Effect of Preventive Nursing Guidelines about COVID-19 on Hospitalized School Age Children

Eman Ahmed Taha El-Naggar[1], Faten Shafik Mahmoud[2] and Basma Rabie Abdel-Sadik[3]

(1) BSc Nursing (2006), Nursing Inspector, Department of Nursing, Directorate of Health Affairs Kafr El Sheikh and (2,3) Professor of Pediatric Nursing, Faculty of Nursing-Benha University

Abstract

Background: Coronavirus disease 2019 (COVID-19) has upended societies and dramatically altered everyday life across the globe. COVID-19 is a highly contagious viral illness caused by severe acute respiratory syndrome. **Aim of the study:** To assess the effect of preventive nursing guidelines about COVID-19 on hospitalized school age. children **Research design:** A quasi-experimental research design was used to carry out the study. **Setting:** The study was conducted in pediatric medical department at Benha University Hospital, which consists of three wards. **Sample:** A purposive sample of hospitalized school age children (75) child admitted the above-mentioned setting for treatment during the period of data collection (six months) were included in the study. **Tools of data collection**: Two tools were used. **Tool (I):** A structured interview questionnaire sheet to assess personal characteristics of hospitalized school age children, and their knowledge related to COVID-19. **Tool (II):** Children reported practice related to COVID- 19 to assess hospitalized school age children' reported practice related to COVID-19. **Results:** Total knowledge of the studied children about COVID-19 was good and total reported practices related to COVID-19 were satisfactory post preventive nursing guidelines implementation. There were highly statistically significant relations between the studied children's total knowledge score regarding covid-19 and their personal characteristics. There were highly statistically significant relations between the studied children's total practices score regarding covid-19 prevention and their personal characteristics. There was a positive correlation between the studied children's total knowledge and total reported practices between pre and post the preventive nursing guidelines implementation. **Conclusion:** The preventive nursing guidelines was effective in improving hospitalized school age children' knowledge and reported practice about COVID-19. **Recommendations:** Simple Arabic illustrative educational booklets, posters and COVID-19 plan should be produced and provided for all children in inpatient and outpatient department.

Keywords: COVID-19, Hospitalized School Age Children, Preventive Nursing Guidelines.

Introduction

Coronavirus disease 2019 (COVID-19) has upended societies and dramatically altered everyday life across the globe **(Arora et al., 2021).** COVID-19 is a highly contagious viral illness caused by severe acute respiratory syndrome SARS-CoV-2. It has had a devastating effect on the world's demographics. It has emerged as the most consequential global health crisis since the era of the influenza pandemic of 1918 **(Cascella et al., 2022).**

December 2019, in Wuhan city, the capital of Hubei province in China, became the center of an outbreak of pneumonia of unknown cause. By Jan 7, 2020, Chinese scientists had isolated a novel coronavirus, severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2; previously known as 2019-nCoV), from those with virus-infected pneumonia which was later

designated coronavirus disease 2019 COVID-19 in February, 2020, by WHO **(Zhou et al., 2020).**

The coronavirus disease 19 (COVID-19) is a highly transmittable and pathogenic viral infection caused by severe acute respiratory syndrome coronavirus 2 SARS-CoV-2, which caused global pandemic that led to a dramatic loss of human life worldwide **(Shereen et al., 2020).** In particular, children with underlying diseases, such as diabetes mellitus, hypertension, cardiovascular disease, and respiratory disease, are at increased risk for severe COVID-19, and case fatality rates increase steeply with age **(Kampen et al., 2021).**

The SARS-CoV-2 virus spreads by close person-to-person contact, mainly via respiratory droplets produced when an infected child coughs, sneezes, sings, or talks. The spread occurs through large respiratory droplets that can travel short distances and land directly on mucosal surfaces or through small respiratory particle aerosols that can linger in air for several hours and travel longer distances before being inhaled. Spread of the virus could also occur via contact with surfaces contaminated (fomites) by respiratory secretions, if a child touches a contaminated surface and then touches a mucous membrane on the eyes, nose or mouth **(Seagle et al., 2023).**

Coronavirus disease 2019 (COVID-19) symptoms can vary widely. Some children have no symptoms at all. But others become so sick and need to stay in the hospital and may eventually need a machine to breathe **(Center of Disease Control and prevention, 2022).**

Children who become ill with COVID-19 commonly have fever or chills, a dry cough and shortness of breath, feeling very tired, muscle or body aches, headache, a loss of taste or smell, sore throat, congestion or runny nose, nausea, vomiting, and diarrhea. Emergency symptoms include trouble breathing, constant pain or pressure in your chest, bluish lips or face, sudden confusion and having a hard time staying awake **(Alzahrani et al., 2023)**

Whereas COVID-19 affects all age groups, children have had markedly different outcomes than adults. During the early months of the pandemic, reports of severe forms of COVID-19 among pediatric populations were rare. However, the clinical course of COVID-19 in children has since been found to encompass a wide spectrum of disease, from asymptomatic infection to severe complications, including acute respiratory distress syndrome, myocarditis, acute renal failure, multisystem organ failure, and multisystem inflammatory syndrome in children **(O'Neill &Chumbler, 2022)**.

