

Awareness Related To The Spread Of Covid-19 To Children - A Cross-Sectional Survey

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ABSTRACT:

BACKGROUND: Covid-19 (coronavirus) has been identified as the cause of an outbreak of the respiratory disease in Wuhan, China; declared as a global health emergency on January 20, 2020. Symptoms of covid include cough, fever, tiredness, sore throat etc. Children below the age of 1 are at a high risk of infection due to less maturity of the immune response.

AIM: To create awareness among parents related to the risk of exposure of their children to Covid-19.

MATERIALS AND METHODS: A cross-sectional study was conducted among 100 parents of school-going children with different cultural backgrounds. A pre-validated and reliable questionnaire containing 10 questions was distributed to the participants. The questionnaire contained the question items pertaining to their knowledge and awareness related to the risk of exposure of their children to Covid-19. Parents who had more than 1 child were excluded from the study. Statistical analysis was performed in Statistical Package for the Social Sciences (SPSS) software version 23.0 (IBM, Chicago, USA). Descriptive statistics were performed to present the frequency distribution of the options of the question items. Also, Pearson's chi-square association was done to analyze the knowledge and perception of participants.

RESULTS: From the present study it was assessed that children from cities are more healthy(25.71%) and are aware of covid and its consequences than children in towns and villages (28.57%). Most of the children follow safety measures such as wearing masks, using hand sanitizer, maintaining social distance, etc while playing outdoors/ in public places.

CONCLUSION: By creating awareness among parents about covid and its consequences we can reduce the fatality rate of newborns or children with weak immunity. By this study we emphasize the importance of hygienic practices that are supposed to be followed during Covid to ensure a healthy life.

KEYWORDS: Covid-19, parents, children, hygienic practices, Novel analysis, immunity, awareness.

INTRODUCTION:

Covid-19 is also known as Severe Acute Respiratory Syndrome Coronavirus2 (SARS- CoV-2). The first case of Covid was reported in Wuhan, China on December 31, 2019. Declared as a global health emergency on January 30, 2020(1). Symptoms of Covid-19 include fever, cough, sore throat, tiredness, etc. Significantly affected both physical and mental health of the people. Elevation of fatality rate of 2.48% to 5.52%.

In the study done by Fischer A et al, it was found that children below the age of 1 are highly prone to covid infection (2). This can be due to less maturity of the immune response. Also, children are least infected compared to adults. This can be due to less exposure of children to infected patients, strong innate immunity, and the role of maternal immunity transmission (3). In the study done by Balasubramaniam.S et al it was proved that children affected with covid are asymptomatic/have mild symptoms but few clinical features of covid include fever and cough (4).

In the study done by Gonzalez et al, it was found that 2135 children were reported in the Chinese center for disease control and epidemic, curves were obtained out of which 728 were confirmed cases, 1407 were suspected cases. The median age of all patients was 7 years. 90% were asymptomatic (5),.

Our team has extensive knowledge and research experience that has translated into high quality(6),(7),(8),(9),(10),(11),(12),(13),(14),(15),(16),(17),(18),(19),(20),(21),(22),(23),(24),(25). Aim of the study is to create awareness among parents related to the risk of exposure of their children to Covid-19.

MATERIALS AND METHODS:

A cross-sectional study was conducted among parents of school-going children with different cultural backgrounds. A convenience sampling technique was employed. A pre-validated and reliable questionnaire containing 10 questions was distributed to the participants. The questionnaire contained the question items pertaining to their knowledge and awareness related to the risk of exposure of their children to Covid-19. The average time taken by the participants to fill the questionnaire was 3 minutes. Oral consent from the participants had been obtained after explaining the need for the study.

Parents who had more than 1 child and children aged less than 3 were excluded from the study. Prior approval to carry out the study was obtained from the Institutional Research Committee (IRB) of the authors University. Data collected were tabulated and Statistical analysis was performed in Statistical Package for the Social Sciences (SPSS) software version 23.0 (IBM, Chicago, USA). Descriptive statistics were performed to present the frequency distribution of the options of the question items. Also, Pearson's chi-square association was done to find the influence of residential location on the knowledge, and awareness related to the risk of exposure of children to Covid-19.

RESULTS :

There were 105 respondents involved in the study. Out of 105 parents, 38.10 % of the parents reside in cities, 20.95% of the parents reside in villages and 40.95% of the parents reside in towns. In fig 2, it was assessed that 44.76% of the parents complained about the frequent illness of their child, 55.24% of the parents were satisfied with the health of their child . In fig 3 it was assessed that 71.15% of the parents were aware of the fact that children aged less than 1 are at high risk of covid infection, 28.85% of the parents are not aware of this fact. In fig4 it was assessed that 84.62% of the parents are aware of the fact that the immunity of the child plays an important role in protecting their child from covid, 15.38% of the parents are not aware of this fact. In fig 5 it was assessed that 57.69% of the children are aware of covid and its symptoms, 42.31% of the children are not aware of covid and its symptoms. In fig 6 it was assessed that 72.12% of the children are aware of the hygienic practices that are supposed to be followed during covid, 27.88% of the children are not aware about the hygienic practices that are supposed to be followed during covid. In fig 7 it was assessed that 47.62% of the children spend their leisure time by playing outdoor games, 24.76% of the children spend their leisure time by playing indoors and 27.62% of the children spend their leisure time by doing other activities like learning and reading books. In fig 8 , it was assessed that 56.19% of the children attend online classes and 43.81% of the children attend offline classes. In fig 9, it was assessed that 86.54% of the children wear masks in public places, 13.46% of the children don't wear masks in public places. In fig 10 , 65.71% of the children mask in public places, 13.33% of the children use hand sanitizer after playing and 20.95% of the children maintain social distance in public places. Health status of the children residing in different locations is represented in fig 11 where out of 38% of the children living in cities, 25.71% of the children are reported to be healthy and 12.38% of the children fall sick frequently. . Out of 40.95% of the children residing in town,16.19% of the children are reported to be healthy and 24.76% of the children fall sick frequently. Out of 20.95% of the children residing in villages , 13.33% of the children are reported to be healthy, 7.62% of the

children fall sick frequently. P-value is 0.025 ; ($p < 0.05$) implying that most of the children residing in town fall sick more frequently than others. Covid awareness status among children residing in different localities is represented in fig 12 where out of 38.09% of the children residing in cities, 28.57% of the children are aware about covid and its symptoms whereas 9.52% of the children are still not aware of it . Out of 40.95% of children residing in towns , 17.14% of the children are aware of covid and its symptoms whereas 23.81% of the children are still not aware of it. Out of 20.95% of the children residing in the village, 11.43% of the children are aware of covid and its symptoms whereas 9.52% of the children are still not aware of it. P-value is 0.009 ($p < 0.05$) implying that most of the children residing in cities are more aware than others. Figure 13 represents the percentage of children aware about different hygienic practices that are supposed to be followed during covid. Out of 38.16% of the children residing in cities, 30.48 % of the children are aware of the hygienic practices that are supposed to be followed whereas 7.62% of the children are not aware of it. Out of 40.99% of the children residing in the town, 2.71% of the children are aware of the hygienic practices that are supposed to be followed whereas 15.24% of the children are not aware of it. Out of 20.95% of the children residing in the village, 15.24% of the children are aware of the hygienic practices that are supposed to be followed whereas 5.71% of the children are not aware of it.. P-value is 0.220 ($p > 0.05$) implying that all the locality children are more or less aware of sanitization practices. Different hygienic practices followed by children residing in different localities during covid is represented in fig 14 where out of 38.09% of the children residing in cities, 8.57 % of the children use hand sanitizers, 21.90% of the children wear mask and 7.62% of the children maintain social distance in public places. Out of 40.95% of the children residing in town , 1.90% of the children use hand sanitizer, 30.48% of the children wear masks and 8.57% of the children maintain social distance in public places. Out of 20.95% of the children residing in villages , 2.86% of the children use hand sanitizer, 13.33% of the children wear masks and 4.76% of the children maintain social distance in public places. P value is 0.20 ($p > 0.05$) implying that all the locality children are more or less practicing several sanitisation measures.

