54.00	6.00
Consistency of food items	-	-	-	-
Liquid	46.00	54.00	53.00	82.00
Semi-solid	-	-	-	-
Solid	54.00	46.00	47.00	18.00
Normal				
Duration of feeding				
10 minutes	-	-	-	-
10 - 15 minutes	33.00	40.00	40.00	6.67
20 minutes	54.00	46.00	46.00	14.00
More than 30 minutes	12.00	14.00	14.00	80.00
Aftercare of the child				
Repositioning	46.00	40.00	53.33	93.33
Burping	26.00	33.00	20.00	86.67
Cleaning the mouth	73.00	80.00	66.00	100.00
Cleaning the utensils	80	73.00	66.00	100.00
Hygienic practices				
Hand washing	66.00	66.00	66.00	100.00
Nail clean	53.00	53.00	53.00	86.00
Utensil washing	46.00	46.00	46.00	86.00
Feeding difficulty				
Chewing	14.00	14.00	14.00	-
Swallowing	40.00	40.00	34.00	14.00
Regurgitation	7.00	7.00	14.00	-
Drooling	39.00	39.00	38.00	14.00
Feeding problems				
Apnoea	-	-	-	-
Aspiration	27.00	27.00	20.00	-
Coughing and choking	26.00	26.00	26.00	7.00
Cyanosis and tachypnea	-	-	-	-

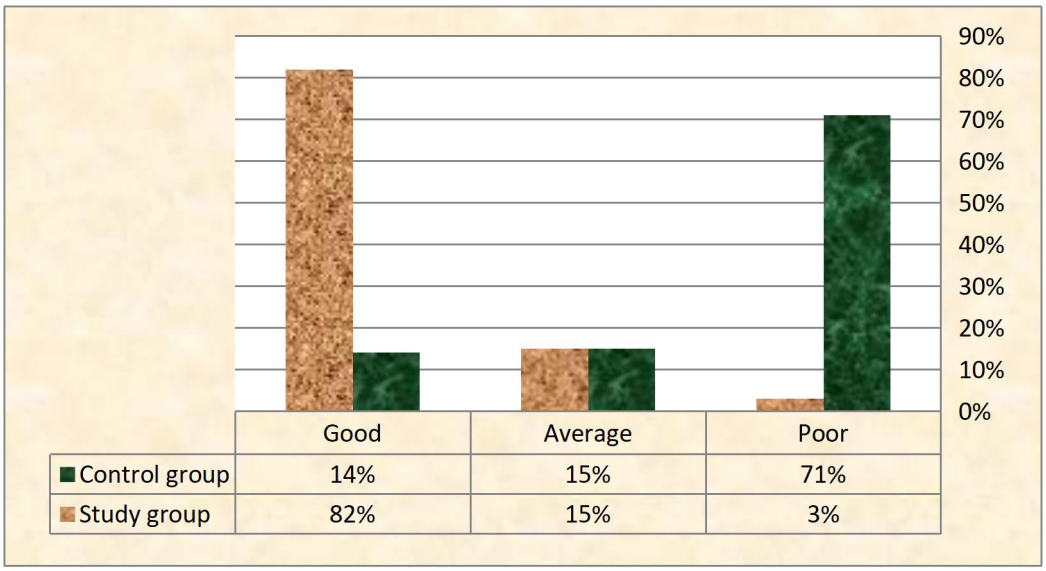


Figure 6. Comparison between study & control groups regarding their total feeding practices level

Table 4: Correlation between total knowledge score and total practices score of the studied mothers' pre and post-the social platform program

Correlation	Pearson correlation coefficient			
	Total practice score			
	Pre-social based program		Postsocial based program	
	r	P	R	P
Total knowledge score	.441	.000**	.625	.000**

Note .** Correlation is significant at the 0.0001 level

Table 5: Percentage distribution of the studied mothers regarding their satisfaction with the social-platform program implementation (N=100).

Social- platform program	N0	%
Contents of the social- platform program were enough		
-Yes	100	100.0
Satisfaction with the social- platform program		
-Yes	100	100.0
Did social- based program improve mothers' knowledge and their reported practices		
-Yes	90	90.0
Advantages of the social- platform program:		
- Active participation	100	100.0
-Participants can get a chance for live chat.	100	100.0
-Participants can reach it at any place.	100	100.0
-Ease of users to stay in touch with teaching program providers	100	100.0

Discussion

CP is a motor function and postural tone disorder that develops at an early age, even before birth. CP symptoms commonly appear in the first year of life. Feeding issues are typically exacerbated by parents' lack of knowledge about the disease and the prevalence of malnutrition in people with CP. As a result, the study attempted to assess the impact of an social- platform program on mothers' feeding of the children with CP.

According to the current study findings, the majority of the analysed mothers were between

the ages of 30 and 40. This finding is consistent with the findings of Afifi, Ragheb, Elsayied, Mekhemar, and El-Khayat (2018) who studied "An Intervention Program for Mothers Regarding Dependency Level of their Children with Cerebral Palsy" and discovered that mothers caring for children with CP had an average age of 37.6±0.6 years. This finding is corroborated by Adam et al. (2019), who investigated "Symptom Burden in Individuals with Cerebral Palsy" and stated that women should be of a proper age to assume appropriate responsibility toward children because young moms are typically unprepared for motherhood.

In terms of education, more than half of the mothers in the study and fewer than half of the control groups had a university education, respectively. This finding is consistent with the findings of Saunders, Hellmann, and Farine (2018) who stated in their study titled "Cerebral Palsy and Assisted Conception" that when the mother is educated, she has more health awareness and the ability to help throughout the child's life, and when the mother's education decreases, the health risk to herself, her children, and family increases.

