

Internship Training

At

NATIONAL HEALTH MISSION KERALA

Nomophobia and Behavioral changes in Children during Pandemic

by

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Enroll No: PG/20/008

Under the Guidance of

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PGDM (Hospital and Health Management)

2020-22



International Institute of Health Management Research

New Delhi

AROGYA KERALAM

KOZHIKODE

This certificate is awarded to

Dr Anamika. K

In recognition of having successfully completed her internship in the

Department of

Rastriya Bala Suraksha Karyakram

And has successfully her project on

**TO STUDY NOMOPHOBIA AND BEHAVIOURAL CHANGES IN CHILDREN
DURING PANDEMIC**

From March 14 2022 to June 14 2022

At

NATIONAL HEALTH MISSION KOZHIKODE

She comes across as a committed, sincere & diligent person who has a strong drive & zeal for learning.

We wish her all best for her future endeavours.


Organization Supervisor




Department Head

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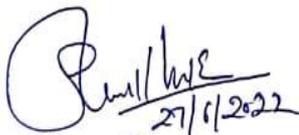
TO WHOMSOEVER IT MAY CONCERN

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The candidate has successfully carried out the study designated to him during internship training and his/her approach to the study has been sincere, scientific and analytical.

The Internship is in fulfilment of the course requirements

I wish him all success in all his/her future endeavors.



Dr Sumesh Kumar

Associate Dean, Academic, and student affairs

IIHMR, New Delhi



Dr Sumant Swain

IIHMR, New Delhi

Certificate of Approval

The following dissertation titled “**Nomophobia and Behavioural changes in Children during the Pandemic**” at **National Health Mission Kerala** is hereby approved as a certified study in management carried out and presented in a manner satisfactorily to warrant its acceptance as a prerequisite for the award of PGDM (Hospital & Health management) for which it has been submitted. It is understood that by this approval the undersigned do not necessarily endorse or approve any statement made, opinion expressed or conclusion drawn therein but approve the dissertation only for the purpose it is submitted.

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Dr. Ankur Kathuria

Certificate From Dissertation Advisory Committee

This is to certify that Dr. Anamika K, a graduate student of the PGDM (Hospital and Health Management) has worked under our guidance and supervision. She is submitting this dissertation titled “Nomophobia and behavioural changes in children during pandemic” at “National Health Mission Kozhikode” in partial fulfilment of the requirements for the award of the PGDM (Hospital and Health Management).

This dissertation has the requisite standard and to the best of our knowledge, no part of it has been reproduced from any other dissertation, monograph, report or book.



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**INTERNATIONAL INSTITUTE OF HEALTH MANAGEMENT RESEARCH,
NEW DELHI**

CERTIFICATE BY SCHOLAR

This is to certify that dissertation titled Nomophobia and Behavioral Changes in Children during Pandemic and submitted by Dr Anamika Enrollment No. PG/20/008 under the supervision of Dr Sumant Swain for the award of PGDM (Hospital and Health Management) of the institute carried out during the period from March 14 2022 to June 14, 2022

Embodies my original work and has not formed the basis for the award of any degree, diploma associate ship, fellowship, titles in this or any other institute or other similar institutes of higher learning.

A handwritten signature in black ink, appearing to be 'Dr. Sumant Swain', with a date '11/22' written below it.

Signature

FEEDBACK FORM

Name of the student: Dr. ANAMIKA . K

Name of the Organization: NATIONAL HEALTH MISSION

Area of Dissertation: CHILD HEALTH

Attendance: 90%.

Objective achieved: DISSERTATION COMPLETED ON 'Nomophobia in School children during Covid Pandemic'.

Deliverable: Exposure to child health programmes especially RBSK.

Strength: Sincere in work. Passionate and dedicated in work.

Suggestions for Improvement:

Should be target oriented and ~~conscientious~~ self motivated.

Signature of the Office-in-Charge/Organization Mentor

Date: Calicut.

