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# RESEARCH ARTICLE

# Children patients with COVID-19: How can parental and peer support lessen the psychological burden of isolation

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#### **Abstract**

Aim: To assess the effect of parental and peer support on children's self-esteem during the isolation period in COVID-19-infected children is the main objective of this study.

Design: This is a descriptive cross-sectional study. One hundred ninety children with a confirmed diagnosis of COVID-19 were included.

Methods: A survey questionnaire to assess family and children's demographic characteristics was used for this study. A 13-item scale to assess parental support during the isolation period and a 10-item scale to assess peers' support during the isolation period were evaluated. Along with it, a 10-item scale to assess self-esteem during the isolation period was also measured.

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**Results:** Home isolation was associated with higher parental and peer support scores than hospital isolation. The mean age of study participants was 13.23±4.05 years; 52.6% were isolated at home versus 47.4% in hospital isolation. Phone calling and WhatsApp/messenger chat were methods of communication for 44.2% and 33.2% of patients, respectively, 6.3% of them had no method of communication, Child selfesteem was significantly affected by both parental and peer support during isolation. The increase in pronounced negative psychological effects such as disorientation, anger, low self-esteem and post-traumatic distress may be caused by a lack of parental care.

No patient or public contribution to this study: Patients or the general public were not involved in the design, analysis or interpretation of the data in this study. The study's aim and objectives were developed based on children's self-esteem, which was limited by questionnaire data information, so the researchers completed demographic and disease-related questionnaires by interviewing them.

#### KEYWORDS

children, COVID-19, isolation, parental support, peer support, self-esteem

## INTRODUCTION

COVID-19 is a pandemic crisis spreading worldwide, with millions of cases and thousands of deaths in many countries. Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) is the cause of the pandemic in Egypt as a part of a worldwide pandemic (WHO, 2020b). Children under 18 years accounted for approximately 9 to 11% of confirmed cases reported in the United States (American Academy of Paediatrics, 2019). In Egypt, the first case was recorded on February 14, 2020. The total incidence of COVID-19 infection among Egyptian children was less than 10% of all confirmed cases.

Children's patients are not indifferent to the dramatic impact of the COVID-19 epidemic. They have been exposed to unexpected variations in their daily activities, which may affect their mental, psychological and behavioural well-being. They experience fears, uncertainties and social and physical isolation from their peers, teachers, extended family and community networks. So, understanding their reactions and emotions is essential to properly address their needs (Brooks et al., 2020; Malik, 2020).

#### 1.1 Isolation and children's psychological burden

The isolation of confirmed and suspected cases is a crucial part of COVID-19 control efforts. Isolation is a painful emotional experience due to the discrepancy between actual and desired social contact. The risk of a negative psychological impact on the patient's child may be increased due to the prolonged duration of isolation. Fear of infection, boredom, frustration, lack of necessary supplies, lack of information and financial loss are additional factors that impact the psychological burden of COVID-19 infection (Lacey et al., 2014). Parental emotional and social factors may significantly affect the treatment of their children (Fore, 2021).

Furthermore, the isolation and disruption of the ill child's daily routines and the loss of contact with the peer support group may generate a feeling of uncertainty. Significantly, isolation can effect on a child's mental health status and may present as post-traumatic stress disorder or cause difficulties in returning back to social activity with changes in interactions with other friends. Anyway, early psychological intervention is fundamental, and more resources should be addressed to implement new ways to provide emotional support for ill children and their families (Golberstein et al., 2019: Lee, 2020a, 2020b).

Consequently, the sudden epidemic of isolated sick children not only has physical problems but also is prone to anxiety, depression and other psychological problems (Ahorsu et al., 2020). Ill children in isolation not only hope to receive the best treatment for their diagnosis but they also hold high expectations and demands for psychological care. Therefore, it should be ensured that the ill child is supported successfully throughout the isolation treatment period (Xiang et al., 2019; Zandifar & Badrfam, 2020).

# Peer support and psychological adjustment

Peer support is one of the most important resources of social support during a pandemic and refers to a subjective evaluation of the quality of peer networks. Therefore, peer support is an important protective factor for ethnically diverse college students' psychosocial adjustment in terms of depressive symptoms, somatization and loneliness. However, positive peer relationships can facilitate adjustment during isolation. In terms of self-esteem, the evidence from previous research shows that increased social support from friends but not from family predicts positive socioemotional adjustment, including self-esteem, in emerging situation (van Hoorn et al., 2016).