Nursing professionals are an organized team that actively contributes to global health from health policy, health-disease dynamics, to the control of epidemics and emergency situations. Therefore, when analyzing the situation of nursing, it can be seen that in the past it was little recognized in the development of its work and activities, remaining on the sidelines. It´s important to highlight the role of nursing in facing this Covid-19 pandemic and through this to emphasize care as a fundamental axis of health care **(Estefanía et al., 2021).**

Signification of the study

The COVID-19 pandemic that began in 2019 has resulted in millions of deaths worldwide. Over this period, the economic and healthcare consequences of COVID-19 infection in survivors of acute COVID-19 infection have become apparent **(Brenda, 2022).** COVID-19 was the underlying cause of death for more than 940,000 people in the US, including over 1,300 deaths. Among children and young children aged 0 – 19 years

in the US, COVID-19 ranked eighth among all causes of death; fifth among all disease-related causes of death; and first in deaths caused by infectious or respiratory diseases **(Flaxman et al., 2023).**

Globally, as of 6:06pm CET, 28 February 2023, there have been 758,390,564 confirmed cases of COVID-19, including 6,859,093 deaths, reported to WHO. As of 25 February 2023, a total of 13,226,873,459 vaccine doses have been administered. In Egypt, from 3 January 2020 to 6:06pm CET, 28 February 2023, there have been 515,698 confirmed cases of COVID-19 with 24,809 deaths, reported to WHO. As of 25 February 2023, a total of 105,493,060 vaccine doses have been administered **(World Health Organization. 2023).**

COVID-19 which has been characterized as a pandemic by the World Health Organization (WHO), is attacking societies at their core. It is much more than a health crisis. It is a human, economic and social crisis **(Center of Disease Control and prevention, 2023)** So, the study was conducted to assess the effect of preventive nursing guidelines about COVID-19 on hospitalized school age children.

Aim of the Study

This study aimed to assess the effect of preventive nursing guidelines about COVID-19 on hospitalized school age children.

Research hypothesis

1. The preventive nursing guidelines will improve the knowledge of hospitalized school age children about COVID-19.
2. The preventive nursing guidelines will improve the reported practice of hospitalized school age children about COVID-19.

Subjects and Method.

Research design:

A quasi-experimental research design was used to carry out the study.

Research Settings:

The study was conducted in medical department at Benha university hospital which consists of three wards. Total capacity of these words is 20 beds.

Research subjects:

A purposive sample of hospitalized school age children admitted the above-mentioned setting for treatment during the period of data collection (six months) were included in the study. The hospitalized school age children who met the required inclusion criteria and their mothers who agreed to participate in the study were recruited. They reached 75 hospitalized school age children.

Tools of data collection:

Data was collected through the following tools:

Tool (I): A structured interview questionnaire Sheet:

It was designed by researchers after extensive review of related literatures covering various aspects of the research problem as books, magazine, articles, journal and websites **(Amer & Mohamed, 2020)**. It was written in Arabic language to suit children and their caregivers' educational level. It consisted of three parts.

Part (1): Personal characteristics of hospitalized school age children such as age, gender, child rank, number of children in the family, residence, level of education of the child and level of education of mother or caregiver. This part included 7 questions.

Part (2): General knowledge about COVID-19 to assess hospitalized school age children' knowledge such as country of origin of disease, the year of appearance of disease, season of the disease, spread of the disease, type of the disease, source of the disease, factors affecting COVID-19 widespread, , clear symptoms of the disease, is it easy to identify a person with COVID-19, the possibility of having COVID-19 without

symptoms, the methods of COVID-19 transmission, the treatment of COVID-19, vaccination against COVID-19, the appropriate age for taking COVD-19 vaccine in children in Egypt, the number of doses of COVID-19 vaccine, recurrence of COVID-19 after recovering, the immunity period of COVID-19 after recovery , the protective measures used after direct contact with COVID-19 children, the protective equipment used to avoid COVID-19 infection, type of mask that should be used to avoid COVID-19 infection, places of wearing the mask, cases of changing the mask, use of mask during sports or during physical activities, the possibility of sharing the mask with the other friends or siblings, presence of complications for COVID-19and type of these complications. This part included 31 questions.