Place: 14/6/2022



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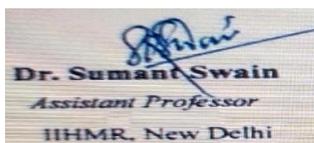


CERTIFICATE ON PLAGIARISM CHECK

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ABBREVIATIONS/ ACRONYMS

COVID – Corona Virus Disease

JPHN - Junior Public Health Nurse

RBSK - Rastriya Bala Suraksha Karyakram

NHM – National Health Mission

NRHM - National Rural Health Mission

NUHM - National Urban Health Mission

OBSERVATIONAL LEARNING



Introduction: National Health Mission

The Government of India launched an admirable intervention of The National Rural Health Mission (NRHM) to provide accessible, affordable and equitable healthcare to the vulnerable people in rural areas in 2005. It is now under National Health Mission. In 2013, The prime Minister of India approved the launch of the National Urban Health Mission (NUHM) as a subdivision of the National Health Mission (NHM), with the National Rural Health Mission (NRHM) being the other Subdivision of the National Health Mission.

The main programmatic components include,

- Reproductive-Maternal- Neonatal-Child and Adolescent Health (RMNCH+A).
- Health system strengthening.
- Communicable and Non-Communicable Diseases control programme.
- Infrastructure maintenance.

Kerala is in the southwestern part of India. It has a long history of art and cultural heritage and foreign trade with other states in India. In addition, Kerala is glimpsed for its achievement in literacy rate, gender equality, health, social justice, etc. Kozhikode, the central part of the former Malabar district, had carved itself a landmark in Indian history as a gateway to India for Vasco-da-Gama, the adventurous Portuguese navigator, in 1498.

National Health Mission was launched in Kozhikode in the year 2007- 2008. The mission led to an overall change in the structure of health institutions, facility upgrading, human resources and decentralised management. The last eight years of the National Rural Health Mission's Community Processes intervention have eight demonstrated that ASHA significantly improves health outcomes. Integration of programmes like Aardram- Aims at creating a "people-friendly" health delivery system in the state, quality assurance programme, District mental health programmes etc., has given a new outlook to the Arogyakeralam programme in Kozhikode district. The introduction of HMIS, RCH portal and IHIP into health data collection and compilation has helped the district authorities monitor health programmes and prepare PIP accordingly. The services provided through the child health programme like RBSK, Arogyakiranam, and Hridyam in the district are another creditable achievement of NHM.

Significant achievements (2019-2020)

- 13 FHCs operationalised
- The newborn screening programme started at all delivery points.
- Mathruyanam implemented in all delivery points benefited 7380 mothers in the district.
- "Hridyam" program: SCTIMST Thiruvananthapuram started Hridyam Surgeries from June 2019 onwards at MCH, Kozhikode. A total of 13 surgeries were done in 3 months.

- Govt General Hospital Kozhikode received the Kayakalp award (2nd prize) at the national level.
- “Quit to care”- Antismoking campaign launched in the district. The program had a triumphant journey from 2007, but still, certain challenges are faced.

KOZHIKODE, AT A GLANCE



In every panchayat, there is a PHC, the public can access service by travelling half a km radius, and CHC can reach by travelling 1 hour. Based on IPHS standards, the health institutions are not fully operational. In urban areas, private health institutions are prominent. NHM posted medical officers and staff nurses in institutions with IP facilities and FHC. Many significant hospitals, CHCs, and FHCs have achieved accreditation status. Hence more public is attracted to the system now.

9 Goals and objectives

- Reduce Infant Mortality Rate (IMR) and Maternal Mortality Rate.
- Universal access to public health services (Women’s and children’s health, water, sanitation & hygiene, immunisation, and nutrition.)
- Control and prevention of communicable diseases and non-communicable diseases,
- Access to integrated, comprehensive primary healthcare
- Population stabilisation, gender and demographic balance
- Revitalise local health traditions and mainstream AYUSH
- Promotion of healthy lifestyles.

As per the census 2011	
Population	3086293
Male	1470942
Female	1615351
Population growth	7.2%
Sex ratio	1098
Average literacy	95.08%
Literate	2615443

RBSK (Rastriya Bal Swasthya Karyakram)

It is a significant initiative aiming at early identification and early intervention for children from the delivery point to 18 years old to cover 4’D’s. These 4’Ds include 30 selected health conditions.