# | Parental perception

During the COVID-19 pandemic, most parents of children admitted to paediatric wards reported high levels of uncertainty, anxiety, stress and decreased parenting confidence. Both fathers and mothers reported significant stress and the need for reassurance and support (Ionio et al., 2016). Better parental support during the pandemic is associated with reduced stress perception and child abuse potential (Başaran et al., 2019).

Emerging children's parent's attachment during isolation contributes to an integrated self, confidence in self and developmental resilience (Tucker, 2019). Parent-child attachment is fundamentally important to improving a patient child's self-esteem during an isolation period that will affect physical, psychological, behavioural and developmental well-being. Peers constitute an important socialization domain in children's and adolescents' lives. Positive social relationships can affect children's thinking about themselves, feelings and behaviour (Matthews et al., 2015).

Self-esteem is how much value a person places on himself. Self-esteem is linked to happiness and quality of life (Baumeister et al., 2003). Emotional problems, substance abuse and eating disorders are all signs of low self-esteem. It can potentially influence the long-term outcome of depression and anxiety symptoms in adolescents (Henriksen et al., 2017).

# 1.4 The impact of the pandemic on children' self-esteem

Children's patients during this period of the pandemic have a high risk of losing the sense of support, self-esteem and security on which their well-being depends (Tsui et al., 2023). Parents and peers are supposed to play a role in providing positive support to infected children to increase reinforcement and ensure that they emerge with a strong sense of self-worth, self-esteem and the determination to keep going even when things are tough. Previous studies indicated a positive relationship between COVID-19 infection and symptoms such as depression and anxiety among patients and the general population (Deng et al., 2021). However, scanty studies discuss the role of parental and peer support during the COVID-19 pandemic on the self-esteem of patients' children, which is a major effector in long-term outcomes on various psychological well-being aspects. Also, insufficient studies investigate parental and peer support factors affecting child self-esteem.

#### 1.5 Nursing intervention during isolation

Nursing interventions for ill children admitted to the ward with suspected COVID-19 infection included explaining the importance and necessity of isolation screening in order to improve their understanding and degree of cooperation, providing ill children with targeted treatment and life care, making them aware of the

importance of using protective equipment, reducing children's fear and establishing a good nurse-patient relationship through health education. Helping a child to clear up anxiety, depression and other negative emotions by using verbal and non-verbal communication skills such as through the eyes, movements and text communication helping isolated children to establish social emotional support, giving children psychological comfort, eliminating their worries and improving the social support system for each child, guiding ill children to use emotional regulation auxiliary intervention methods, including physical decompression, breathing relaxation, selfeducation and communication regulation (Niu et al., 2021).

#### 2 AIM OF THE STUDY

The study aims to assess how parental and peer support can impact self-esteem among children with COVID-19, with an inquiry about the best supportive measure to improve social interaction during isolation. The study also aims to illustrate the consequences of various parental and peer support factors. The effect of isolation (hospital vs. home) on child self-esteem is also investigated.

#### **Operational Definitions**

- 1. Parental support has been defined as "parental behaviours towards the child, such as praising, encouraging, and giving physical affection, which indicate to the child that he or she is accepted and loved" (Sisk et al., 2020).
- 2. Peer support should be straightforward. A "peer" is an equal, someone with whom one shares demographic or social similarities. "Support" expresses the deeply felt empathy, encouragement, and assistance that people with shared experiences can offer one another within reciprocal relationships (Penney, 2018).
- 3. Self-esteem; Confidence in one's own worth or abilities; selfrespect (Dictionary, 2020).

# SUBJECTS AND METHODS

# Research design and setting

A descriptive cross-sectional study was used to achieve the aims of this study. The data were collected over seven months, from May to November 2020. As a result of the spread of the virus COVID-19 in Egypt, the Egyptian Ministry of Health decided to provide the necessary tests and swabs to confirm the diagnosis of COVID-19. In EL-Fayoum Governorate, some hospitals saved this service for patients exposed to COVID-19 under supervision from the ministry of health, such as Health Insurance Hospital, Chest Hospital, Fevers Hospital, Fayoum General Hospital, and other district hospitals. These isolation hospitals make initial investigations to confirm a diagnosis and, when suspected of COVID-19, give patients time to make swaps for a confirmed diagnosis. Some patients were isolated at the hospital; others were isolated at home under the supervision of the ministry of

health surveillance system. In the case of home isolation, prescribed medication for these cases was ensured, following them until they became free of symptoms for at least three days before being advised to end isolation according to WHO guidelines (WHO, 2020b).