Scoring system of hospitalized school age children' knowledge:

The correct and complete answer scored (2). The correct and incomplete answer scored (1). Don't know and incorrect answer scored (0). The total score for all 31 questions was 62 marks which represent 100%.

The total score of the children' knowledge will be calculated and classified into three levels as the following:

- Poor knowledge: (0< 50%) of total score
- Average knowledge: (50< 75%) of total score.
- Good knowledge: (75≤ 100%) of total score

Tool (II): Children reported practice related to COVID- 19.

It was designed by the researchers in the light of relevant studies covering various aspects of the research problem as books, magazine, articles, journal and websites **(Amer & Mohamed, 2020).** It was written in Arabic language to suit children and their caregivers' educational level to assess the hospitalized school age children reported practice about COVID-19. It included 47 questions distributed into 4 major areas (The children's self-protective practices, the children's preventive measures related to school and travel, the children's general preventive measures and the children's preventive measures related the protection of others).

Scoring system of children' reported practices:

The questions were scored as follow:
- Each done response was given (1) score.
- Each not done response was given (0) score.
- The total score for all 47 questions was 47 marks which represent 100%.

The total scoring system of the children' reported practices was calculated as the following:

- Unsatisfactory reported practice: (0<60%) of total score
- Satisfactory reported practice: (60≤100%) of total score.

Content validity and reliability

The revision of tools was done through a jury of three experts in the field of Pediatric Nursing from the Faculty of Nursing Benha University, to test the content validity of the instruments and to judge its clarity, comprehensiveness, relevance, simplicity and accuracy. All their remarks were considered. Some items were rephrased to arrive at the final version of the tools. The tools were regarded as valid from the experts, point of view.

The reliability for tools was applied by the researchers for testing the internal consistency of the tools by administering of the same tool to the same subjects under similar condition. Internal consistency reliability of all items of the tools was assessed using Cronbach,s alpha coefficient test. This turned to be (0.81) for children knowledge assessment sheet.

Reliability of children reported practice related to COVID- 19 was (0.92).

Ethical considerations:

Ethics approval granted from the Scientific Research Ethical Committee of Faculty of Nursing, Benha University, an official approval was obtained from directors of the Benha University Hospital. Oral consent was obtained to participate in the current study was taken after the purpose of the study was explained to each child and her mother. Also, the children and their mothers were assured that the study was harmless, their participation was voluntary, and they have the right to withdraw from the study at any time without giving the reason. They also assured that anonymity and confidentiality will be guaranteed as well, the collected data will be used for the research purpose only. The ethics, values, culture and beliefs of the children and their mothers were respected.

Pilot study:

A pilot study was carried out on 10% of the sample size (8 children) to test content validity, clarity, applicability and feasibility of the study tools and to estimate the time needed to fill each tool. No radical modifications were done according to the results of pilot study, so participants involved in the pilot study were included in the study sample. This phase took about one month (July 2021).

Field work:

Data collection for this study was carried out over a period of six months starting from the beginning of August 2021 to the end of January 2022. The researchers was available two days/ week. Data was collected during the morning and afternoon times from the previously mentioned setting. in the study setting by using the previously mentioned tools.

Preventive Nursing guidelines about COVID-19: It was designed by researchers under guidance of the supervisors and after review of related literature **(Centers for Disease Control and Prevention, 2020), (Jenner et al., 2020), and (UNICEF, 2020).** The preventive nursing guidelines used simple Arabic language and different illustrated pictures in order to facilitate children' understanding about Covid-19. The researchers started to collect data through assessment, planning, implementation and evaluation phase as the following.

Assessment phase:

Assessment phase involved interviews with children to collect data. The researchers visited Benha University Hospital in Benha city two days/ week by rotation from10 AM and extended to 4 PM. At the beginning of the interview, the researchers welcomed children, explained the purpose, duration, activity of the study and take their oral approval to participate in the study prior data collection. The medical data was collected from medical record and it take nearly 10 minutes for each child and then the researchers asked the children and filled tool in to assess the children knowledge and reported practice it take nearly 30-45 minutes. This period of pretest took four weeks starting from beginning to the end of August 2021.