Also, in agreement with this, Hallman (2018) emphasized that educated mothers can take care of their children, especially children with CP who need more care and understanding of their needs and problems.

This result is not supported by Klingels, Molenaers, and Desloovere (2017) who studied "Upper Limb Motor and Sensory Impairments in Children with Hemiplegic Cerebral Palsy" and reported that the minority of mothers of children with hemiplegic CP was high education.

According to the current study, all of the mothers did not undergo CP training. According to the researchers, this showed the necessity for moms to improve their expertise through educational training.

According to the current study's findings, over three-quarters of the mothers said doctors were their primary source of information about CP. According to the researchers, this confirms that women prefer to seek medical help due to precise diagnosis and trust in the judgement of specialists.

The findings of the current study showed that there was a highly statistically significant difference between groups immediately, post, and post two months of social- platform program implementation in the total knowledge. From the researcher's point of view, it indicated that the social- platform program is effective in enhancing the knowledge of the mothers and feeding practices.

As regards the knowledge of the studied mothers about CP, the majority of them had unsatisfactory knowledge level pre- social-platform program. From the researcher's point of view, the lack of awareness about CP may be due to an absence of ongoing educational program or sessions about this topic, and a lack of funds for workshops.

The current study found a highly statistically significant improvement in total knowledge level among mothers in the study group before, immediately after, and two months after implementing the social- platform program. Furthermore, the majority of them had a sufficient understanding of post- social- platform program execution. According to the researcher, this demonstrates the need of adopting online social-based program implementation for mothers to improve their expertise. Also, the favourable effects of post- social- platform program implementation were reflected.

The current study findings agreed with those of Afifi et al. (2018), who found that after implementing an social- platform program, mothers had higher good score levels than before and after implementing a follow-up social-platform program, highlighting the positive effect of social- platform program implementation on mothers' knowledge.

Similarly, Ahmed and Youssef (2013) found that the highest percentage of mothers' knowledge was unsatisfactory prior to the implementation of the guidelines, which improved immediately after the implementation of the guidelines, and that this level of knowledge was decreased but still better than before the intervention.

Concerning the practice of the investigated mothers in the study group, it was discovered that there was a highly statistically significant difference and improvement between the feeding practices level as a result of mothers' post- social-platform program implementation. According to

the researcher, the lack of practice is attributable to a knowledge gap as well as a lack of education.

The current study's findings highlighted the observation scores of mothers in the control and study groups on the feeding practices of children with CP. Regarding the position of the kid while eating, the most were observed sitting upright, the majority of children consumed pulses, cereals, meat, vegetables, and fruits, the majority consumed food five times per day, and the majority consumed typical food. The beneficial impact of the online social-based program reflects this. The current study's findings are similar to Gangil's (2020) study on "Feeding Issues in Children with Cerebral Palcy to Assess Parental Awareness" Larnert and Ekberg, (2015), They studied "Positioning Improves the Oral and Pharyngeal Swallowing Function in Children with Cerebral Palsy" and they found that in the study group, mothers' feeding practice of children with CP had improved after the intervention.

This result is in the same line as the studies conducted by Amirtha (2019), Hayles et al. (2018), and King and Chiarello, (2018) who studied "Effectiveness of Nursing Intervention on Knowledge and Practice of Feeding Among Caregivers of Cerebral Palsy Children" and reported that the same results.

The results of the current study revealed that the majority were taking food for more than 30 minutes, All the children cleaned their mouths and utensils, all followed hygienic practices like hand washing, swallowing difficulty, and drooling faced fourteen percent of children, and other feeding problems like coughing and choking experienced by less than ten percent of children. This result is similar to the studies conducted by Meadan and Daczewitz (2015); Molinaro et al. (2017); Reyes et al. (2019), Motion, Northstone, Emond, Stucke, and Golding, (2020); Novak, & Berry (2020) who found that feeding problems decreased and improved after educational programs.

The current study found a significant correlation between the total knowledge and total practice scores of the mothers tested before and after the social- platform program. According to the study, increased knowledge leads to more appropriate practices. This could be explained by mothers with less awareness of CP having a lower degree of effective practice. Giving them the essential knowledge and abilities can be an effective strategy to improve the care of children with CP.

According to the current study, all of the studied mothers in the study group said that the contents were sufficient and that they were satisfied with the social- platform program. Concerning its influence on knowledge, they all reported that it increased their knowledge and feeding practice. Finally, they all noted that an social- platform program had numerous advantages, such as active engagement, the opportunity for live chat, the ability to contact it from anywhere, and the convenience with which users could stay in touch with instructional program providers. This outcome demonstrates the value of providing the online social-based program, which fulfilled the mother's requirements and provided her with adequate knowledge and practices, also indicated the achievement of the study's goal.

The results of this study support the hypothesis that social- platform program will improve some factors that might affect the level of mothers' knowledge and practices and also, the dependency level of their children. The study finding revealed that the program was affected in improving the daily activities of children with CP namely their feeding.

Conclusion

Depending on the results of the current study, the study concluded that social-platform program regarding the feeding of children with CP had a positive effect on improving their mothers' knowledge and practice. There was a statistically significant difference between the experimental and control groups. There was a significant correlation between the total knowledge and total practice scores of the studied mothers' pre and post-the social platform program.

Recommendations

Based on the findings of this investigation, the following suggestions were made:

1- Providing mothers with a well-planned health education program to increase their understanding and practice of feeding infants with CP.

2- A large sample size can be used in a comparable investigation.

3- A study can be carried out employing several instructional technologies.

4- A comparative research can be undertaken to analyses the feeding difficulty and care required for children with CP and children with other disabilities.

5- A long-term study on the nutritional health and growth of children with CP can be carried out.

6- Media support should be provided to help nurses become more aware and to reinforce potential interventions that are necessary.

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