# 3.2 | Study participants

COVID-19 confirmed cases aged from 6 to 17 years old. A technique of convenience sampling was used. The sample size was calculated using EpiCalc-2000, assuming that the proportion was 11.5%. (Proportion of children affected among COVID-19 cases) representing the per cent of confidence interval 95%, effect size 5%. The calculated sample size was 160; then, a 20% increase was added for a total of 190 cases (Anna Medaris Miller, 2020).

## 3.3 | Tools of data collection

The researchers created a structured interview questionnaire in a simple, clear Arabic language based on a review of the literature for children and adolescents, and visits to the Ministry of Health and Population (MOHP) and WHO websites for frequently asked questions (WHO, 2020a). The following topics were covered in the questionnaire:

The tool I consists of three parts:

- Demographic characteristics for the child: age, sex, residence, site of isolation, etc.
- 2. Demographic characteristics for the family: level of education for mother and father; income; job; marital status
- 3. The knowledge section about the nature of friends you prefer to deal with includes ten items such as those who are greater than you, smaller than you, classmates, etc., and knowledge about communication during the isolation period. It includes seven items: a TV set, a dish to receive satellite TV, a computer or Laptop, etc.

# Tool II

Tool II consists of three parts:

1. Social Support Questionnaire for Children (SSQC) scale of parents' support for a patient child during the isolation period: It was adopted by Gordon (2011) to assess the role of parent support for their patient child. It includes 13 items such as I enjoy spending time with them and do not feel this crisis, they support my choices in practising my favourite hobby during this period, they accept what I am and do not make me feel hurt, etc., and each scored question is rated on items using a 4-point Likert scale ranging from 1 to 4 as "Never or Rarely True," "Sometimes True," "Often or Very True," or "Always True." A total score is calculated. The minimum total score is 26, and the maximum is 52. The parent support was classified into low support with a cut point less than the median score and

- high support with a score more than or equal to the cut-off point.
- 2. Social Support Questionnaire for Children (SSQC) scale of peers' support for a patient child during the isolation period: It was adopted by Gordon (2011) to assess the role of peers' support for their patient child. It includes ten items with a total of 40 scores, such as it relaxes me when I feel upset during this period, cares about me and makes me feel better and hopeful, gives me good advice, etc. A total score is calculated and can range from 20 to 0. The parent support was classified into low support with a cut point less than the median score and high support with a score more than or equal to the cut-off point.
- 3. A self-esteem scale was adopted during the isolation period (Kracke & Held, 1994; Rosenberg, 1965) to assess the effect of isolation on the self-esteem of child patients during isolation. It includes ten items: feel equal with others and no less than them during my illness, feel that I have good qualities that help me cope with illness, tend to feel like a failure and cannot help myself in this period; etc. Each scored question is rated on the 4-point scale with a zero score as "strongly disagree," one score as "disagree," two scores as "agree," and three scores as "strongly agree." A total score is 30 and can range from 0 to 30. Scores less than 15 suggest low self-esteem.

# 3.4 | Validity and reliability

Four experts, including two public health professors from the faculty of medicine, reviewed and validated the questionnaire for content and relevance. The Cronbach alpha test=0.92 was used to determine the internal consistency of the study questionnaire. To validate the clarity of the developed tool, a pilot study was conducted on 10% (20) of the children. Simple changes were made in response to the findings of the pilot study. Participants in the pilot study were excluded from the study sample.

# 3.5 | Ethical considerations

These studies were performed in accordance with the ethical standards laid down in the 1964 Declaration of Helsinki and its later amendments. The ethical committee approved the study protocol from Assiut University with a code number (IRB no. 2360032). The study participants' identities were kept confidential throughout the study by keeping their information private and asking them to give truthful answers. Participation was entirely voluntary and unpaid.

# 3.6 | Statistical analysis

Data entry and statistical analysis were done using SPSS version 19. Data were presented using descriptive statistics in frequencies and percentages for qualitative variables, means and standard deviations for qualitative variables. Comparing two groups was done using a Student t-test and an ANOVA test for more than two groups. Qualitative variables were compared between groups using the chi-square test.  $p \le 0.05$  was considered statistically significant.

