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Paul Illingworth

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De Montfort University, United Kingdom

"From One Global Pandemic to a Second - the emerging Mental Health Pandemic"

Dr. Klaus Irrgang

Associate Professor

Burman University, Wellness department, Division of Science,

Canada

" The ounce of Prevention, what does it look like?" - Lifestyle choices and quality of life, longevity, and surviving a pandemic. Lessons from the Adventist Health Study".

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Summary of the Proceedings of 6th International Conference on Global Public Health 2021

11 October 2021 (Online)

The 6th International Conference on Global Public Health 2021 GPH2021 organised by ICRD, Sri Lanka was held on 11-10- 2021 in Singapore time. At the outset, the Convenor of the Conference, Dr. Prabhath Patabendi welcomed the scholars and spoke about the theme of the Conference. Following this, two keynote addresses were rendered, one by Dr Klaus Irrgang, Associate Professor of Wellness and Chair of Department of Wellness, Faculty of Science, Burman University, Canada and Paul Illingworth, Head of Leicester School of Allied Health Sciences De Montfort University, Leicester, England. Dr Klaus Irrgang presented research he had been involved in around Lifestyle choices and quality of life having survived a pandemic. The study was undertaken in the Adventist community. Paul Illingworth presentation covered about the effect Covid-19 had on people's mental health, stating that the next pandemic is going to be mental health. This was illustrated by personal experience of undergoing treatment for cancer through the pandemic.

The Conference was attended by delegates from as many as 23 countries from all parts of the globe. The second session of the Global Public Health Conference "Emerging Public Health Issues" chaired by Dr Klaus Irrgang. There were 5 papers from four different countries. Prof. Dr. Kholil Kholil of Indonesia presented a paper on Tobacco Harm Reduction Strategy in Indonesia, Cibele, Carvalho of Brazil presented a paper on Anápolis/Goiás Family Health Strategy Oral Health. Ika, Saptarini of Indonesia spoke about Delayed Children Healthcare, Reneepearl Kim Sales of Philippines presented on cancer patient navigation program in the Philippines and Consuelo, Ortiz of Colombia presented on Emergency and Disaster Plan in a Rural Setting.

The third session of the Global Public Health Conference 2021 Co-Chaired by Dr Neha Patil and Paul Illingworth, stimulated a great deal of thought and relevant questions from delegates. The sessions theme was 'Covid-19 & other issues.' The papers presented showed the impact Covid-19 has had on other health and health care issues. Globally, treatments, immunization programmes and infant development have tended to take a backwards seat due to the severity of the Covid pandemic. Bijay Maharjan demonstrated the impact it had on tuberculosis services in parts of Nepal. This was due in part to restriction imposed by Government on travel. Saptarini Ika's presentation discussed the impact Covid had in missing or delaying children's use of healthcare. The focus of Tahani Al-Waalan's presentation and resulting paper not only showed the benefits of breast feeding in the first few months, but also the disadvantages of not doing so and the impact Covid-19 had on the progress made in Kuwait in recent years.

It is interesting to note the focus of the three presentations. All looked at Covid-19 impact, but the three areas were, understandably, focused on areas of health care delivery that were a priority for their locality. In Britain, much of the attention, especially in the press, has been around people not being able to access their General Practitioners or seeking investigations for some of the key health concerns in the West; cancers, heart disease and stroke.On the whole, it was a useful and purposeful Conference. It was hoped that the next Conference would be an offline conference where the delegates would be able to interact with each other in person.

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Co-Chairperson- 6th International Conference on Global Public Health 2021

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Impact of COVID 19 in the Tuberculosis Services, Care and Support at the Community Level

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Abstract

Coronaviruses (CoV) are a large family of viruses that causes COVID-19 which ranges from asymptomatic infection to mild infection, moderate infection, severe infection, and critical infection. WHO declared COVID-19 as a pandemic on 11th March 2020. More than 210 countries/territories have had active cases and 1/3rd of the world's population has been on complete lockdown or partial travel restriction as to the disease control measures. COVID-19 and travel restrictions have affected the overall health service delivery system, including tuberculosis services at a community level.

This paper presents a qualitative study to explore the impacts of COVID 19 on tuberculosis (TB) services, care and support. The data were collected through the field notes with diaries, with both descriptive information like informal communication with co-workers, and reflective information like thoughts, ideas, questions, and personal experiences of health workers during the field visit to monitor implementation of the National Tuberculosis Program. The verbal consent was taken before the interview with participants. The confidentiality of the participants was maintained. The travel restriction measures contribute to the delay in TB diagnosis reducing the accessibility of health services. Likewise, laboratory personnel were fully occupied in COVID 19 and could not focus on sputum tests for TB resulting in a delay in TB diagnosis. The number of OPD visits to health facilities was less, as patients were afraid to go to the health facilities due to the perceived risk of coronavirus. Similarly, the major activities like contact tracing of TB patients were severely hampered as health workers were busy in COVID 19 management. Health workers had to provide TB medicine for 1 month due to travel restrictions, raising the question about treatment adherence of TB patients. Besides, health workers had to change TB medicine from intensive phase to continuation phase without any sputum follow up examination at 2 & 3 months. Also, they were not doing regular recording and reporting of the TB program. Therefore, COVID 19 and travel restriction has affected TB diagnosis, treatment care and support at the community level.