1. Defects at birth

2. Deficiencies

3. Diseases

4. Developmental delays including disabilities the implementation mechanism of RBSK in Kerala has some differences from the national level. Here we can see the national-level mechanism. But in Kerala, there are four screening points. Those are delivery points, immunisation points, Anganwadis, Government & Govt. aided schools, and RBSK nurses carry out all these. The hospitals with more than 1200 deliveries/year will provide a lot two shalabham nurses for the physical examination of the new-born.

HRIDYAM

Hridyam is another initiative by the Kerala government to support children with congenital heart disease (CHD). It is estimated that 8-9 in 1000 babies are born with a heart defect, and around 1,000 babies each year are born with Critical Congenital Heart Disease. As per the Expert's opinion, many heart defects don't need immediate treatment and can be fixed easily. But the CCHD can raise the rate of morbidity or death. The beneficiary (Hridyam cases) can register in the particular website assigned for that scheme. During the registration, the child will get an automatically generated unique registration number used as a case number for that case. Then latterly the case will be categorised as 1, 2 or 3 according to the severity level by the paediatric cardiologist. Hridyam follows up is also done by RBSK nurses.

AROgyAKIRANAM

Kerala state's ambitious and modified version of RBSK offers free treatment to all children aged below 18. In addition, it provides free intervention and treatment for all health conditions other than the 30 conditions covered under RBSK.

DEIC (District Early Intervention Centre)

It should be focusing on the early detection and intervention of children's diseases. So that detecting the defects and minimising the disabilities through intervention is the core function of this service.

CIVIL ENGINEERING

This wing mainly contributes to providing the essential infrastructure facilities by constructing new/ renovation and reconstructing of various hospitals. It also deals with strengthening the labour room as per LaQshya standards, setting up a sewage treatment plant, Dialysis unit, Microbiology lab, SNCU etc. Moreover, all the PHCs work on the FHC transformation as per Ardram-HWC (Health and Wellness Centre) guidelines. And this wing provides basic infrastructure.

Reception
 Primary waiting area
 Precheck room Secondary waiting area
 Consultation room
 Dressing room
 IUCD room
 Nebulization room
 ORT corner
 Nurses station
 Nurse dress changing room

Laboratory procedure room
 Pharmacy with waiting area
 AC Pharmacy store Immunization room
 Breastfeeding area
 Special clinic room
 Toilets Office room
 Biomedical waste management room
 Public health wing
 Conference hall
 Server/UPS Room

PALLIATIVE CARE

In India, for the first time, the Government of Kerala declared a Pain and Palliative Care policy under the leadership of the Local Self Government department facilitating the development of community-based home care initiatives. The aims and objectives are identifying patients in need and then offering proper guidance for suitable treatment, providing care at home for the bedridden and incurably ill, and providing primary health care to the 'socio economically' backwards patients. And ultimately to ensure that palliative care becomes an integral part of the state's public health system.

The service is implemented through 3 strategic levels, primary, secondary, and tertiary. The Institute of Palliative Medicine is an organ of the pain and palliative care society. That was founded in 1993 as an outpatient department unit at Government Medical college Kozhikode. Then in 2003, the institute was separated for the training, care, and research for pain and palliative care society. Moreover, the institute was recognised as a WHO collaborating centre in the community.

National Urban Health Mission (NUHM)

It aims to meet the health needs of the Urban poor by facilitating essential healthcare facilities. To fulfil the needs of the urban poor, NUHM runs

- Urban Primary Health Centres,
- Medical camps in the name USHUS (Urban Slum Health Upliftment Scheme),
- UHND (Urban Health Nutrition Days)
- Deliver maternal and child healthcare, nutrition, water, sanitation, and hygiene services to the urban poor population.

The UPHCs are providing speciality OP services in addition to regular general OP services. All the centres offer free nursing, pharmacy, laboratory, immunisation, and family planning services. All are functioning as facility integrated counselling and testing centres to provide HIV testing and counselling service to the public.