#### 4 | RESULTS

The demographic data of the patients are shown in Table 1. The mean age of study participants was  $13.23\pm4.05$  years, and slightly less than two-thirds (65.3%) have a social personality type. In comparison, the majority (85.8%) of them have  $2 \le 4$  siblings. As regards father and mother education, it was found that the minority (15.8% and 14.2%) of father and mother, respectively, had a high level of

TABLE 1 Distributions of the studied children and their parents according to their demographic characteristics (N = 190).

Item	No	%
Age		
6≤12 years	57	30.0
12≤18 years	133	70.0
Gender		
Male	94	49.5
Female	96	50.5
Personality type		
Introvert	66	34.7
Social	124	65.3
Number of siblings		
No one	21	11.1
2≤4	163	85.8
+4	6	3.2
Residence		
Urban	78	41.1
Rural	112	58.9
Father education		
Illiterate	36	18.9
Read and write	9	4.7
Primary	40	21.1
Intermediate	75	39.5
High	30	15.8
Mother education		
Illiterate	45	23.7
Read and write	31	16.3
Primary	33	17.4
Intermediate	54	28.4
High	27	14.2
Working		
Father not working	19	10
Father working	171	90
Mother's working	93	48.9
Mother not working	97	51.1

education. Also, the majority (90%) of fathers work, while about half (51.1%) of mothers are not working (Table 1).

The distribution of the studied children (190 COVID-19 patients) according to isolation place and using methods of communication is shown in Table 2. 62.1% versus 37.9% of the studied children lived in a rented home and owned home, respectively. 52.6% of the studied children were isolated at home, while Hospital isolation was 47.3%. The parents care for more than two-thirds (70.5%) of studied children. Phone calling and WhatsApp/Messenger chat were methods of communication in 44.2% and 33.2% of patients, respectively (Table 2).

Relations between the self-esteem of studied children and their demographic and isolation conditions are shown in Table 3. It demonstrated no relationship between self-esteem, age, sex, residence or personality type (p>0.05). At the same time, a significant relationship was detected between self-esteem and isolation, with the majority of participants isolated at home having normal self-esteem (85% vs. 63% among those isolated at the hospital) (p=0.001). Also, the percentage of children with normal self-esteem was significantly higher among those who communicated during isolation than among those without communication (78.1% vs. 25%). Parental care is significantly associated with better COVID-19 children's self-esteem than those cared for by another family member (Table 3). Figure 1 demonstrates an elevated self-esteem score in participants with

TABLE 2 Distribution of the studied children according to isolation site and other various conditions (N = 190).

Item	No	%
Type of housing		
Owned	72	37.9
Rented	118	62.1
Crowdedness index		
<2	124	65.3
≥2	66	34.7
Site of isolation		
Insurance hospital	36	18.9
Home	100	52.6
University hospital	27	14.2
Private hospital	21	11.1
Public hospital	6	3.2
Care provided to child		
Mother/father	134	70.5
Sister/brother	19	10.0
More than one family member	37	19.5
Method of communication		
Phone calling	84	44.2
WhatsApp/messenger	63	33.2
Facebook	17	8.9
More than one method	14	7.4
No communication	12	6.3

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TABLE 3 Relations between selfesteem of studied children with their demographic and isolation conditions (N=190).

		Self-esteem					
	Low			Normal			
Item		No	%	No	%	X <sup>2</sup> test	(p-value)
Age							
6≤12 years		15	26.3	15	26.3	0.048	0.827
12 ≤ 18 years		100	75.2	33	24.8		
Gender							
Male		66	68.8	30	31.2	3.86	0.055
Female		76	80.9	18	19.1		
Personality type							
Introvert		48	72.7	18	27.3	0.216	0.642
Social		30	24.2	94	75.8		
Residence							
Urban		85	75.9	27	24.1	0.193	0.660
Rural		57	73.1	21	26.9		
Isolation place							
At home		15	15.0	85	85.0	11.777	0.001**
At hospital		33	36.7	57	63.3		
Care provided to child							
Mother/father		42	31.3	92	68.7	12.63	0.005**
Sister/brother		5	26.3	14	73.7		
More than one family member	У	1	2.7	36	97.3		
Communication	Yes	39	21.9	139	78.1	16.78	<0.001**
during isolation	No	9	75.0	3	25.0		

<sup>\*\*</sup>p < 0.05 significant difference.