Planning Phase:

Based on baseline data obtained from assessment phase and relevant review of literature, the preventive guidelines about COVID-19 were developed by researchers for children according to the actual needs of the children. It was constructed, revised and modified from the related literature. The contents were prepared according to the children' level of understanding in simple Arabic language. Selecting the teaching place at the study setting (teaching classroom). Different teaching methods were used such as; lecture, modified small group discussion,

demonstration, and redemonstration and role play. Suitable media was used such as; booklet, photos, power point presentation, educational videos, lap top and CD to help proper understanding of the content by children.

Implementation phase

This phase took three months from the beginning of September to the end November 2021. The implementation phase was achieved through sessions each session started by a summary of the previous session and the objective of the new one. Taking into consideration the use of Arabic language that suits the children, educational level. Motivation and reinforcement during sessions were used to enhance motivation for sharing in the study such as distribution of toys, coloring books and stories.

The preventive nursing guidelines about COVID-19 was developed and implemented by the researchers for children. The overall aim was to provide children confidence, advising about COVID-19. Providing the preventive nursing guidelines about COVID-19 contained four steps as follow:

Knowledge sessions:

The purpose of Knowledge sessions is to enhance knowledge of hospitalized school age children about COVID-19: The studied children were divided into 10 groups. The educational content was explained to children in small groups (7-8) child per each group. The total number of sessions 5 sessions distributed as the following: (3) sessions for knowledge kept going for 30-45 minutes and (2) sessions for practices kept going 30-45 minutes. The sessions were repeated for each group. **Knowledge part as the following:**

The first session of included introduction, origin of the disease, the year of appearance of the disease, definition of Covid-19, manifestation of COVID-19, the source of

COVID-19 disease and modes of transmission of the virus.

The second session included persons at risk for the disease, complications of the disease Ways to prevent corona virus, Preventive measures in case of disease spread and diagnosis of COVID-19.

The third session included Vaccines against COVID-19, age group for vaccination, number of doses for vaccine, side effect from vaccines, treatment of COVID-19 and general definitions.

Practices sessions:

The purpose of practices sessions is to improve reported practice of children, two learning sessions was held by demonstration and redemonstration teaching methods and practical presentation method. The duration of each session was about 30-45mintus. Firstly, the researchers explained to children and their mothers about the skills and its importance and the complications that arise due to lack of theses skills. The researchers presented the ultimate procedure of the skills in front of children and then the children were asked to obtain self- efficacy in component of the skills through practice and repetition and to be able to do it without researcher's attendance. Finally, the children got competently self-efficient in the skills, learning and the felling of learning when capability resulted in their encouragement and increased self-esteem. Children requested to perform all learned skills in every group discussion session. The following practical presentation including:

The first session involves personal protective equipment and demonstration of hand washing.

The second session involve demonstration of wearing, taking off mask and taking of gloves after usage.

Feedback of hospitalized school age children was assessed at the end of each

session so verbal questions were requested to hospitalized school age children from the prior session. Moreover, evaluation of self-efficacy was performed by asking the children to indicate the related skills properly. Evaluation of self-esteem and confidence was assessed by level of cooperation in education.

Evaluation phase:

During this process, the effect of the preventive nursing guidelines on hospitalized school age children' knowledge and reported practice regarding COVID-19 was evaluated by using the same forms of tools which used before the implementation for hospitalized school age children. This was done during children follow up visit in the outpatient clinic. This phase took about 2 months (from the beginning of December 2021 to the end of January 2022).

Statistical analysis:

The collected data were organized, coded, computerized, tabulated and analyzed by using electronic computer and Statistical Package for Social Sciences (SPSS) version 20. Data were presented in the form of tables and graphs. The collected data were represented in terms of number, percentage distribution, means, standard deviation and relation coefficient. Chi-square(x^2) was used to test the significance of some variances. A significant difference was considered when ($p<0.05$). A highly statistical significant difference when ($P< 0.001$) and Insignificant difference when ($P >0.05$).

Results:

Table (1): Shows that, the majority (86.7%) of the studied children aged between 10 to 12 years old with M ± SD of 11.04 ± 1.045 years, less than two thirds (60.0%) of them were males, and less than half (45.3%) of

them were the third child to his family. Regarding the number of children in the family, less than half (44.0%) of the studied children had three children in their family, two thirds (66.7%) of them were living in rural areas, and more than half (52.0%) of them were in the fifth grade.