At the beginning of the financial year 2020-21, there were 10 UPHCs in the district. In 2020 11th UPHC of the district is inaugurated. All UPHCs are working on the FHC transformation as per Aadram-HWC guidelines. All UPHCs are functioning on the quality development, and all are standing on the various stages of quality accreditations. 5 UPHCs and 6 UFHCs are in the district now, and many of them got NQAS certificates and kayakalp awards. During the financial year 2020-21, NUHM conducted 30 speciality medical camps and 202 UHNDs in the district.

CONCLUSIVE LEARNING

It helps one sharpen interpersonal skills while simultaneously being exposed to the ground reality of the situation. Face to face interaction with people leading to first-hand exposure of hurdles in data collection, management activities and rejection handling constructively.

CHALLENGES

- Establishment of IP facility in all PHCs.
- Establishment of delivery services in all CHCs.
- Strengthening of the delivery services in all District hospitals and Taluk hospital.
- Implementation of quality standards in the public hospital.
- For the proper functioning of the RBSK scheme, there are no adequate centres for offering specialised treatment facilities.

SUGGESTIONS

Exposure related to Data analysis should also be provided.

There should be a review board to review all the work done and suggestions by the NHM staff and their problems.

PROJECT REPORT

Today, the lives of many children and adolescents are increasingly influenced by new technological devices and means of communication (smartphones, tablets, social networks). Specifically, that skyrocketed during the pandemic, which occurred at a time of global digitalisation, characterised by a quick connection of people and information anywhere in the world. Children and adolescents had lower incidence and mortality rates of COVID-19 than adults. However, they had adverse psychological and behavioural effects, especially among school-age ones, due to home confinement and other infection control measures, such as social distancing and the closure of schools and public spaces. This led them and adults to spend more time at home with effective use of technological devices.

Nomophobia

The term NOMOPHOBIA or NO MOBILE PHONE PHOBIA is used to describe a psychological condition when people have a fear of being detached from mobile phone connectivity. The signs and symptoms observed in NOMOPHOBIA cases include- **anxiety, respiratory alterations, trembling, perspiration, agitation, disorientation and tachycardia.** NOMOPHOBIA may also act as a proxy to other disorders. Nomophobia behaviour may reinforce social anxiety tendencies and dependency on using virtual and digital communications as a method of reducing stress generated by social anxiety and social phobia

LITERATURE REVIEW

A study conducted in the Muhammadiyah 1 Primary School Kudus in 4th-grade students, in Indonesia with a total of 25 students, found that 17% of the students had high intensity for using mobile phones, and 22% of them had the intensity of often use of mobile phones. The study indicated the excessive dependency on mobile phones as a means of entertainment and communication.

The students stated that they felt very happy when playing on mobile phones makes the children happier, and make them more excited playing games on it. Sometimes they forgot to take a shower. They behaved rudely and aggressively whenever they were supposed to stop by their parents.

Another study was conducted on the Indian population to find out the condition of nomophobia aged between 15 and 35 years. And 74.8% of the participants had a moderate level of nomophobia, whereas 18.9% of the population had a severe level.

A recent study conducted in India has shown that the excessive usage of mobile phones badly affected the mental health of secondary school students. They were more aggressive and ruder in their behaviour and were not able to concentrate on their studies. Moreover, their sleeping patterns were also affected badly. Briefly, the excessive usage of digital gadgets affected the mental health of the higher secondary students badly.

ABSTRACT

Mobile Phone is one of the communication tools without limited distance and helps carry out daily activities. The incidence and mortality rate of Covid 19 affected adults more than children. However, they had adverse psychological and behavioural effects, especially among children, due to home confinement and social distancing for infection control and the closure of schools and public spaces.

This study aims to identify the condition of nomophobia in children in the Kozhikode district. The Indications of nomophobia can be seen in their habits: spending time with a mobile phone, feeling restless when not getting a mobile phone, feeling more sensitive, and craving to spend more time with a mobile phone in activities rather than socialising with friends. Thus, action is needed to identify the existence of students who indicated nomophobia and how their character develops in daily life.

Keywords: behavioural changes, nomophobia, mental health.