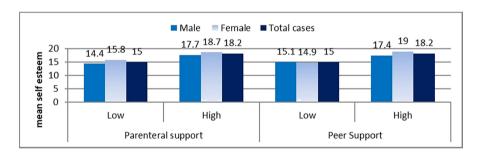


FIGURE 1 Mean self-esteem by parenteral and peer support of studied children (N=190).

high parental and peer support compared to those with low support, either males or females (see Figure 1). Relations between the self-esteem of studied children and the isolation period, parent support and peer support during isolation from COVID-19 are demonstrated in Table 4. It revealed statistically significant relations between child self-esteem and parent support and peer support during isolation from COVID-19, with the mean parent and peer support significantly higher in participants with normal self-esteem than those with low self-esteem.  $p \le 0.001$  and p = 0.012, respectively, while no statistically significant relationship was detected between child self-esteem and the isolation period (Table 4).

Relations between isolation from COVID-19 in studied children with an isolation period, parent support and peer support are illustrated in Table 5. It showed significantly higher paternal and peer support scores in children isolated at home than those isolated in hospitals  $(44.66\pm8.12 \text{ vs. } 37.43\pm9.49 \text{ for paternal support, } 34.56\pm6.96 \text{ vs. } 30.20\pm6.29 \text{ for peer support)}$ . There is no relationship between the isolation place of the studied children and the isolation period of COVID-19 (Table 5). Figure 2 shows a correlation between paternal and peer support and adolescent self-esteem during isolation from COVID-19. This figure clarifies a strong correlation between paternal and peer support and children's self-esteem (r=0.648, p ≤0.001).

# 5 | DISCUSSION

The COVID-19 pandemic carries a variety of unexpected challenges for families and child welfare service providers. During the

TABLE 4 Relations between self-esteem of studied children with isolation period, parent support and peer support during isolation from COVID-19 (N = 190).

	Self-esteem		
	Low self-esteem	Normal self-esteem	
Items	Mean ± SD	Mean ± SD	p-value
Isolation period	$11.88 \pm 6.4$	$11.3 \pm 7.01$	0.614
Paternal support	$34.8 \pm 10.8$	$43.4 \pm 7.9$	<0.001**
Peer support	$30.31 \pm 6.4$	$33.2 \pm 7.04$	0.012*

<sup>\*</sup>Statistically significant at p < 0.05.; \*\*High statistically significant at p < 0.005.

TABLE 5 Relations between isolation place from COVID-19 of studied children with isolation period, parent support and peer support (*N* = 190).

	Isolation place		
	Home	Hospital	
Items	Mean <u>+</u> SD	Mean ± SD	p-value
Isolation period	$12.11 \pm 6.95$	$10.70 \pm 6.68$	0.157
Paternal support	$44.66 \pm 8.12$	$37.43 \pm 9.49$	<0.001**
Peer support	$34.56 \pm 6.96$	$30.20 \pm 6.29$	<0.001**

<sup>\*\*</sup>High statistically significant at p < 0.005.

onset of the COVID-19 pandemic, child welfare service providers faced contradictions in their responsibility to make regular inperson contact with children and families to promote safety, permanence and well-being while following public health directives to avoid social contact in order to curb COVID-19 infections. In response, federal guidance was issued regarding the use of technology to maintain mandated contact with children in foster care (Seay & McRell, 2021).

During this difficult time, vulnerable families are also at risk of losing access to services or experiencing a reduction in quality as providers attempt to move services to a virtual format. In the early days of the pandemic, efforts to reduce the viral spread of COVID-19 involved limiting face-to-face contact with human service professionals, including education providers and healthcare providers. Many education systems (including daycares, preschools, elementary, middle and high schools, community colleges and universities) have transitioned from classroom instruction to virtual homeschool instruction (Van Lancker & Parolin, 2020). Paediatricians, mental health therapists, physical therapists and other service providers began offering telehealth and/or virtual services whenever possible (American Academy of Paediatrics, 2020; Lee, 2020a, 2020b; Webster, 2020).

The present study aimed to examine if parental and peer support would impact children's self-esteem and the relationship between self-esteem and several factors in parental and peer support during isolation from COVID-19.