Keywords: COVID-19, Pandemic, Tuberculosis, Effects.

Introduction

The coronavirus disease 2019 (COVID-19) is a new type of pneumonia caused by severe acute respiratory syndrome coronavirus-2 (SARS-CoV-2) infection. The SARS-CoV-2 coronavirus is a type of single-stranded RNA virus that belongs to the coronavirus's family. These deadly coronaviruses cause lower respiratory tract infections, resulting in acute pneumonia, respiratory distress, cytokine storms, multiple organ dysfunctions, and even patient death. The clinical presentation of COVID-19 ranges from asymptomatic infection to mild infection, moderate infection, severe infection, and critical infection respectively.[1] On March 11, 2020, the WHO declared COVID-19 a global pandemic.[2] As per the Infections disease act, 2020 (1964), Nepal Government has announced a nationwide lockdown on March 24 in a bid to stop the coronavirus from spreading out of control. The government urged people to stay at home and leave the house merely for essential health services, shops, banks.[3]

Tuberculosis (TB) is an infectious disease, which has similar signs and symptoms COVID-19 and both primarily infect the lungs. The COVID-19 pandemic has added complex layers of stress to health systems worldwide, hampering progress in the fight against TB. COVID 19 impacts TB services at all the level. According to WHO 1.4 million people received less TB care and services in 2020.[4] Monthly notifications for 2020 in the top countries with the largest shortfalls compared with 2019.[4] Therefore,

the study seeks answers to how COVID 19 and pandemic situation distresses the diagnosis, treatment, care and support of tuberculosis and utilization of TB services at the community level.

Methods and Materials

Context

Tuberculosis (TB) remains a public health problem in Nepal. Nepal envisions TB free Nepal by 2050. TB services are provided through 4955 TB treatment centres. The diagnostic services are provided through 765 Microscopic centres and 72 Gene Xpert centres. Drug Resistant (DR) TB services are provided through 22 treatment centres and 81 DR treatment Sub-centers.[5] National Tuberculosis Control Centre is the apex body under the Ministry of Health and population for the planning, implementation, monitoring and evaluation of the National TB program in Nepal. Furthermore, Global Fund support to implement the National TB program in Nepal and Save the Children manages the grant as a primary recipient from 16th July 2015.

Japan-Nepal Health and Tuberculosis Research Association is a sub-recipient of the Global Fund to implement the National Tuberculosis Program in the Bagmati and Gandaki Province from 16th March 2021. The major interventions of the project are sputum collection and transportation, contact tracing of Drug Sensitive (DS) and Drug Resistant (DR) patients, screening of TB among malnourished children, Tuberculosis Preventive Therapy (TPT) for under five years children, screening of presumptive DR TB, engagement of private sectors, Find Actively Separating Treating (FAST)strategy in major hospitals and active case finding in prisons.

The second wave of the COVID-19 pandemic was confirmed in Nepal with an exponential rise in the number of cases in April 2021. On April 1, 152 cases were recorded which jumped to 4,897 on April 28, 2021. Therefore, Nepal government imposed a complete lockdown from April 29, 2021, which extended till June 21. In May, the positivity rate, which was amongst the highest globally, was hovering around 45% nationally, with a transmission rate of 1.8%.[6] After June 21, the lockdown was gradually lifted, with certain fortnightly relaxations.[6] Then, in the first week of July a team of Japan-Nepal Health and Tuberculosis Research Association visited some of the project sites in rural and urban parts of Tanahun, Kathmandu and Lalitpur district to monitor the implementation of the National Tuberculosis program especially sputum transportation and contact tracing activities after the easing travel restriction due to COVID 19 pandemic. The main objective of the monitoring and supervision visit is to understand the working modalities during the pandemic situation and to get the answer to the impact of a pandemic on TB services. A general checklist was developed to understand the impact of COVID 19 from the program implementation perspective. This study utilized qualitative research methodology to explore health workers experiences and patient's perspectives towards TB services and care during the pandemic's situation. The development and reporting of this study followed the standard guidelines of consolidated criteria for reporting qualitative studies.[7]

The monitoring and evaluation visits were made in Tanahun, Kathmandu and Lalitpur districts. The team visited 2 health facilities in Tananun, 2 in Kathmandu and 2 in the Lalitpur district. The team interviewed the health workers, outreach workers and patients who were attending the health facility for the TB services. The data was collected in the health facilities. Before interviewing the health workers and patients, the team took their time and consent for the interview. During asking the interviewing/observations patients and health workers were taken the verbal consent. Besides, the confidentiality of participants involved was completely maintained. Also, during the interview, any information/identification was not collected that could harm TB patients and the health workers. The objective of the information collection was explained and their participation was voluntary. One interviewed the health workers and the other interviewed the TB patients who were attending the health facility. The field notes were made after the completion of the interviews. In the field notes, quotations from participants are presented to illustrate the theme and findings. The field notes were grouped into three two themes (1) TB diagnosis (2) TB treatment and follow up.