Figure 1:

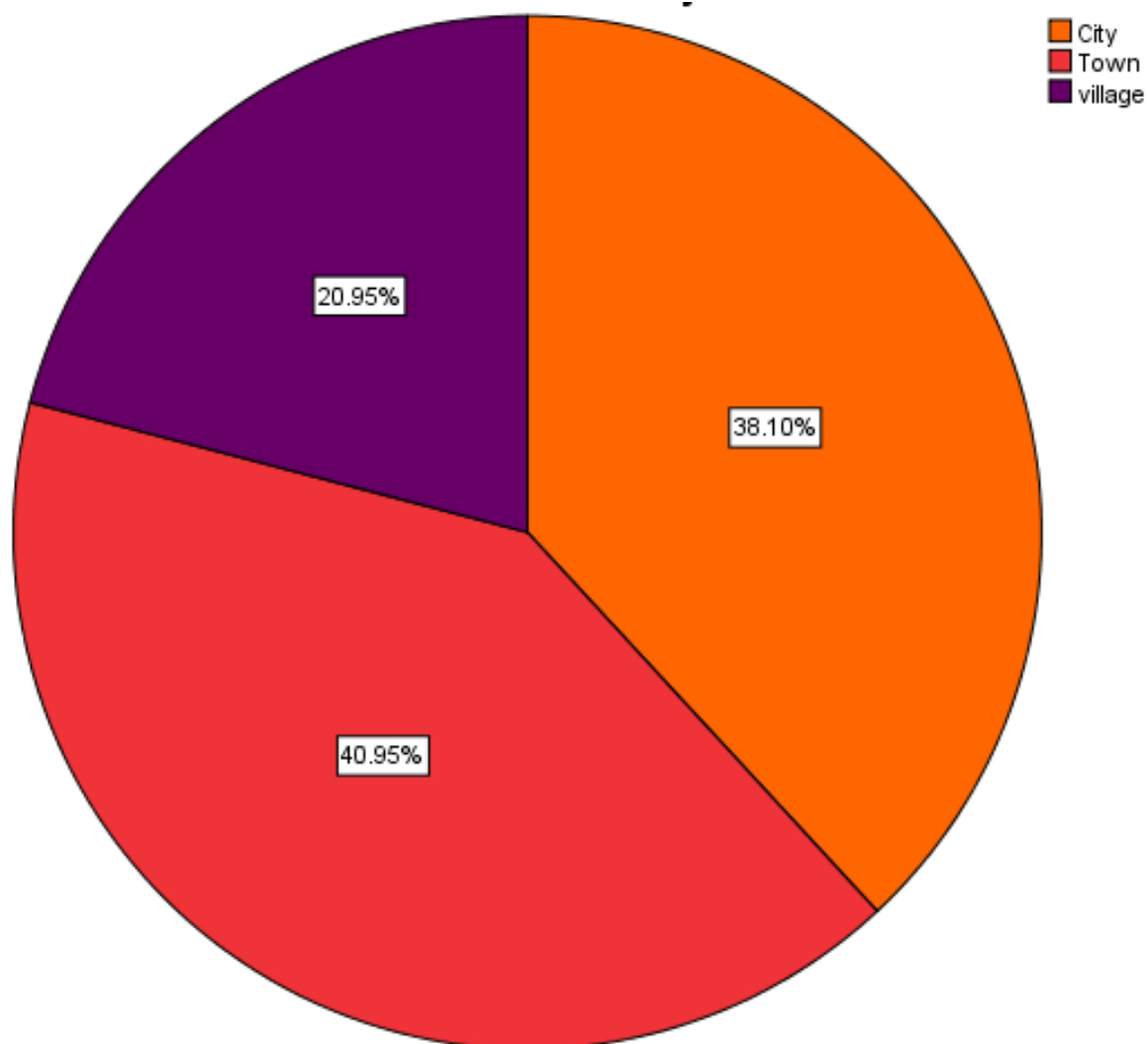


Figure 1 represents the percentage of parents residing in different locations (Red - town, Orange - city, Violet -village):.38.10 % of the parents reside in cities, 20.95% of the parents reside in the village and 40.95% of the parents reside in town.

Figure 2:

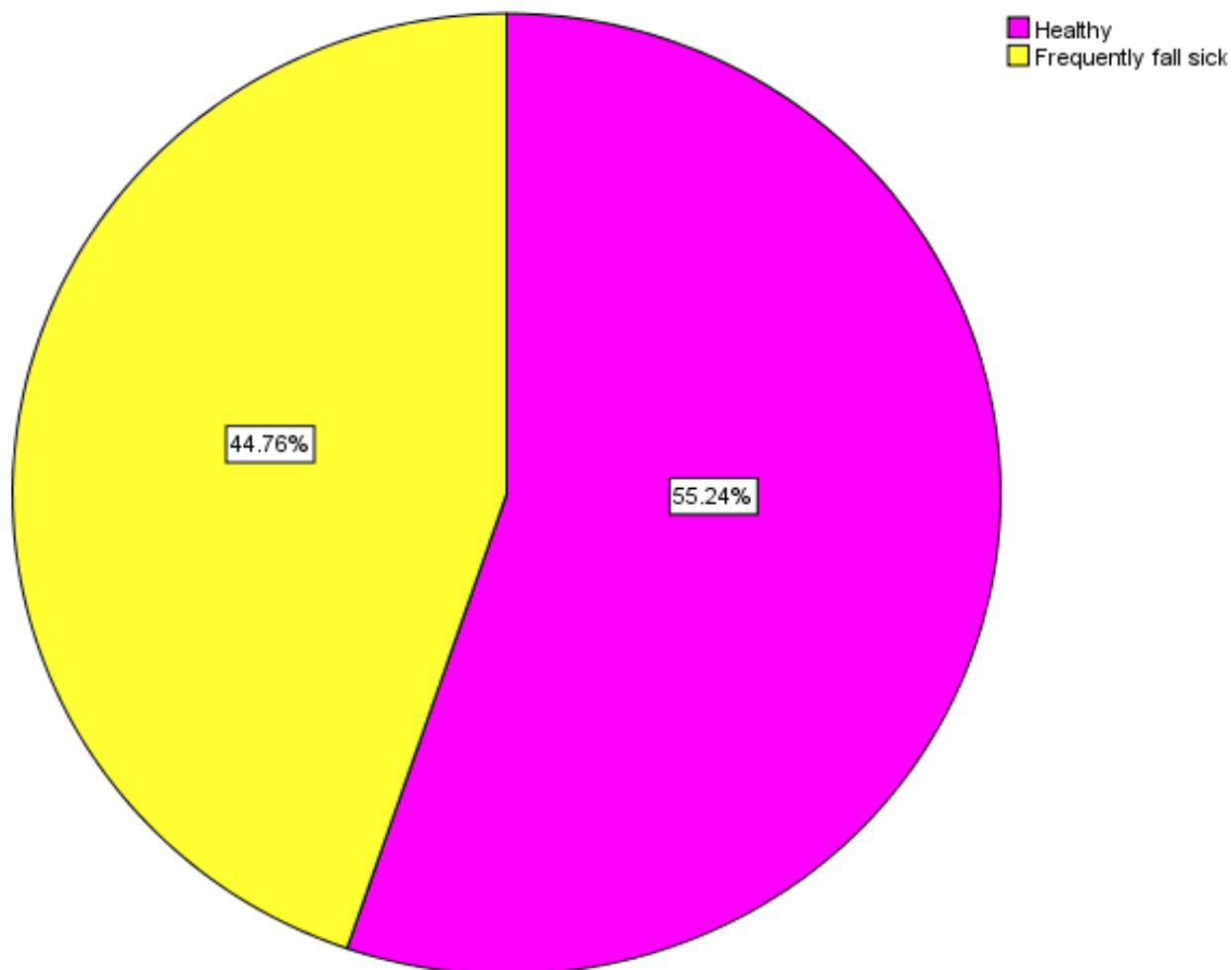


Figure 2 represents the health status of the child (Pink- healthy, Yellow- frequently falls sick): 44.76% of the parents complain about their child getting sick frequently, 55.24% of the parents are satisfied about the health of their child .