INTRODUCTION

Pandemic-induced business and school closures have caused many families to adjust to new realities. The parents have transformed the bedrooms and living rooms into home offices, while children have shifted to online learning and an increasingly digital social life. Meanwhile, many parents have eased device restrictions so their children can stay entertained, engaged, and connected. The availability of technology during the pandemic has been a double-edged sword. The COVID-19 pandemic has been a jarring and sometimes frightening experience for many, especially children who may lack the ability to process and understand the crisis. Forced into their homes with little else to do, children may turn to devices and screens to avoid scary or stressful situations. Research has repeatedly shown that excessive use of technology can lead to various health issues. Mobile phones at this time users have penetrated all walks of life, one of which is elementary school-age children who use mobile phones to play games. The fact gadget is not only used by adults (22 years and over) and adolescents (12-21), but my children (7 - 11 years) and children (3 - 6) years who should not be eligible to use mobile.

The attitude and behaviour of a child dependent on the use of a mobile phone will affect the activities and personal character of the child in daily life. Thus, it is necessary to prevent adverse impacts on mobile telephones to equip children to understand the importance of character education and apply it in everyday life. Character is a way of thinking and behaving that characterises each individual to live and cooperate within the scope of the family, community, nation, and state. Character education aims to educate children to make decisions wisely and practice them in their lives to contribute to their environment positively.

Based on the existing problems, this study was conducted to identify children who like to play on mobile phones continuously (indicative of nomophobia) and how their friendly characters behave in relationships in school.

METHOD

This research method uses a descriptive cross-sectional e-survey conducted between the 4th week of April and the first week of June. The nomophobia questionnaire via the online platform, telephonic interviews and literature studies were the data collection techniques for the study.

The research study was under the RBSK department in NHM. The contacts number of parents from each block of Kozhikode district were collected with the support of Junior Public Health Nurses. In Kerala, Junior Public Health Nurse (JPHNs) are female multi-purpose health workers. They provide comprehensive primary health care services at the community level, which vary widely and include promotive, preventive, and curative services.

A personalised nomophobia e-questionnaire was circulated among the parents using social media and was designed in the google form. A telephone interview was also done to clarify and resolve their doubt. The main benefit of an e-survey is greater productivity by saving time. In addition, the data is instantly available and can analyse by transferring it to statistical software if needed. The questionnaire was divided into four parts; the first part was a consent form. The second part contained the participant's sociodemographic variables, the third part was the nomophobia questionnaire, and the fourth part contained the symptoms.

In the beginning, we have given a brief introduction and objective of the survey with the authority's name. People who spend time focusing on what they are grateful for will experience more positivity and resilience and improve public relationships. At the same time, we thanked the respondents and gave them an approximate time to finish the question.

Three hundred telephonic interviews have been done, and they have been sent questionnaires too. Among these, 54 participants did not fill up the google form even after several attempts, and 46 responses were incomplete or repeated and, as such, deleted. Thus, among the accurate responses collected from 300 participants, a correct response rate of 91.5 % was documented.

MEASUREMENT

The condition of children in Kozhikode district indicated nomophobia by giving questionnaires to their parents. Parents fill out the questionnaire, and they are given answer choices. The questionnaire given to the parents is arranged based on nomophobia indicators by choosing four answer choices below. The results of the recapitulation questionnaire were used to identify nomophobia in children.

- 1)When they play games on a mobile phone they don't care about other people and even forget themselves, for example, eating, bathing etc.
- 2) The time spent playing continues to grow until they forget to study.
- 3) They prefer playing on mobile phones rather than doing work.
- 4) Their tasks are too late if they spend time playing on mobile phones
- 5) They are happy when they win a game on a mobile phone

- 6) They refuse and argue when told by my parents to help when playing, which makes them angry.
- 7) We parents make ends meet (obey) them, so they don't get angry.
- 8) They add time to play games from a mobile phone.
- 9) They feel uneasy when they don't play games on their mobile phones daily.
- 10) They fill my free time by playing with a mobile phone.
- 11) They play a game from a mobile phone, so they don't miss another friend.
- 12) They do not want to take turns with friends when playing using a mobile phone.
- 13) They prefer to play on mobile phones instead of playing outdoor with friends.
- 14) When they play games from a mobile phone, they increase the game level.
- 15) They feel happy when levelling up or discovering new games from a mobile phone.