During isolation from COVID-19, our data provide evidencebased support for two central propositions: the first, children and their parents have independent yet overlapping perceptions of their relationships and the second, children's perceptions of the relationship are consistently related to their self-esteem, while the others'

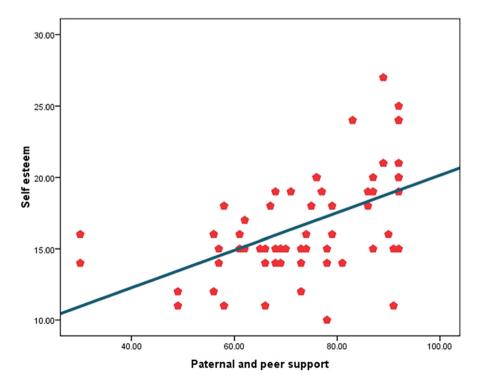


FIGURE 2 Correlation between selfesteem, parenteral and social support of studied children during isolation from COVID-19 (N = 190).

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perceptions are generally unrelated. This study focuses on middle childhood, a central time for the development of independence and social and emotional skills (Coughlin et al., 2014; Decety & Michalska K. J., 2010), yet children remain dependent on their parents in many ways. Attachment research suggests that throughout the school-age years, children view their carers as a "safe haven" they can turn to when threats emerge, as sources of information and as a support for the co-regulation of emotions and behaviours (Grossmann et al., 2008). Stressful events, like COVID-19, may impact parents' emotional well-being and thereby availability to their children (Chung et al., 2020). However, high-quality parent-child relationships also protect children's cognition (Spieker et al., 2003), cortisol stress response (Hostinar et al., 2015), amygdala reactivity (Gee et al., 2014) and depression (Sichko et al., 2016).

The study revealed that parental support positively affected self-esteem during COVID-19 isolation; the more parental support a child received, the higher the child's self-esteem. This finding is consistent with the findings of Abbasi et al. (2020), who found that children who receive parental and peer support have higher self-esteem and fewer symptoms of depression.

Lack of parental support may be the reason for the increase in pronounced negative psychological impacts such as confusion, anger, low self-esteem and post-traumatic distress. Therefore, parents should consider the appropriate supportive interventions for their children to overcome the pandemic and promote their health (Liu et al., 2020). Moreover, parents need to get creative when interacting with patients' children by using safe social distancing practices and technology to help bridge the gap during the pandemic. Consequently, parents can bridge the gap during COVID-19 with their children to raise their self-esteem through guidance on how to react to stressful events. Acknowledging some level of concern without panicking is appropriate and can result in taking the necessary actions that reduce the risk of illness. Teaching children positive preventive measures, talking with them about their fears and giving them a sense of some control over their risk of infection can help reduce anxiety. This is also a tremendous opportunity for adults to model for children problem-solving, flexibility and compassion as we all work through adjusting daily schedules, balancing work and other activities, getting creative about how we spend time, processing new information from authorities and connecting and supporting friends and family members in new ways. Also, be aware of how you talk about COVID-19, explain the importance of social distancing during the pandemic, demonstrate that deep breathing is a valuable tool for calming the children's nervous system, focus on the positive, establish and maintain a daily routine and identify projects that might help others, such as writing letters to the neighbours or others who might be stuck at home alone, sending positive messages over social media or reading a favourite children's book on a social media platform for younger children to hear. Also, parent offer lots of love and affection for their children (National Association of School Psychologist, 2021).

As regards peer support, the current study confirmed its positive effect on patients' self-esteem. This result is consistent with a

study by Lan and Wang (2019) who found that more peer support and higher levels of resilience improved self-esteem. Peer relations are influential in individuals' self-evaluation and, consequently, selfesteem. In the same context, Loades et al. (2020) illustrated the role of social isolation and loneliness in increasing the risk of depression and possibly anxiety during times of loneliness. Even though this study proved the significant effect of peer support on self-esteem, it also revealed that parental support is more impressive. This may be due to the more inclusive effect of parental support, as parents could promote self-esteem in their children by providing positive communication through supportive and caring relationships (Bhat, 2017). Also, the longer contact period with parents and the deeper sympathy may enhance the parental effect. From the researchers' point of view, loving behaviour of parents towards their children includes physical expressions of love (hugs, kisses, etc.), verbal expressions of love, encouragement, patience and sensitivity, expressions of empathy and time spent together, which can have a positive effect on children's self-esteem during COVID-19, on the other hand, the experiences of parents during the pandemic; their emotional pain caused by loneliness, lack of support, feelings of isolation and lack of familycentred care; and an increase in emotional distress (Tsui et al., 2023). This study indicated that more rooms should be provided to facilitate parental skills in assisting the children's adaptation to their new environment. Another important aspect is the consistency of care. Furthermore, it is recommended that healthcare providers adopt better communication strategies to reduce parents' distress, such as identifying the knowledge demands of both children and parents, offering supportive services, increasing the comfort of the parents and their children, providing emotional support and making better use of online facilities for consultation. It also suggests that familycentred care should be encouraged while formulating care policies for children (Bate et al., 2021).