Figure 3:

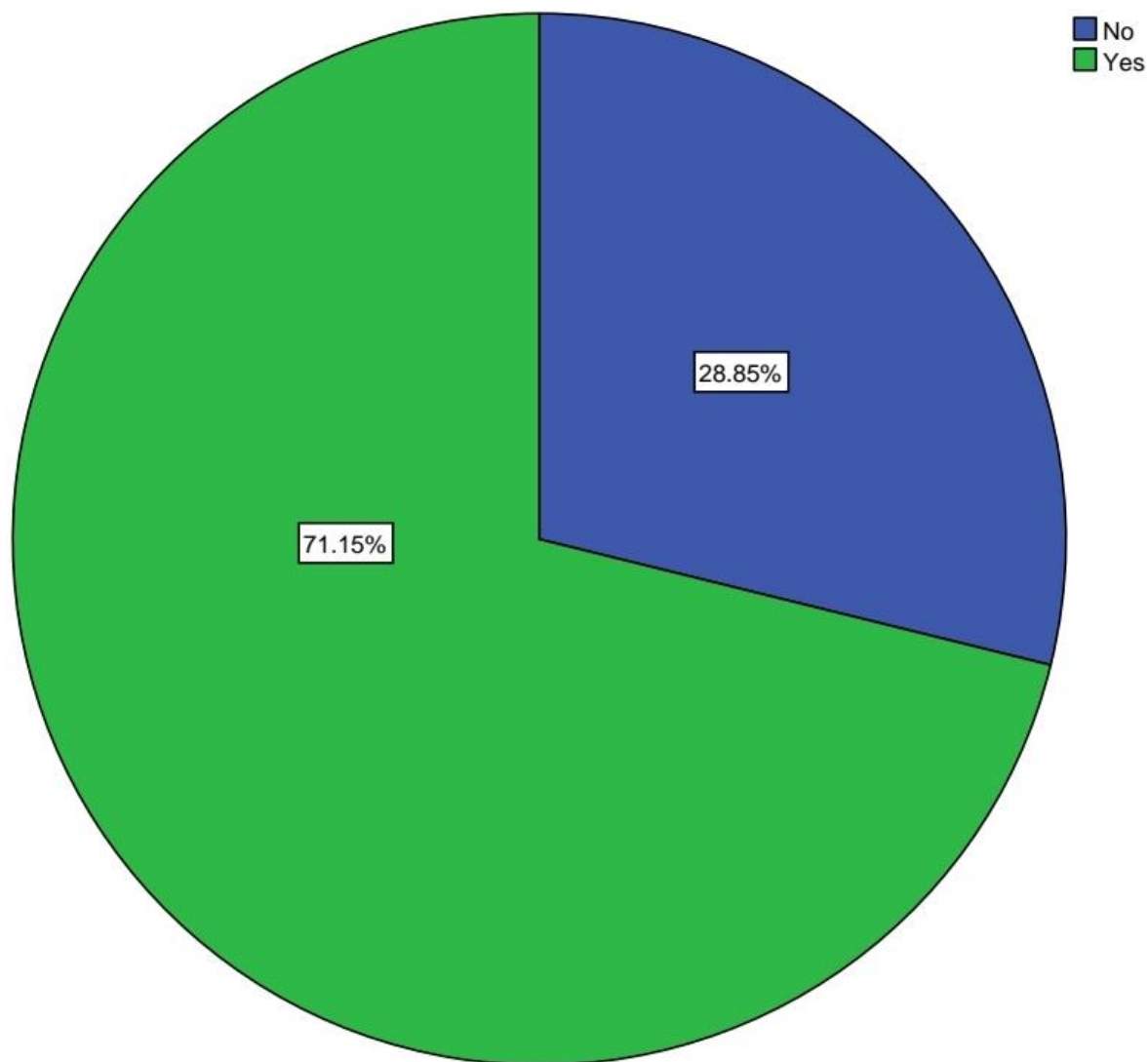


Figure 3 represents the percentage of students who responded to the question “ are you aware that children aged less than 1 are under high risk of covid infection?” (green -yes, blue-no): 71.15% of the parents are aware of the fact , 28.85% of the parents are not aware of this fact.

Figure 4 :

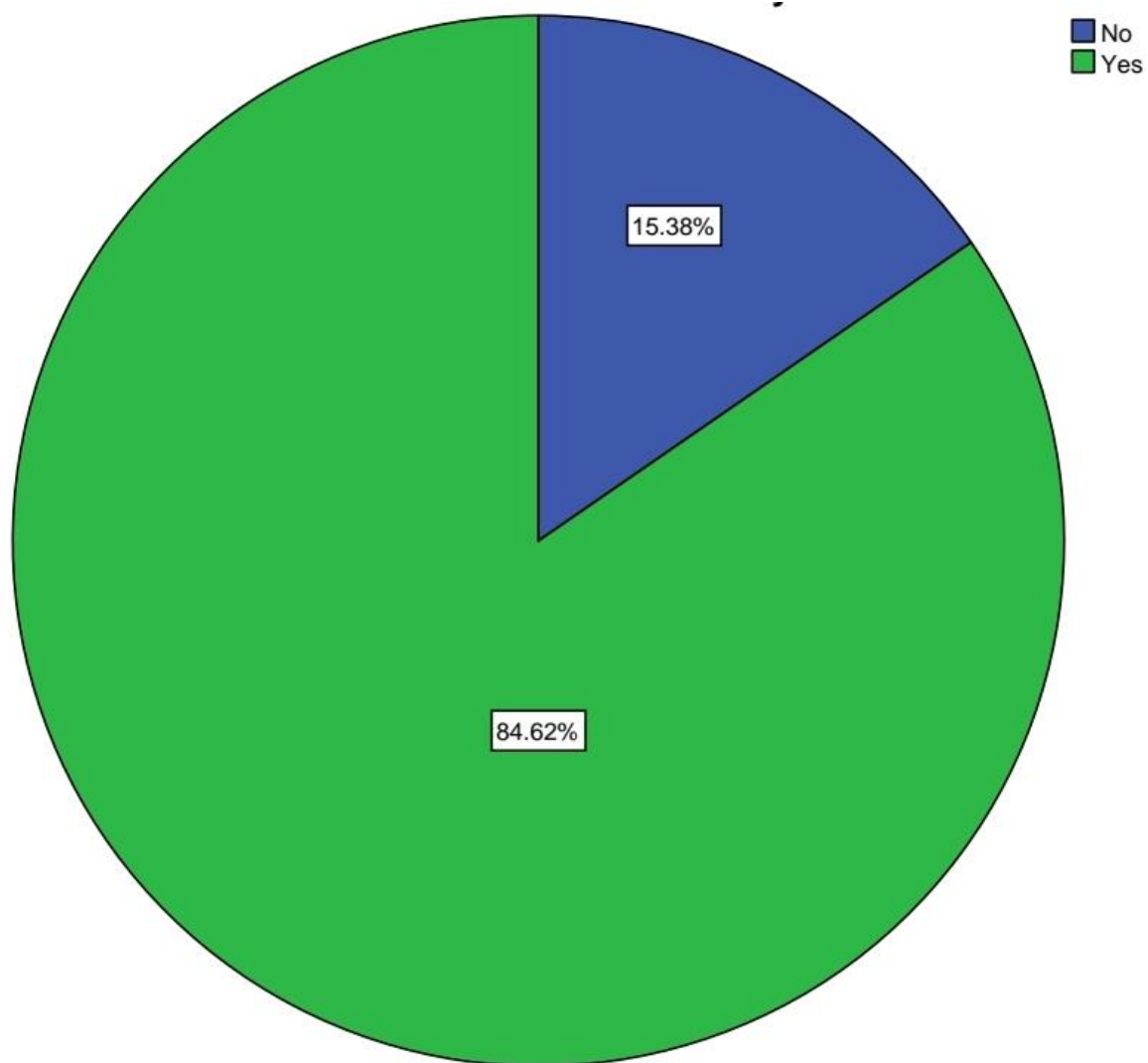


Figure 4 represents the percentage of parents aware about the fact that immunity of their child plays an important role in protecting their child from covid(green- yes, blue-no): 84.62% of the parents are aware of this fact, 15.38% of the parents are not aware of this fact.

Figure 5:

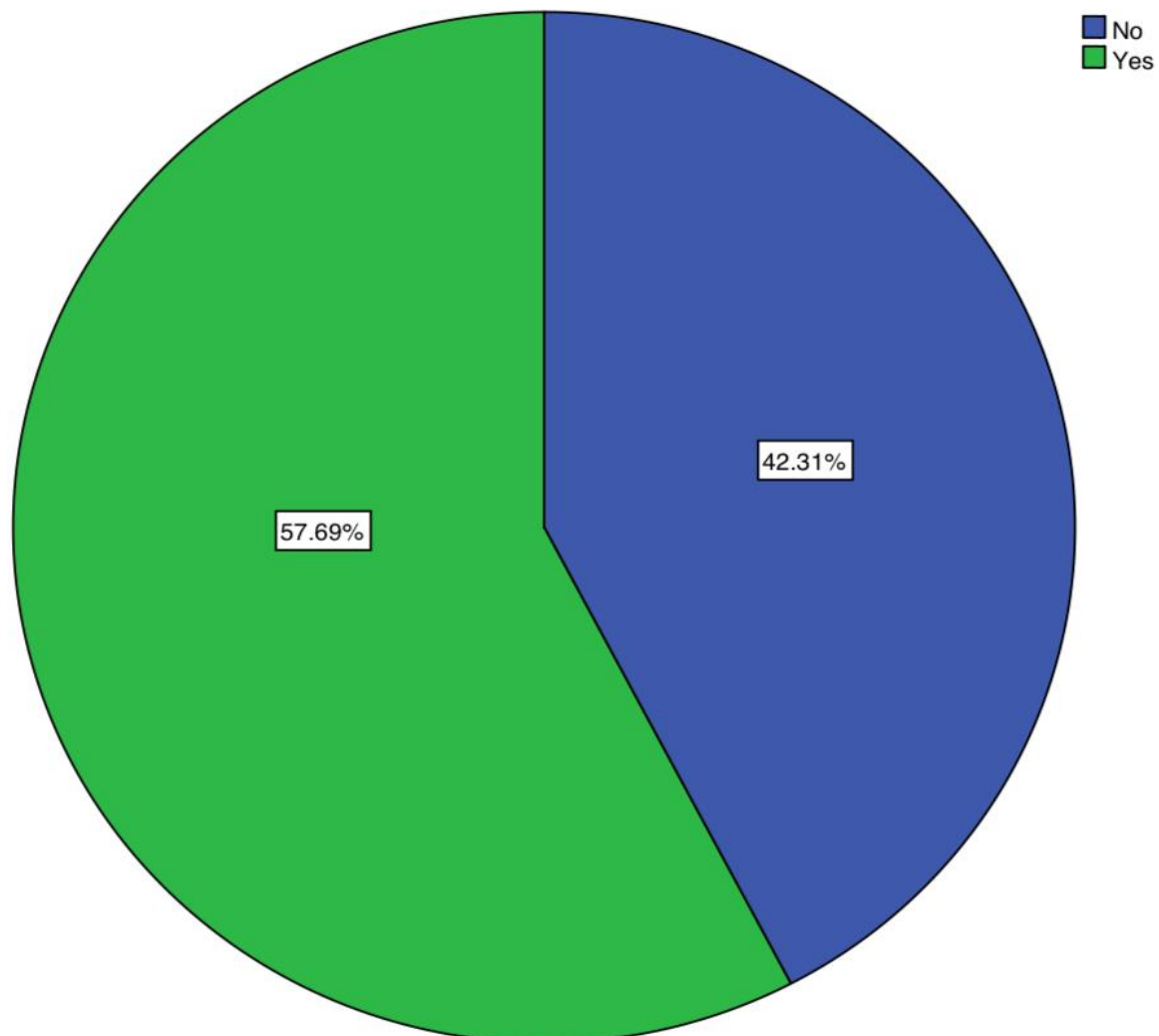


Figure 5 represents the percentage of children aware about covid and its symptoms (green -yes, blue-no): 57.69% of the children are aware about covid and its symptoms , 42.31% of the children are not aware about covid and its symptoms

Figure 6:

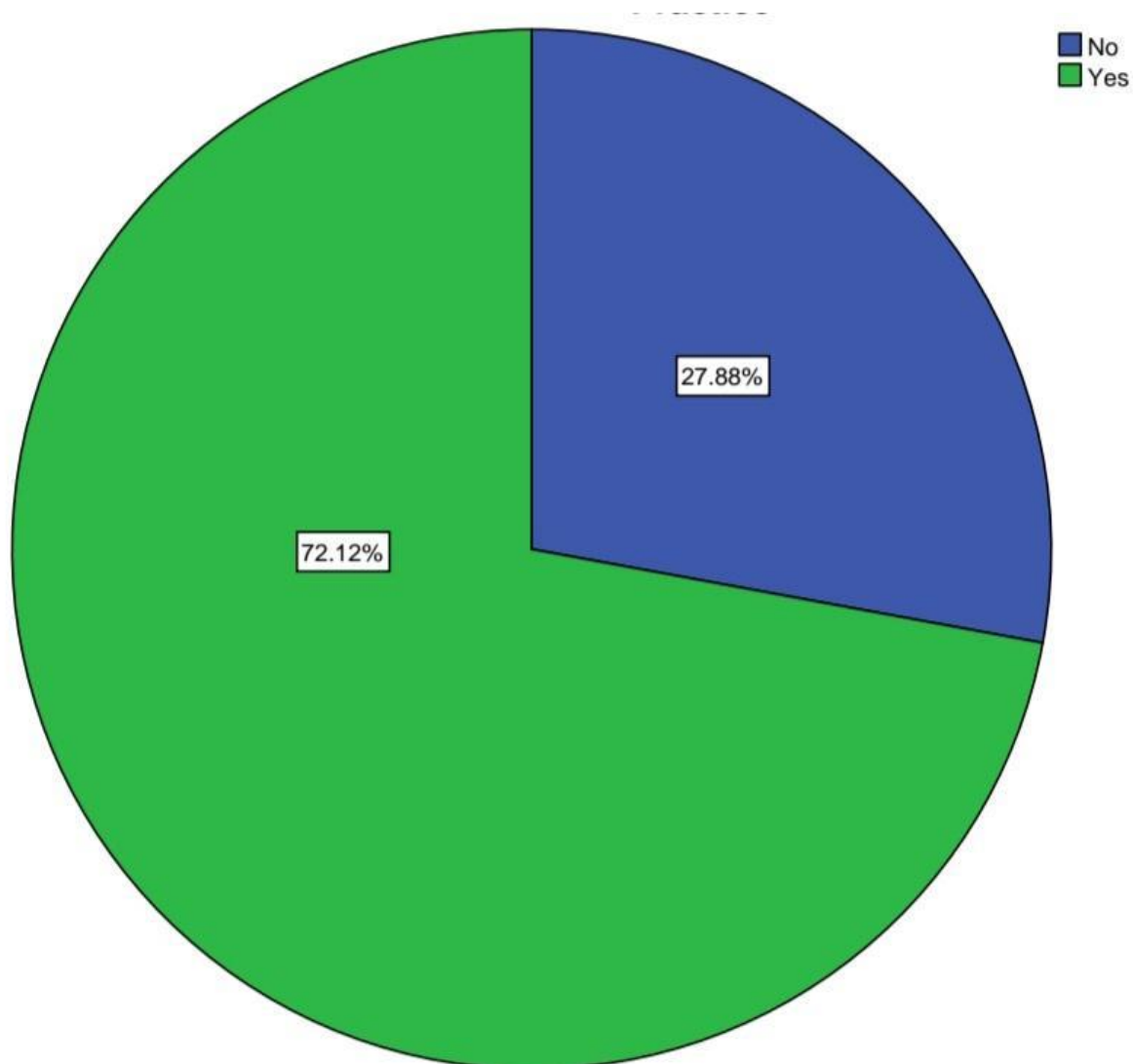


Figure 6 represents the percentage of children aware of the hygienic practices that are supposed to be followed during covid (green=yes, blue=no): 72.12% of the children are aware and 27.88% of the children are not aware .

Figure 7:

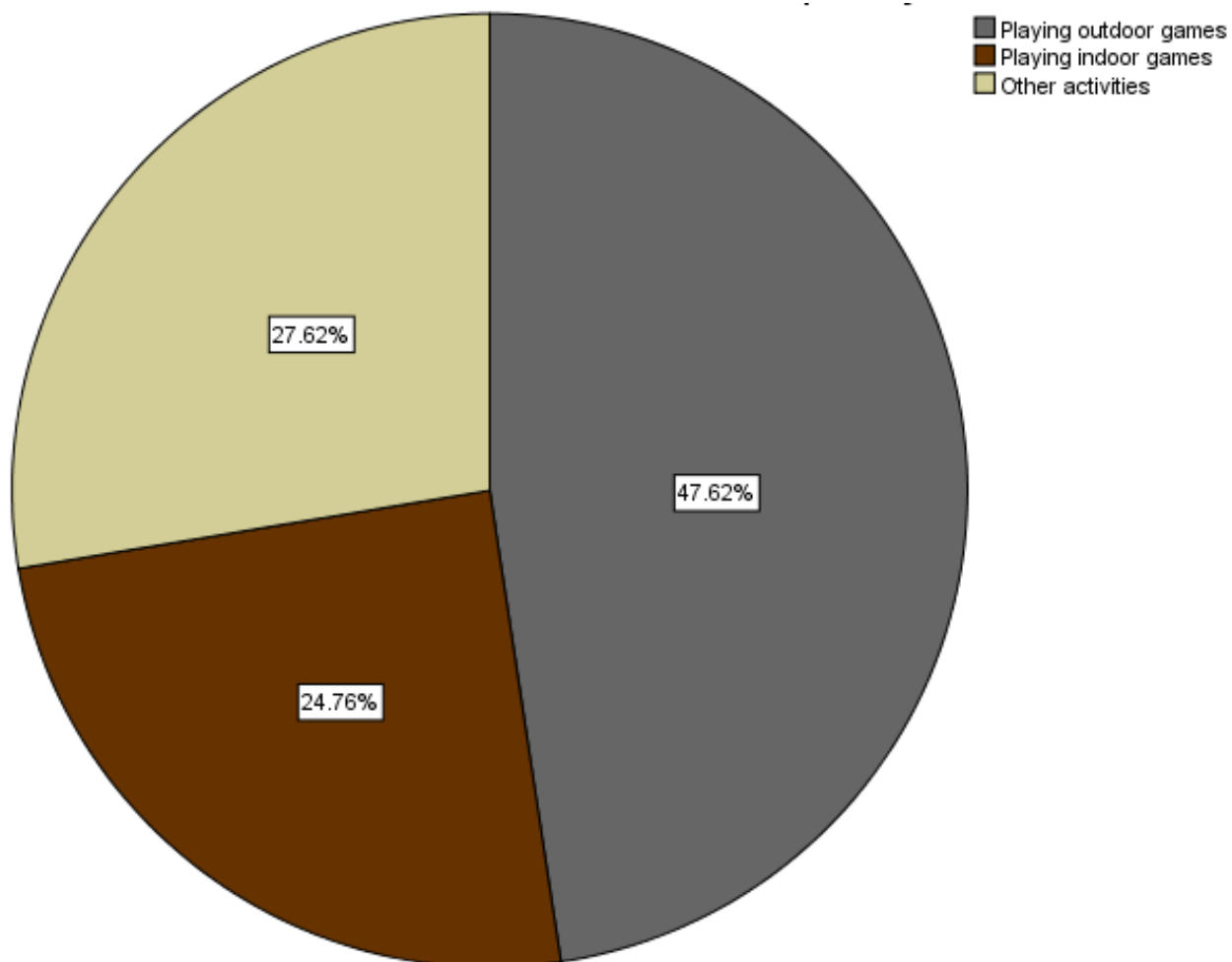


Figure 7 represents the percentage of children's way of spending leisure time: (Brown -playing indoor games, Beige-other activities,Grey-playing outdoor games): 47.62% of the children spend their leisure time by playing outdoor games, 24.76% of the children spend their leisure time by playing indoor and 27.62% of the children spend their leisure time by doing other activities.

Figure 8:

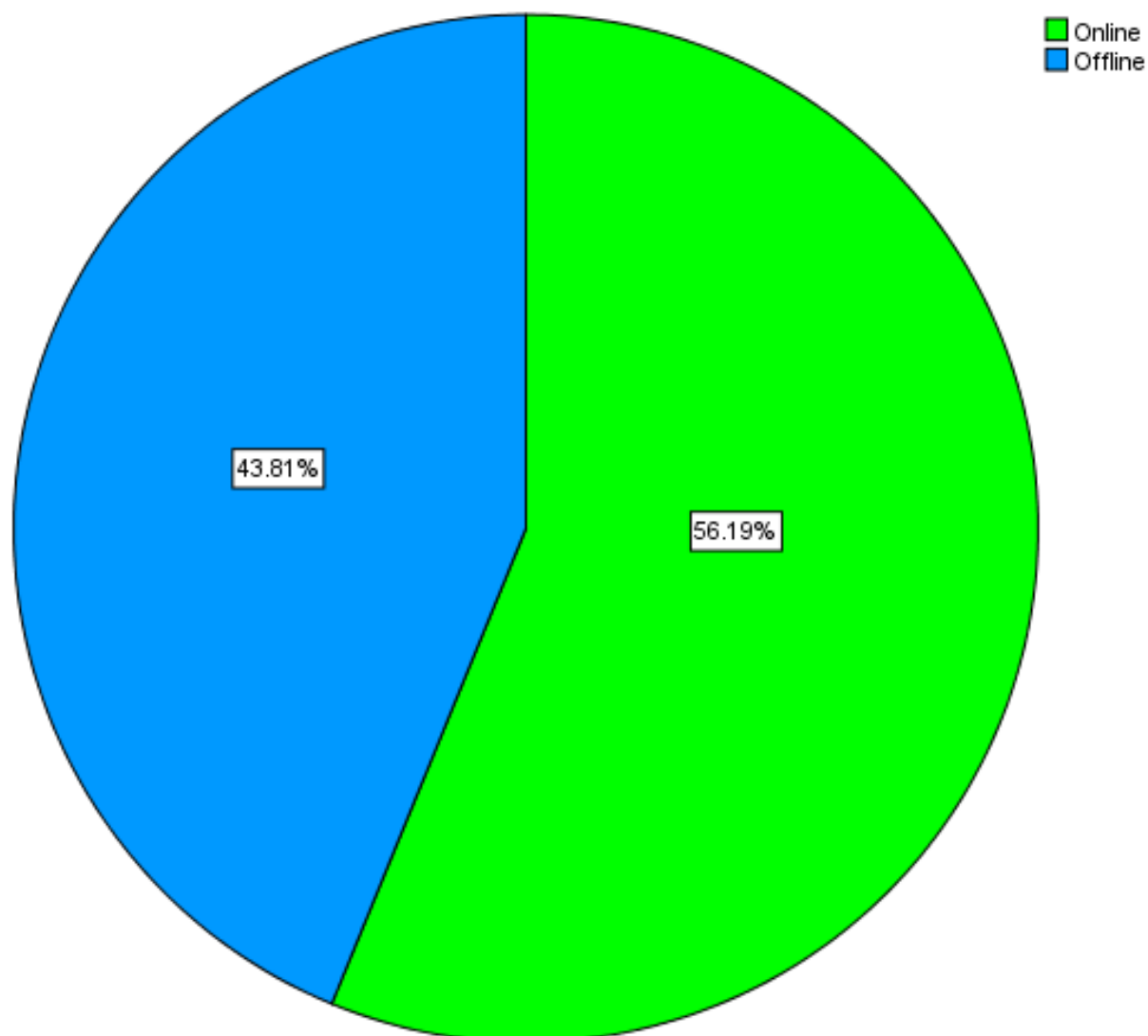


Figure 8 represents the percentage of children's mode of attending: (light green- online, light blue- offline) 56.19% of the children attend online classes and 43.81% of the children attend offline classes.

Figure 9:

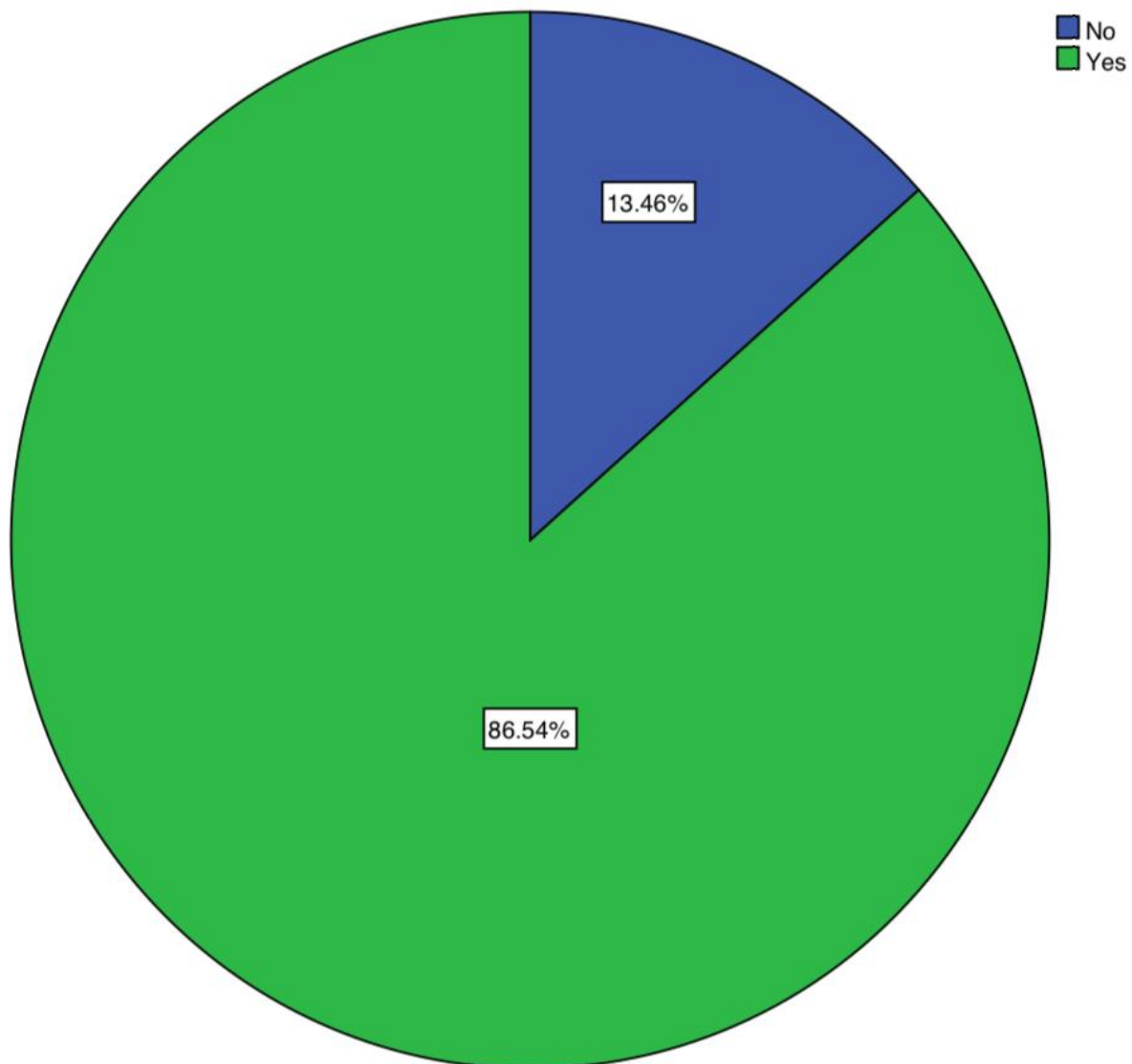


Figure 9 represents the percentage of children who wear masks in public places: (green- yes, blue- no)86.54% of the children wear mask in public places, 13.46% of the children don't wear mask in public places