Figure (1): Shows that, less than on third (28.0%) of the studied children had good total knowledge score regarding covid-19 pre the preventive nursing guidelines implementation which increased to more than three quarters (77.3%) post the preventive nursing guidelines implementation, while less than two thirds (60.0%) of them had poor total knowledge score pre the preventive nursing guidelines implementation which decreased to less than one fifth (12.0%) post the preventive nursing guidelines implementation.
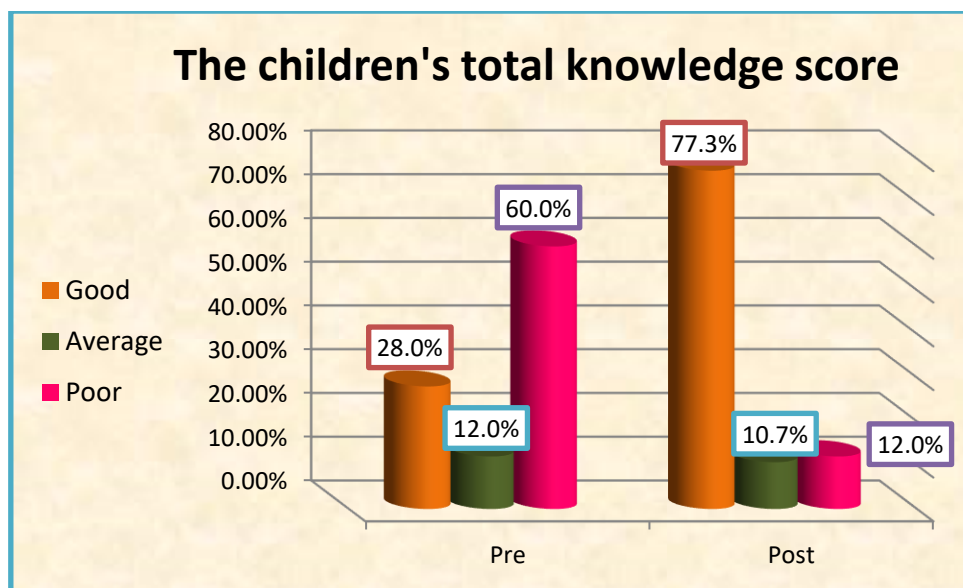
Figure (2): Illustrates that, more than on third (40.0%) of the studied children had satisfactory total practices score regarding covid-19 prevention pre the preventive nursing guidelines implementation which increased to more than three quarters (84.0%) post the preventive nursing guidelines implementation, while more than half (60.0%) of them had unsatisfactory total practices score pre the preventive nursing guidelines implementation which decreased to less than one fifth (16.0%) post the preventive nursing guidelines implementation.

Table (2): Shows that, there was a positive correlation found between the studied children's total knowledge and total reported practices between pre and post the preventive nursing guidelines implementation.
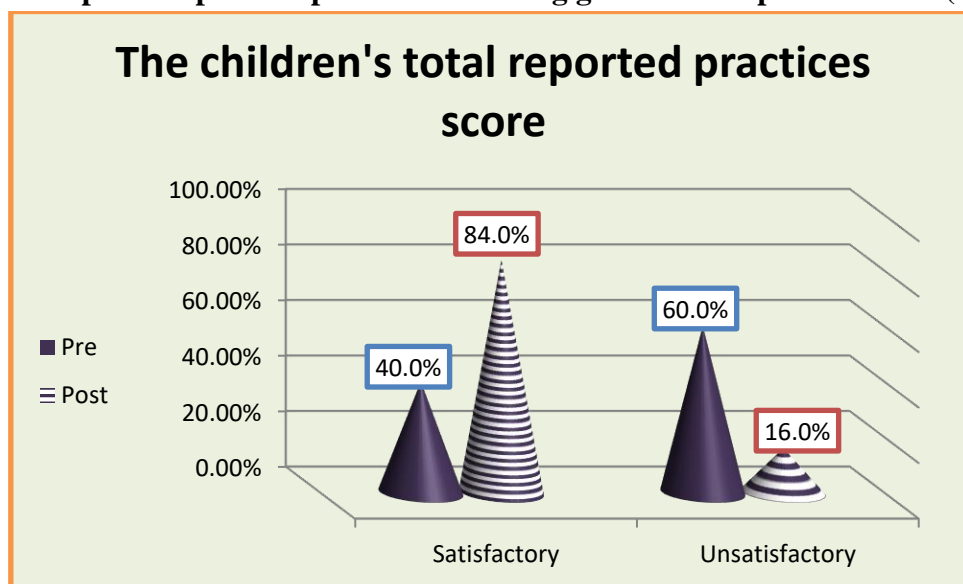
Table (1): Distribution of the studied children according to their personal characteristics, (n = 75).