Nomophobia questionnaire Table 1

Statement	Never	Rarely	More often	Always
When they play games on a mobile phone, they don't care about other people and even forget themselves, for example, eating, bathing etc.	53	67	62	18
The time spent playing continues to grow until they forget to study.	60	58	52	30
They prefer playing on mobile phones rather than doing work.	34	76	62	28
Their tasks are too late if they spend time playing on mobile phones.	50	69	58	23
They are happy when they win a game on a mobile	46	33	55	66

phone.				
They refuse and argue when told by my parents to help when playing, which makes them angry.	59	55	52	34
Our parents make ends meet (obey) the, so they don't get angry.	106	43	40	11
They add time to play games from a mobile phone.	35	65	74	26
They feel uneasy when they don't play games on their mobile phones daily.	90	45	57	8
They fill my free time by playing with a mobile phone.	38	78	61	8
They play a game on a mobile phone, so they don't miss another friend.	104	59	37	23
They do not want to take turns with friends when playing using a mobile phone.	120	47	20	13
They prefer to play on mobile phones instead of playing outdoor with friends.	104	50	35	11
When they play games from a mobile phone, they increase the game level.	64	23	55	58
They feel happy when levelling up or discovering new games from a mobile phone.	56	38	71	35
Total Score	1019	806	791	384
Average	67.9	53.8	52.7	25.6
Percentage	33.9%	26.9%	26.4%	12.8%

Children may use technology and screens to avoid complex or negative emotions, which has been abundant during the COVID-19 pandemic. During the pandemic, children and parents have turned to social media to stay in touch with their friends and family. The study observed an increased occurrence of behavioural and mental problems in children. This obsession with the gadgets can further lead to increased agitation and temper tantrums if parents take these gadgets away or refuse to give them. There were four symptoms for the parents to find out their kid's range of influence on devices. Q1) Anxiety Q2) Agitation Q3) Disorientation Q4) Respiratory alteration.

RESULT

Socio-Demographic characteristics

This study includes 200 participants from the 3-11 years age group 125 were girls, and the remaining children were boys.

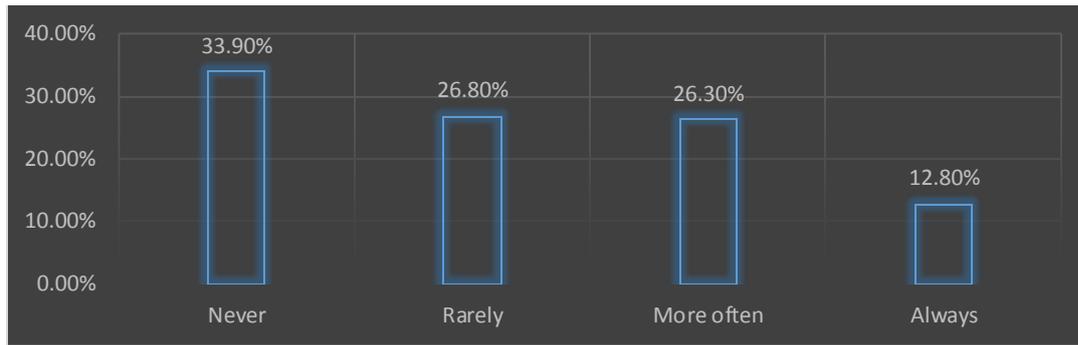
Table 2

Variables	Frequency	Percentage
• Gender		
Boys	75	37.5
Girls	125	62.5
• Age group		
3-6 years		
7-11 years	85	42.5
	115	57.5

Nomophobia questionnaire

Based on the results of the recapitulation of a questionnaire (Table 1) written by randomly selected children from 12 blocks in Kozhikode district, it was found that there were not many children who indicated nomophobia because of a total of 200 children, around 121 children or 60.8%, did not experience the habit or frequency of using mobile phones. Children who indicated nomophobia were 25 students or 12.8% of the total 200 children due to high intensity or always using mobile phones for games, and some 52 children or 26.4% of 200 children with intensity more often used mobile phones. Although it does not reach 50%, this condition must be observed and anticipated so that no more serious negative impacts occur.