Figure 10:

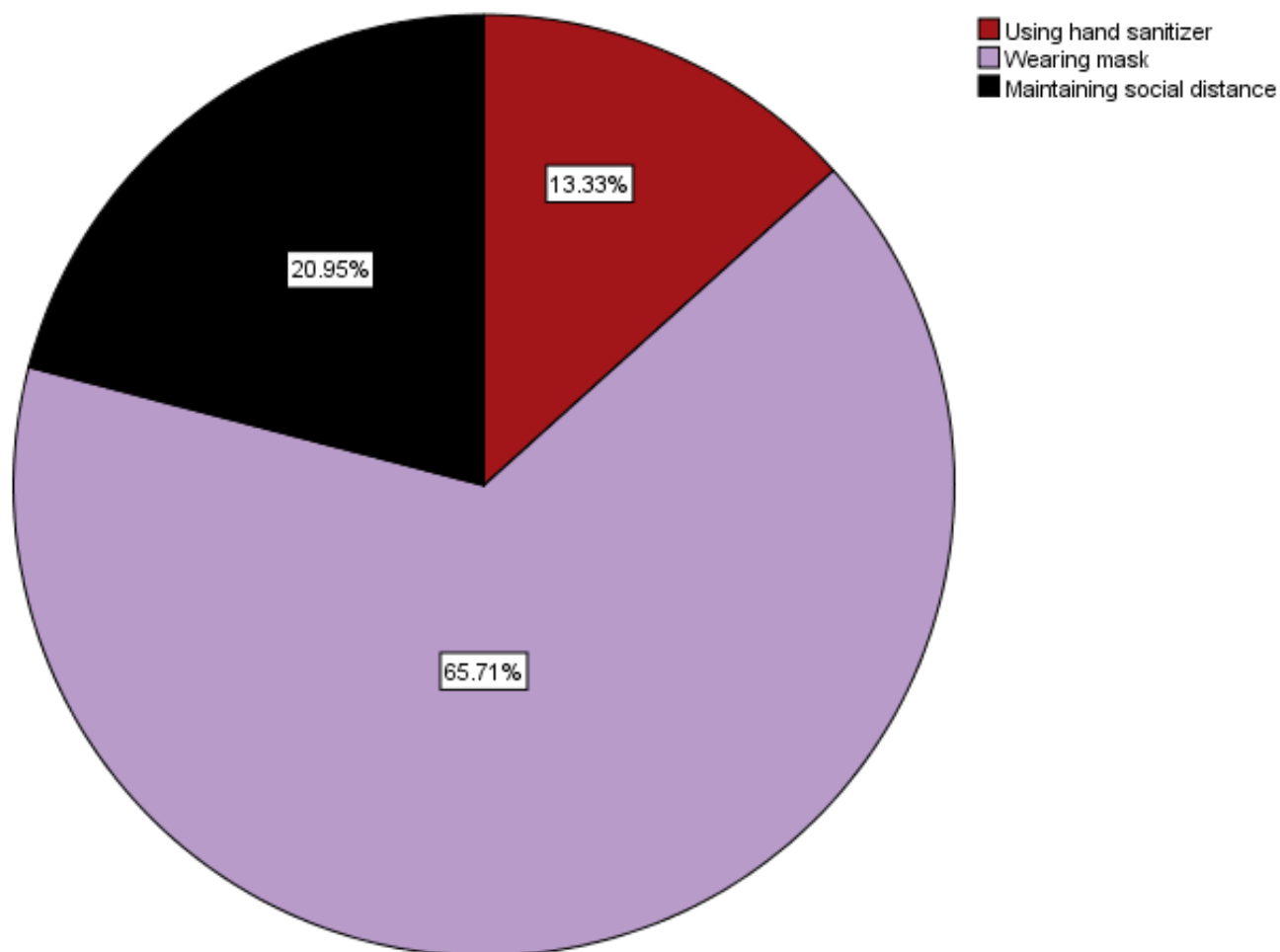


Figure 10 represents the percentage of children following different hygienic practices during covid (Purple - wearing mask, Maroon- using hand sanitizer, Black - maintaining social distance) : 65.71% of the children wear mask in public places, 13.33% of the children use hand sanitizer after playing and 20.95% of the children maintain social distance in public place.

Figure 11:

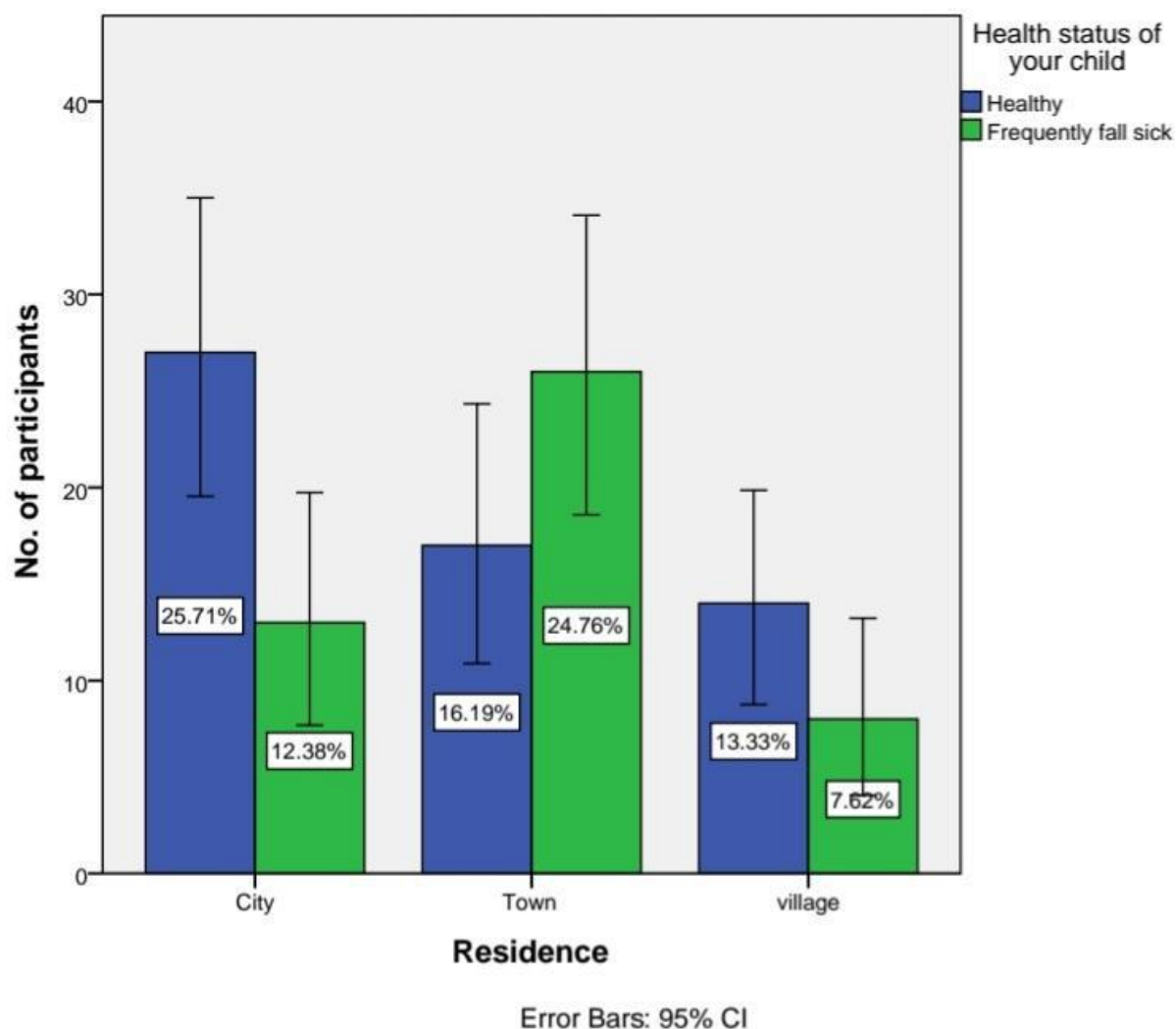


Figure 11 represents the health status of the children residing in different locations (blue- healthy, green-frequently fall sick), X axis-location, Y axis -count: 38% of the children live in cities (25.71% - healthy, 12.38% - fall sick frequently), 40.95% of the children residing in town (16.19% - healthy, 24.76% - fall sick frequently), 20.95% of the children residing in village (13.33% - healthy, 7.62% -fall sick frequently). P value is 0.025 ; ($p < 0.05$) implying that most of the children residing in town fall sick more frequently than others.