The personal characteristics	No.	%
Age (Years):		
8 - > 10	10	13.3
10 - ≥ 12	65	**86.7**
M±SD 11.04±1.045		
Gender:		
Male	45	**60.0**
Female	30	40.0
The child ranking:		
1st	8	10.7
2nd	18	24.0
3rd	34	**45.3**
4th +	15	20.0
The number of children in family:		
One	8	10.7
Two	25	33.3
Three	33	**44.0**
Four or more	9	12.0
Residence:		
Urban	25	33.3
Rural	50	**66.7**
The children's level of education:		
First grade	0	0.0
Second grade	0	0.0
Third grade	3	4.0
Fourth grade	7	9.3
Fifth grade	39	**52.0**
Six grade	26	34.7

The children's total knowledge score

Figure (1): Percentage distribution of the studied children's total knowledge score regarding Covid-19 pre and post the preventive nursing guidelines implementation (n=75).

The children's total reported practices score

Figure (2): Percentage distribution of the studied children's total reported practices score regarding Covid-19 prevention pre and post the preventive nursing guidelines implementation, (n = 75).

Table (2): Correlation between the studied children's total knowledge and total practices pre and post the preventive nursing guidelines implementation (n=75).

| Variables | Total knowledge | | | |
| | Pre | | Post | |
	r	P-value	r	P-value
Total practices	0.525	0.001**	0.717	0.001**

Discussion:

Coronavirus disease (COVID-19) is a global pandemic that is caused by severe acute respiratory syndrome coronavirus-2. Covid-19 was first seen in Wuhan, Hubei Province, China, on 31 December 2019, and later, on 12 March 2020, was declared by World Health Organization (WHO) as a global pandemic. The disease is highly infectious, and the main clinical symptoms include fever, dry cough, fatigue, myalgia, and dyspnea. In China, 18.5% of the children with Covid-19 develop to the severe stage, which is characterized by acute respiratory distress syndrome, septic shock, difficult-to-tackle metabolic acidosis, and bleeding and coagulation dysfunction **(Bukata et al., 2022)**.

According the personal characteristics of the studied children; the current study revealed that the majority of them aged between 10 to less than or equal 12 years old with M ± SD of (11.04 ± 1.045). As regards the studied children's gender, the present study showed that less than two thirds of them were males. Concerning the studied children's ranking, the current study finding indicated that less than half of them were the third child to their family.

Regarding the number of children in the family, less than half of the studied children had three children in their family. As for the studied children's residence, the current study result demonstrated that two thirds of them were living in rural areas. Concerning the studied children's level of education, the study result showed that more than half of them were in the fifth grade.

As for the studied children's total knowledge score regarding covid-19; the current study result showed that less than on third of them had good total knowledge score pre the preventive nursing guidelines implementation which increased to more than

three quarters post the preventive nursing guidelines implementation. This finding supported with **Dong & Bouey, (2020),** who conducted a study entitled " Epidemiology of covid-19 among children in China", and found that there was an improvement in the total score of knowledge among children during covid-19 after the intervention implementation.

The same result was also in agreement with **Pongoh et al., (2022)**, who carried out a study entitled "Effectiveness of health education in covid-19 prevention for children using comic with cultural context media in Indonesia", and found that the mean score of the elementary school students' knowledge post-test was significantly higher than the pre-test. From the researchers point of view this might be due to the attractive presentation of preventive nursing guidelines through pictures and colored booklet.

Regarding the correlation between the studied children's total knowledge and total reported practices; the present study result showed that there was a highly statistically significant positive correlation found between the studied children's total knowledge and total practices. This finding was similar to **Nassar et al., (2021)**, who indicated that there was a statistically significant positive correlation found between the children's total knowledge and their reported practice.

The same result was also in the same line with **Makarabhirom, (2021)**, who carried out a study entitled "Knowledge, attitude, and preventive behavior toward covid-19 of high school students in Bangkok, Thailand: A study among students in Harrow international school", and found that the data showed a statistically significant positive correlation between the studied students' total knowledge and their total preventive behavior regarding covid-19. From the researchers point of view,

this association might be because the improvement in knowledge reflects an improvement in practice. This also might be because the studied children who had sufficient knowledge can practice well.

Conclusion

The preventive nursing guidelines was effective in improving hospitalized school age children' knowledge and reported practice about COVID-19. The majority of studied children having good knowledge score and satisfactory reported practices regarding COVID-19. Additionally, there was a positive correlation found between the studied children's total knowledge and total reported practices between pre and post the preventive nursing guidelines implementation. So that these findings support the research hypothesis and reflect acceptance of the hypothesis that the preventive nursing guidelines will improve the knowledge and the reported practice of hospitalized school age children about COVID-19.