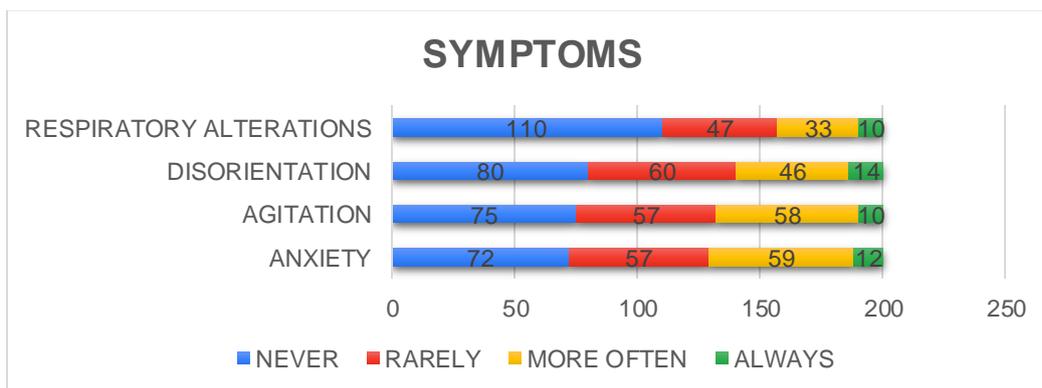
Graph1



Symptoms Table 3

Symptoms	Never	Rarely	More often	Always
Anxiety	72	57	59	12
Agitation	75	57	58	10
Disorientation	80	60	46	14
Respiratory Alteration	110	47	33	10
Total score	337	221	117	46
Average (Children)	84.25	55.25	49	11.5
Percentage	42.1%	27.6%	24.5%	5.8%

Graph2



Based on the response we obtained from the study (Table 3), it was found that there were not many children who had nomophobia symptoms because a total of 200 children, around 139 children or 69.7%, did not show the symptoms or behavioural changes as an impact of using mobile phones. Children who indicated nomophobia symptoms were around 11 children or 5.8% of the total 200 children due to high intensity or always showing the behavioural

changes, and 29 children or 24.5% of 200 children with intensity more often showed the symptoms. It is clearer in the graph2.

DISCUSSION

The pandemic has increasingly reconnected as well as alienated globally in a strange manner. People are stuck wherever they are, but they keep connected in this digitalised world. The duration of the lockdown and the disease protocols propelled the people to a virtual world. There is no other option to get rid of this unfortunate reality. “Modern age phobia” is the alternative name for No-mobile phone phobia. The data showed the mobile users worldwide skyrocketing, especially during the pandemic. India is, with more than 1 billion users globally. Nowadays, digital gadgets have taken a part of our life, and it is inevitable for all.

Besides the benefits of digital gadgets, they ruin our mental and physical health. The latest study has shown that secondary school students’ usage of mobile phones hugely affected their mental health. They became more aggressive and could not concentrate on their studies. Moreover, their sleeping patterns have been affected badly.

Several studies reveal that duration of exposure to mobile phones per day for the long-term causes headache, lack of concentration, aggressiveness, memory changes and depressive symptoms.

The study reveals the findings of the novel research conducted in Kerala to determine the influence of gadget use on children's behaviour. The result of this survey will be a stepping stone for the realisation and a reminder for the parents, teachers and the authority that it’s high time to find a solution for mobile addictions in children. The knowledge was exemplary. The study has shown that around 25 children (12.8%) out of 200 were more prone to using mobile phones. They had a high intensity for using mobile phones always. Moreover, 26.9% of 200 children use mobile phones more often. Around Forty-nine children, or 24.5%, have already started the symptoms with intensity more often, and almost 11 students with the intensity of always.

There is no limitation to mobile use in India. Moreover, a single person can keep multiple phones. It elevates the condition of Nomophobia. The Telecom Regulatory Authority of India (TRAI) would be the best organization that can regulate and restrict people from using mobile phones by making a policy/law. And there must be a minimum upper age limit for using mobile. It can make sure alleviate the condition.