Figure 12:

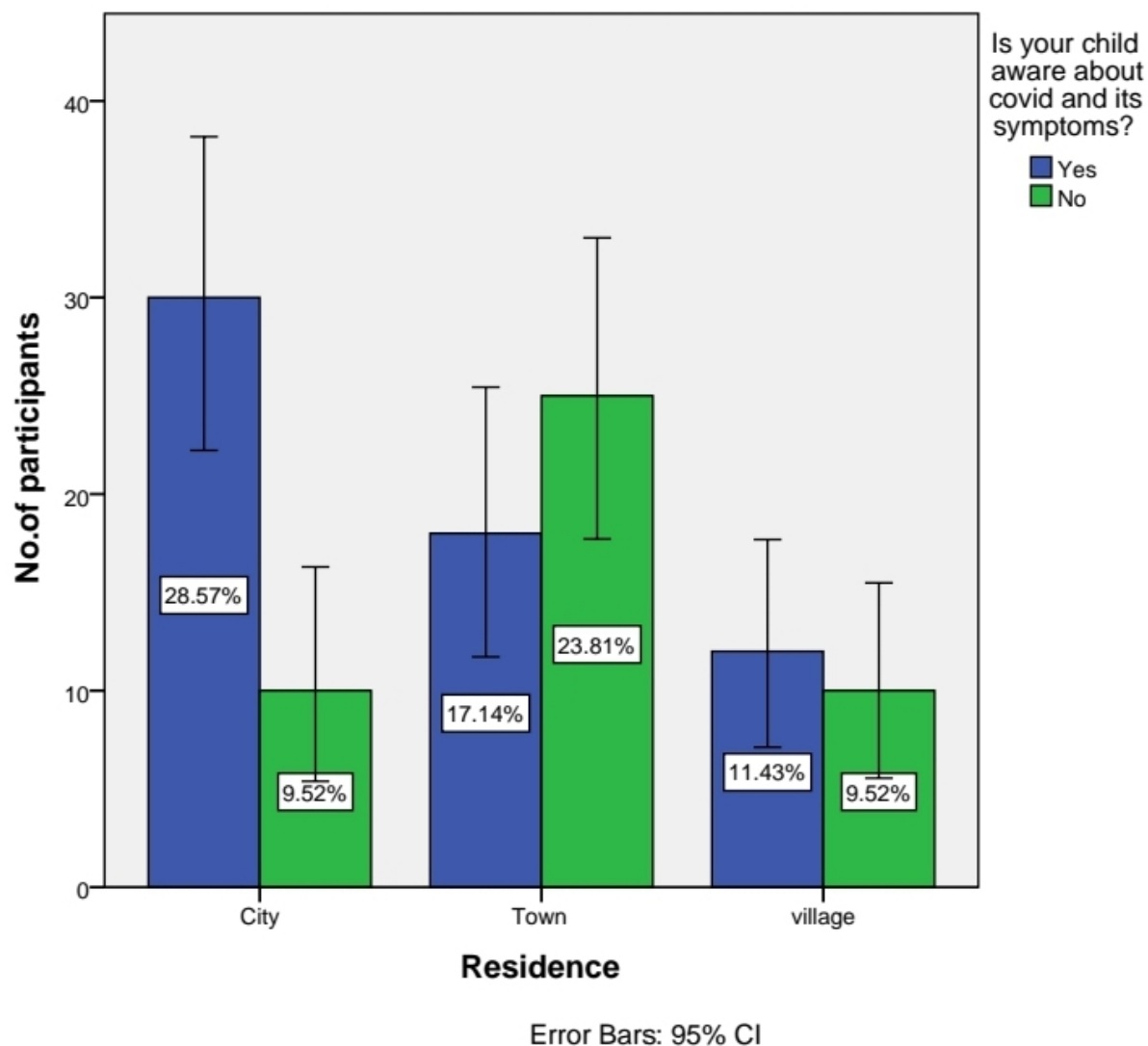


Figure 12 represents the number of children aware about covid and its symptoms (green -no, blue-yes) X axis represents residential location and Y axis represents count of children: 38.09% of the children residing in cities (28.57% - aware, 9.52% - not aware), 40.95% of children residing in towns (17.14% - aware, 23.81% - not aware), 20.95% of the children residing in village (11.43% - aware and 9.52% - not aware).p value is 0.009 ($p < 0.05$) implying that most of the children residing in cities are more aware than others.

Figure 13 :

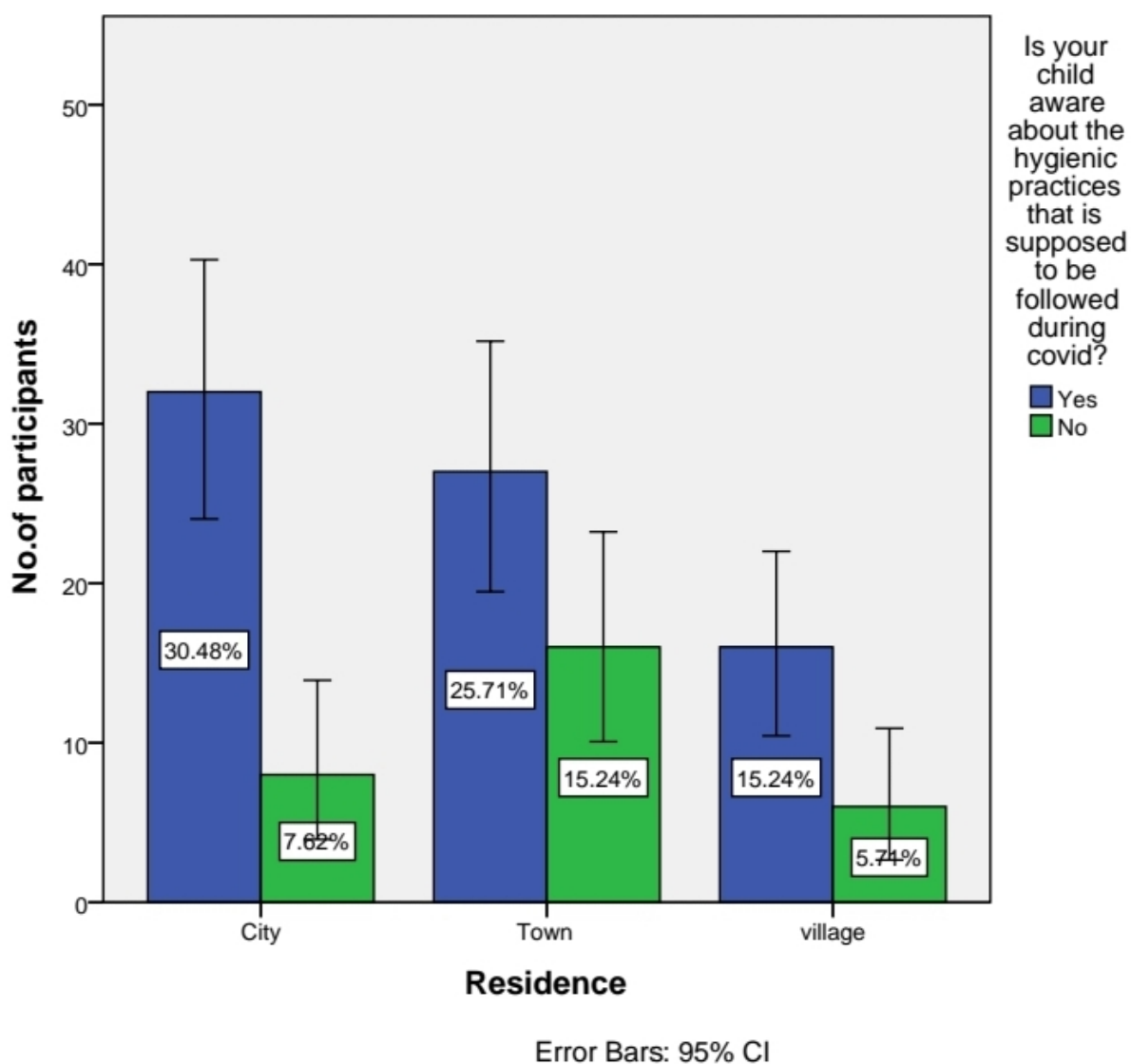


Figure 13 represents the number of children aware about different hygienic practices that is supposed to be followed during covid (blue-yes, green - no) X axis represents residential location , Y axis represents count of children : 38.16% of the children residing in cities (30.48 % - aware, 7.62% - not aware), 40.99% of the children residing in town (2.71% - aware, 15.24% - not aware), 20.95% if the children residing in village (15.24% - aware, 5,71% - not aware). P value is 0.220 ($p>0.05$) implying that all the locality children are more or less aware of sanitisation practices.