Recommendations

1. Simple Arabic illustrative educational booklets, posters and COVID-19 plan should be produced and provided for all children in inpatient and outpatient department.
2. Providing mothers having children in the school age and caregivers with appropriate knowledge about COVID-19.
3. Hotlines should be available 24 hours for providing proper information about any concerns.
4. Providing Educational instruction on social platform and social media about COVID-19.
5. Using telenursing as a new trend in education for providing knowledge about COVID-19 for mothers and school age children.

References:

Alzahrani, M., Bamashmous, H., Hana, A., Alghamdi, H., Alharbi, R., Hassan, M., Darwish, M., Bukhari, A., Mahmoud, B., Mohamed, A., Mirza, A., Adel, M., Abuzenadah, A., Turki, S., Abujamel, S., Anwar, M., and Hashem, M. (2023). Mouth rinses efficacy on salivary SARS-CoV-2 viral load:A randomized clinical trial. Research Article. 1002(100), 2-10.

Amer, H., and Mohamed, H. (2020). Effect of nursing instructions about COVID-19 preventive measures on knowledge and reported practice of hospitalized school age children. International Journal of Pediatric: 8(5): 11454.

Arora, R., Purohit, S., and Agarwal, S. (2021). COVID 19: The Economic Collapse in India. Journal of Enterprise and Development(JED). 3 (2), 71-80.

Brenda, W., Penninx, H., Michael, E., Robyn, S., and Christiaan, H. (2022). How COVID-19 Shaped Mental Health: From Infection to Pandemic Effects. Nature Medicine Review Article. 28 :2027–2037

Bukata, I., Dadi, L., Ayana, A., Mengistu, D., Yewal, D., Gizaw, T., and Woldesenbet, Y. (2022). Knowledge, Attitudes, and Practice Toward Prevention of COVID-19 Among Jimma Town Residents: A Community-Based Cross-Sectional Study. Sec. Infectious Diseases: Epidemiology and Prevention.https://doi.org/10.3389/fpubh.2022.822116

Cascella, M., Rajnik, M., and Aleem, A. (2022). Features, Evaluation, and Treatment of Coronavirus (COVID-19) [Updated 2022 Oct 13]. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2022 Jan-. Available from: https://www.ncbi.nlm.nih.gov/books/NBK554776/

Center for Disease Control and Prevention, (2020). How to Protect Yourself & Others.

Available at: https://www.cdc.gov/coronavirus/2019-ncov/prevent-getting-sick/prevention.html. Accessed on 24/ 1/2020. 7:22 am

Center of Disease Control and prevention, (2022). Symptoms of COVID-19: Available at: https://www.cdc.gov/coronavirus/2019-ncov/symptoms-testing/symptoms.html Accessed on 25/ 2/ 2023 at 10: 30 am.

Center of Disease Control and prevention, (2023). How to Protect Yourself and Others: How to Protect Yourself and Others https://www.cdc.gov/coronavirus/2019-ncov/prevent-getting sick/prevention.html. Accessed on :14/3/2023.

Dong, L., and Bouey, J. (2020). Epidemiology of COVID-19 among children in China, Emerging Infectious Diseases; 26(7): 1616-1618. doi:10.3201/eid2607.202407.

Estefanía, D., Cristina, I., Alexis, A., and Gustavo, O. (2021). Nursing role in the covid-19 pandemic: Systematic Review. Archivos Venezolanos de Farmacología y Terapéutica. 40(6): 0798-0264

Flaxman, S., Whittaker, C., Semenova, E., Rashid, T., Robbie, M., Blenkinsop, A., Juliette, T., Mishra, S., Bhatt, S., Gurdasani D., and Oliver, O. (2023). Assessment of COVID-19 as the Underlying Cause of Death Among Children and Young People Aged 0 to 19 Years in the US. Original Investigation Public Health JAMA Network Open.6(1):1-9.

Jenner, E., Wilson, K., and Robert, N. (2020). Coronavirus A book for children. Nosy Crow; 1-15.

Kampen, V., Jeroen, A., David, C., Vijver, V., Pieter, A., Bart, L., Mart, M., Okba, N., Johannes, C., Akker, D., Endeman, H., Diederik, J., Jan, J., Rogier, S., Menno, M., Eerden, D., Dennis, A., Herold, J., Verbon A., and Jurriaan, M. (2021). Duration and key determinants of infectious virus shedding in hospitalized patients with coronavirus

disease-2019 (COVID-19). Nature Communication 12:267: 1-6.

Makarabhirom, T. (2021). Knowledge, attitude, and preventive behavior toward COVID-19 of high school students in Bangkok, Thailand: A study among students in Harrow International School. International Journal of Medical Science and Public Health; 10(2): P.262. DOI: 10.5455/ijmsph.2021.08085202124112021.