It was interesting to investigate the factors in parental and peer support and their relations to self-esteem during isolation. Regarding isolation places, most studied children have better self-esteem and receive better support when isolated at home than in a hospital, with a statistically significant difference. Adjustment to the new environment in the hospital and the more difficult communication with patient family members may increase the psychological burden of hospital isolation. On the other hand, avoiding interruption of the natural child environment by staying home seems more comfortable with easier access to other family members. It also supports the idea that the disease is easier and not serious, which could reinforce the feeling of self-esteem. This study supports and is consistent with Repper and Carter (2011), Goldstrom et al. (2006), and Davidson et al. (2006) that illustrate the safety and efficacy of peer support, which include its ability to improve empowerment, hope, quality of life, self-esteem, social functioning and care engagement for those accessing its services.

Patients' children using tools of communication were also found to have significantly better support and, in turn, better self-esteem than those with the deficient tool of communication. Using social media to connect with others helps engage in home workouts. Health authorities recommend digital tools for home-based sport and exercise routines to stay active and healthy during the COVID-19 pandemic (Mutz et al., 2021). Therefore, digital media played an important role in sports activities during the COVID-19 pandemic. Thus, the respective media and technologies helped people stay active and healthy under the restrictions of COVID-19 mitigation policies (World Health Organization, 2021).

Moreover, increased engagement with technology is desired for educational purposes. Media eases contact with friends. They were using videoconferencing services to spend happy hours with friends and celebrate holidays and events with loved ones. Communication tools have been useful for addressing mental health conditions, including anxiety and depression, which may benefit from online peer-to-peer support (Naslund et al., 2016; Varker et al., 2019). This growth is supported by Repper and Carter (2011), who illustrate the safety and efficacy of peer support, which include its ability to improve empowerment, hope, quality of life, self-esteem, social functioning and care engagement. Peer support online groups are mechanisms to give and receive help from others who share similar experiences (Hope et al., 2021). They can provide instrumental support for clients dealing with concrete challenges or emotional support by providing the space to talk (Fisher et al., 2020). Although peer support groups may be delivered in different ways, there are common principles that guide their delivery, including the following: building a safe and trusting environment based on mutual validation and shared lived experiences; fostering a sense of mutuality and reciprocity; applying shared experiential knowledge; navigating choice and control in supporting and empowering peers to harness their personal strengths; and establishing and strengthening connections (Gillard et al., 2017).

This study revealed that parental care is significantly associated with better COVID-19 children's self-esteem than those cared for by another family member. Exposure to stressors can lead to emotional, cognitive and physical exhaustion, which may burden the parent-child relationship (Deater-Deckard, 2008). Parents always experience fear and anxiety about caring for their ill children. Parents experience stress specifically related to their roles as parents (Abidin, 1997; Raphael et al., 2010). When it comes to their children, concerns about behavioural or health issues, educational difficulties and even everyday tasks can all lead parents to experience stress, fear and anxiety for their children (Roskam et al., 2018). This result, in line with Brown et al. (2020) and Yuan et al. (2020), illustrated that increased levels of stress and anxiety were found in parents, with substantial strains in compatibility with intensive child care responsibilities and employment while facilities were closed. On the other hand, the attitude of parents and their efficiency in dealing with their ill children during this period were seen as variable depending on factors such as level of awareness, socioeconomic status, accessibility of services and understanding the intensity of any condition (Mridula et al., 2021). In the same line, Hasinuddin et al. (2021) clarified that the reactions that occur in parents who have pre-school and school-aged children regarding COVID-19 are anxiety and worry. However, they should be more alert when supporting their children during a stressful time of isolation. Besides calming separation anxiety, parents can maintain family integrity through traumatic and stressful events (Goh, 2020).