The children must be encouraged to the outdoor games and festivals by their parents and teachers. That can give them more chances to socialise with people. School authorities can arrange for counsellors and health team personnel for educating students and dealing with their problems. The study carried out in the Kozhikode district can urge parents and policymakers to be aware of this situation, as it cannot be a viable substitute for the traditional way of classroom teaching.

LIMITATIONS OF THE STUDY

This study had many limitations. The survey was conducted based on the respective online network of the authors. The study is limited to those who have smartphones and understand the Google form survey, so it should not be generalised to the entire population of Kerala. Despite these limitations, our findings will likely provide valuable information for the upcoming actions. Moreover, compared to the current population in Kozhikode, the survey sample was over a representative of the children.

CONCLUSION

The COVID-19 pandemic has been a terrifying experience, especially for kids who may lack the ability to understand the severity of the crisis. Subsequently, children turned to devices and screens to spend their free time and get rid of boredom. Children's use of devices depends on their parents. However, they should be careful not to restrict screen time, during the lockdown, when devices may be a primary source of communication and social connection. The study conducted in Kozhikode district among the children concluded that from the results of the study, some children show dependency on mobile phones as a means of entertainment when they get an opportunity and free time, they prefer mobile phones than friends. Moreover, more than 20% of the children started showing the consequences of gadget addiction.

Parents and health care professionals can help children by encouraging responsible use of technology and they can offer better alternatives to screen time. The schools/colleges should strictly enforce the mobile phone restriction in their institution.

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Annexure

CONSENT FORM AND STUDY TOOL

NOMOPHOBIA AND BEHAVIORAL PROBLEMS IN CHILDREN

Today, the lives of many children and adolescents are increasingly influenced by new technological devices and means of communication (smartphones, tablets, social networks). Specifically, that skyrocketed during the pandemic, which occurred at a time of global digitalisation, characterised by a quick connection of people and information anywhere in the world. Children and adolescents had lower incidence and mortality rates of COVID-19 than adults. However, they had adverse psychological and behavioural effects, especially among school-age ones, due to home confinement and other infection control measures, such as social distancing and the closure of schools and shared public spaces. This led them and adults to spend more time at home with effective use of technological devices.

The survey is exclusively for the parents. Answering the questions usually takes 5 to 10 minutes. The information you provide will be kept confidential and will not be disclosed to anyone. It will only be used for research purposes. Your personal data will be removed from the questionnaire, and a code will be used to connect your name and your answers without identifying you.

The first section is about demographic and socioeconomic characteristics and included the following variables:

Age (<5,6-9,10-14,15-18),

gender,

school year,

region of residence: Rural/ Urban

occupation: (father, mother)

income:

age at onset of smartphone use:

2nd Section is about the nomophobia identification questionnaire

Statement	Never	Rarely	Sometimes	Always
1) When they play games on a mobile phone they don't care about other people and even forget themselves, for example, eating, bathing				

2) The amount of time spent playing continues to grow until they forget to study				
3) Games from mobile phones keep them entertained because they are dizzy with schoolwork.				
4) They prefer playing on mobile phones rather than doing work				
5) Their tasks are too late if they spend time playing on mobile phones				
6) They are happy when they win a game on a mobile phone				
7) They feel happy when levelling up or discovering new games from a mobile phone				
8) They refuse and argue when told by my parents to help when playing so that makes parents angry				
9) We parents make ends meet (obey) them so they don't get angry				
10) When they play games from a mobile phone, they always increase the game level				
11) they always add time to play games from a mobile phone				
12) They feel uneasy when they don't play games on the mobile phone a day				
13) They fill my free time by playing with a mobile phone				
14) They play a game from a mobile phone so they don't miss another friend				
15) they prefer to play mobile phone instead of playing outdoor with friends				

3rd Section is about the symptoms in the children

	NEVER	RARELY	SOMETIMES	ALWAYS
Anxiety				
Agitation				
Disorientation				
Respiratory alterations				