Figure 14 :

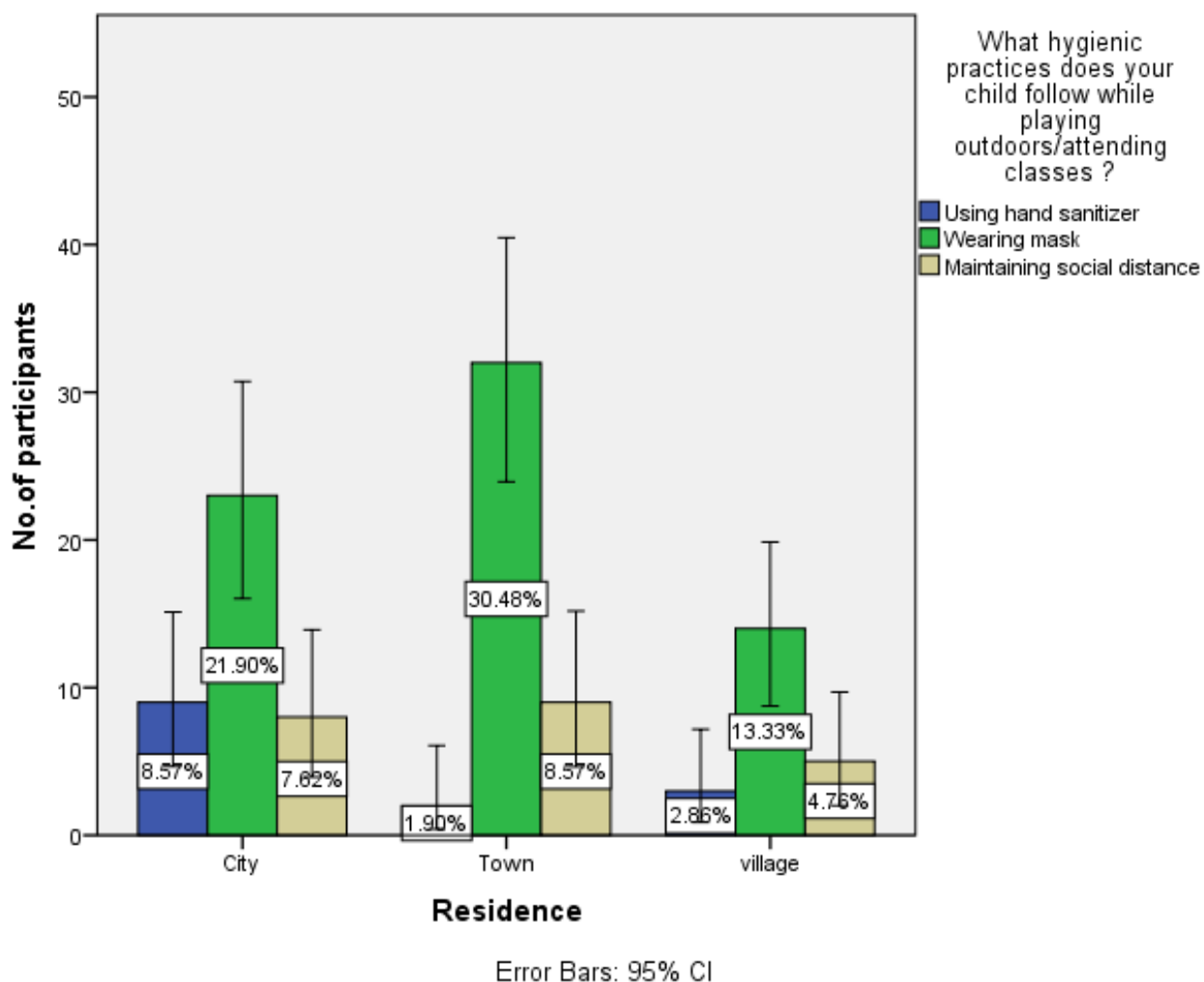


Figure 14 represents the number of children following different hygienic practices during covid (blue- using hand sanitizer, green - wearing mask, peach-maintaining social distance) X axis represents residential location , Y axis represents count of children : 38.09% of the children residing in cities (8.57 % - use hand sanitizer, 21.90% - wear mask, 7.62% - maintain social distance), 40.95% of the children residing in town (1.90% - use hand sanitizer, 30.48% - wear mask, 8.57% - maintain social distance), 20.95% of the children residing in village (2.86% - use hand sanitizer, 13.33% - wear mask, 4.76% - maintain social distance). P value is 0.20 ($p > 0.05$) implying that all the locality children are more or less practicing several sanitisation measures.

DISCUSSION:

In the present study , it was assessed that parents are aware about covid and its effects on their children and the consequences related to it. It can be seen that the majority of parents have instilled hygienic practices in their child and brought awareness about covid in them. It was also found that most of the children are aware about covid and its consequences and follow hygienic practices in public places.

In the study done by Abuhammed.S, it was found that out of 810 parents, 90% of the parents have an appropriate attitude towards accompanying children within crowds 78% of the parents are aware of covid and its symptoms (26). In the present study it was found that out of 105 parents, 71.25% of the parents are aware about consequences of covid in children aged less than 1 or children with weak immunity (in fig 3).

In the study done by Xue. Q et al, it was found that out of total number of school going children 70.1%-99.5% of the children were aware about covid and 96% of the children wash their hands in certain situations and 85.6% of the children wash their hands after sneezing and coughing(27) . In the present study it was assessed that out of 105 children, 57.69% of the children were aware about covid and its symptoms and 13.46% of the children sanitize their hands after playing outside.

In the study done by Atiya A Sheikh et al, it was found that out of 786 children participated in the survey, 97.07% of the children maintain social distance in public places, 96.17% of the children sanitize their hands after going out and 97.07% of the children wear masks while going out as a sanitisation measure that is supposed to be followed during covid (28) . Whereas in the present study, it was assessed that out of 105 children , 20.95% of the children maintain social distance in public places, 13.33% sanitize their hands after going out and 65.71% of the children wear masks while going out as a sanitisation measure that is supposed to be followed during covid.

In the study done by Manal A shehta et al, it was found that children in urban areas had more knowledge about covid and its related risks than children in non-urban areas (29). Whereas in the present study, it was assessed that children residing in cities had more knowledge about covid and its symptoms than children residing in towns and villages (in fig 12).

In the study done by Alison Andrew et al, it was found that out of 4,157 children who participated in the survey, 15% of the children spend their leisure time by reading books and learning, 9% of the children are engaged in on - screen leisure and 76% of the children are engaged in offscreen leisure(30). Whereas in the present study it was assessed that out of 105 children, 47.62% of the children spend their leisure time by playing outdoor games , 24.76% of the children spend their

leisure time by playing indoor and 27.62% of the children spend their leisure time by doing other activities like learning and reading books. (in fig 7)

Limitations of the study: The sample size was insufficient due to less number of participants and less number of questions asked in the questionnaire.

CONCLUSION:

By creating awareness among parents about covid and its consequences we can reduce the fatality rate of newborns or children with weak immunity. It is important for the parents to teach their children about the hygienic practices that are supposed to be followed during covid. By this study we emphasize the importance of hygienic practices that are supposed to be followed during Covid to ensure a healthy life.

AUTHORS CONTRIBUTIONS:

Sadhana K: Literature search, data collection, analysis, manuscript drafting.

Dr. Gheena S: Aided in conception of the topic, has participated in the study design, statistical analysis and has supervised in preparation and final corrections of the manuscript.

Dr. Sandhya : Data verification, manuscript drafting, preparation of manuscript.

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CONFLICT OF INTEREST

The author declares that there was no conflict of interest in the present study.

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