# 6 | IMPLICATIONS FOR NURSING PRACTICE AND HEALTH POLICIES

This study makes recommendations for individuals, health practitioners and policymakers. As to individual recommendations, efficient communication methods might be an important tool to promote parent and peer-child relationships in the hospital during isolation from COVID-19.

Nurses can develop strategies for efficient communication methods based on the needs of children to improve mental and behavioural health during isolation. Developing efficient programmes and local policies by learning from successful experiences is important to promote parent and peer-child relationships based on various communication tools in hospitals during isolation.

Healthcare professionals are immensely important in providing support for parents and their children suffering from COVID-19. A national plan should be established to address inpatient childcare during an epidemic. Nurses can encourage parents and family to be involved in the child's care and communicate effectively to reduce both the parents' and the child's uncertainty, shame, fear and stress (Shteinbuk et al., 2021).

Some children develop severe disease, require prolonged intensive care support and frequently use mechanical ventilators, which should be accounted for in the planning of healthcare services and the allocation of resources during the ongoing pandemic (Gotzinger et al., 2020).

As to health practitioner recommendations, parent and peer-child relationships during isolation from COVID-19 differed with socio-demographic variables. These variables might be a sign of poor communication methods, including low educational levels for mother and father, low income, disruption of marital status and site of isolation, which can easily lead to poor mental and behavioural health. For policymakers, increasing communication methods is necessary for parent and peer-child relationships during isolation from COVID-19; it is also an important direction for policies and strategic planning for promoting the mental and behavioural health of isolated children.

## 7 | CONCLUSION

Parental and peer support can positively affect the self-esteem of children with COVID-19. Isolation at home has a better outcome than that in hospitals as regards children's patients' self-esteem. Home-isolated children receive better support than those in hospitals. Using communication tools can facilitate providing better support and, in turn, better self-esteem.

Isolation is a challenging time for both patients and their families. Nonetheless, we can take measures to mitigate the negative effects Open Access

of isolation. Patient education, effective and efficient communication methods, close monitoring for signs of distress and anxiety, behavioural deviations and early intervention may help patients cope better with the overall isolation experience. So, we can support the need to develop programmes for promoting parent and peer-child relationships based on various communication tools during COVID-19 isolation. Programmes contributing to emerging emotional intelligence in families would pay off in this direction. We recommend further studies investigating the role of physical activity and school performance on behavioural and social well-being. Clinical services should motivate preventative support and early intervention to promote better mental and behavioural health during isolation.

#### 8 | LIMITATIONS OF THE STUDY

This study's findings were limited to a small sample – a group of parents whose children were diagnosed with COVID-19 and hospitalization; the sample was homogeneous. The study was carried out during the peak of the pandemic. This, coupled with the fact that most of the participants were willing to answer all the questions telephonically, means that data collection was performed virtually due to the COVID-19 pandemic. The selection criteria were thus biased, which may not accurately reflect the real situation and cannot be generalized. Therefore, further research should include a larger sample that would include more parents of children who were hospitalized in different types of hospitalized, such as private or government hospitals, and different paediatric units, with differing durations of stay and reasons for admission. This would provide a better sampling of the parents' perceptions of visitation restrictions.

A larger sample size would allow for data collection from different minorities within the community, making the data more substantial and comprehensive. Additionally, results may be biased by the participants due to their children's length of stay in the hospital and sudden changes in policies, which would influence their perceptions.

## **AUTHOR CONTRIBUTIONS**

Made substantial contributions to conception and design, or acquisition of data, or analysis and interpretation of data: NA, FAA, HHA, AAA. Involved in drafting the manuscript or revising it critically for important intellectual content: OAA, OME, SGB, SAS. Given final approval of the version to be published. Each author should have participated sufficiently in the work to take public responsibility for appropriate portions of the content: NA, FAA, HHA, AAA, OAA, OME, SGB, SAS, MAS, HAM, MFM, MEI, AMA, RAM, SAM, WAY, ZTA, SMM. Agreed to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved: AAA, SAM, WAY, ZTA, SMM.

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#### CONFLICT OF INTEREST STATEMENT

The authors declare no conflict of interest.

#### DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available from the corresponding author upon reasonable request.

#### **ETHICS STATEMENT**

The ethical committee approved the study protocol from Assiut University with code number (IRB no:2360032). The study participants' identities were kept confidential throughout the study by keeping their information private and asking them to give truthful answers. Participation was entirely voluntary and unpaid.

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