Nassar, H., El-Ghadban, F., Mahmoud, T., Mohamed, O., and Ayed, M. (2021). Effect of Mobile-Based Nursing Intervention on Preventive Measures of COVID –19 among Children Suffering from Chronic Kidney Diseases. Original Article Egyptian Journal of Health Care; 12(4): Pp. 75-90. DOI: https://orcid.org/0000-0003-0922-5823.

O'Neill, L., and Chumbler, R. (2022). Risk Factors for COVID-19 Hospitalization in School-Age Children .Health Services Research and Managerial Epidemiology 9: 1-6.

Pongoh, A., Lingga, V., Duhita, F., Situmorang, C., Kamala, R., Abdullah, and V. (2022). Effectiveness of health education in covid-19 prevention for children using comic with cultural context media. Journal of Pharm Negative Results;13(4): 1067-1073. DOI:10.47750/pnr.2022.13.04.147.

Seagle, E., Brendan, R., Shawn, R., Georgacopoulos, O., Natalie, S., Roland, J., Devra, M., Helen, L., Christopher, A., Kayalioglu, H., Clogher, P., Revis, A., Monica, M., Lee, H., Shrum, S., Erin, C., Brenda, L., Tiffanie, M., and Meghan, M. (2023). The Landscape of Candidemia During the Coronavirus Disease 2019 (COVID-19) Pandemic. Clinical infectious Disease Major Article. 74, 802-811.

Shereen, M. (2020). COVID-19 Infection: Origin, Transmission, and Characteristics of Human Coronaviruses. Journal of Advanced

Research; 24: 91-98. https://doi.org/10.1016/j.jare.2020.03.005

UNICEF, (2020). Key Messages and actions for COVID-19 Prevention and Control in Schools Available at: https://www.who.int/docs/default-source/coronaviruse/key-messages-and-actions-for-covid-19-prevention-and-control-in-schools-march-2020.pdf?sfvrsn=baf81d52_4 Accessed on 26/11/2020 12:11 am.

World Health Organization (2023). WHO Coronavirus (COVID-19) Dashboard. Available at : https://covid19.who.int/(Accessed on 2/3/2023. 11:30 am).

Zhou, F., Yu, T., Du, R., Fan, G., Liu, Y., Liu, Z., Xiang, J., Wang, Y., Song, B., Gu, X., Guan, L., Wei, Y., Li, H., Wu, X., Xu, J., Tu, S., Zhang, Y., Chen, H., and Cao, B. (2020). Clinical course and risk factors for mortality of adult inpatients with COVID-19 in Wuhan, China: a retrospective cohort study. Lancet. 10229 (395) 1054-1062.

تأثير الإرشادات التمريضية الوقائية عن كوفيد- 19 على الأطفال بالمستشفى فى سن المدرسة

إيمان أحمد طه النجار – فاتن شفيق محمود – باسمه ربيع عيد الصادق

هدفت الدراسة إلى تقييم تأثير الدلائل الإرشادية التمريضية الوقائية حول كوفيد -19 علي الأطفال في سن المدرسة. حيث تم تصميم بحث شبه تجريبي (قبل الاختبار / بعد الاختبار) لإجراء هذه الدراسة. اجريت الدراسه بقسم باطنة أطفال بالمستشفى بنها الجامعى على عينة هادفة من 75 طفل. ونتج ذلك بأنه كانت المعرفة الإجمالية والممارسات الإجمالية المبلغ عنها المتعلقة بـكوفيد- 19 أعلى بعد تنفيذ الإرشادات التمريضية الوقائية المصممة. كانت هناك علاقات ذات دلالة إحصائية عالية بين درجة المعرفة الإجمالية للأطفال المدروسين فيما يتعلق بكوفيد -19 وخصائصهم الشخصية قبل وبعد تنفيذ الإرشادات الوقائية المصممة. كانت هناك علاقات ذات دلالة إحصائية عالية بين مجموع درجات الممارسات للأطفال الذين تمت دراستهم وخصائصهم الشخصية قبل وبعد تنفيذ الإرشادات التمريضية الوقائية المصممة. كانت هناك علاقة إيجابية ذات دلالة إحصائية عالية وجدت بين تنفيذ قبل وبعد تنفيذ المبادئ التوجيهية الوقائية المصممة. وقد أوصت الدراسة بإنتاج كتيبات تعليمية توضيحية بسيطة وملصقات عن كوفيد - 19 وتوفيرها بالأقسام الداخلية والعيادات الخارجية.