Results and discussion

Based on the thematic analysis the findings are grouped into 2 themes: (1) Impact of COVID 19 and lockdown in TB diagnosis (2) Impact of COVID 19 and lockdown TB treatment and follow up

Impact of COVID 19 and Lockdown TB Treatment and Follow Up

There is an enormous impact of COVID 19 and travel restriction in the health-seeking from patients and getting services for the evaluation TB diagnosis. The travel restriction has delayed the health-seeking behaviour of TB patients. Furthermore, the perceived fear of corona infection in the health facilities and patients resulted in a low number of OPD visits to the health facilities resulting in a low number of presumptive TB cases. Also, the lab facilities were occupied with COVID 19 test and sputum test for TB was a not priority in the pandemic situation which also hampered the timely TB diagnosis.

> *"Due to the travel restriction in the district patient could not come to the health facility. It has lowered the number of OPD visits in the health facilities. Besides, due to similar signs and symptoms of coronavirus and tuberculosis patients stay in quarantine at home not accessing the health services unless the symptoms get worse."*
>
> *Laboratory incharge, Health Facility, Tanahun*

Sputum collection and transportation from non-diagnostic health facilities to a health facility with the diagnostic facility is one of the major interventions of the National Tuberculosis Program for early diagnosis of TB patients, especially in hard-to-reach areas. Outreach workers are responsible for sputum collection and transportation to linked lab facilities. Fear of coronavirus and travel restriction has hampered the sputum collection and transportation activities because presumptive TB patients were not wanted to test the sputum sample because of similar signs and symptoms of TB and COVID 19. Besides, lab personnel do not want to collect and test sputum samples due to fear of the corona virus.

> *"Community people do not want to test sputum and health workers are afraid of collecting sputum samples due to risk of corona infection. So, it hampered the sputum collection and transportation system. Besides, the designated lab facilities of the hospital do not prioritize the sputum test for TB so, the patient went to the private lab facilities and was diagnosed with TB".*
>
> *Outreach worker, Tanahun*

There is a delay in seeking TB services among the patients with TB signs and symptoms, which was further delayed by travel restrictions. Even after reaching the facility/hospital, there was a delay in TB diagnosis due to COVID 19 situation. At the time of the pandemic, none of the hospitals admitted patients without COVID 19 test results resulting in barriers to easy patient services.

> *I had a cough for around one week. Then, I went to a nearby private medical store and get medicine for cough and fever. The situation did not improve and after few days. Due to lockdown, I stayed at home for the next 2 weeks. Then, I had hemoptysis during cough and lost consciousness while working on the nearby farm. After that, I was rushed to the hospital in the Chitwan district. At first, the hospital did not admit me to the emergency because I did not have a corona test. Therefore, I had to wait for 2 days to get COVID 19 result. Only after COVID 19 negative result, I was admitted to the hospital followed by a blood test, x-ray, and sputum test and was diagnosed with TB.*
>
> *TB patient, Tanahun*

(2) Impact of COVID 19 and Lockdown TB Treatment and Follow Up

The National Tuberculosis Program endorsed interim guidelines to support health personnel and TB patients for the continuation of essential TB services during the pandemic situation. As per the guideline, the daily DOTS strategy was changed to DOTS at the household till the COVID 19 situation settles. Patients were provided TB medicine for 1 month. This system has might has hampered treatment adherence and coherence because patients were less monitored compared to daily DOTS. Health workers were also busy in COVID 19 management. Besides, there was a delay in the sputum follow up test that should be carried out to transfer TB patients from the intensive phase to the continuation phase.

We were busy in contact tracing of COVID-19. Therefore, we were only providing medicine to TB patients for one month, even did not update the registers. Besides, it was difficult to mobilize female community health volunteers for monitoring TB treatment and contact tracing of TB patients because of the perceived risk of corona infection to both volunteers and family members.

Urban Health Clinic, Kathmandu

I submitted the sputum sample for the following test at the end of 2 months of the intensive phase but I only received results after 2 months. When I asked about the result, health workers told me that due to lockdown there is a delay in the sputum test.

TB patient, Lalitpur

Discussion

Our existing study revealed, the COVID 19 has procrastinated seeking initial TB services, evaluation for TB diagnosed and distressed TB treatment services at the community level. TB diagnosis, treatment and care at the community level. The reason for the delay in seeking initial TB care from the patients' side, they were unaware of TB signs and symptoms, which resembles COVID 19 symptoms. Therefore, they stayed in-home quarantine until the health condition gets worse. Similarly, the patient has a perceived risk of corona infection, if they visit the health facilities. On the other hand, there was a travel restriction, only the COVID 19 hospitals were open, which were fully occupied by COVID 19 patients. The diagnostic facilities were busy testing COVID 19, rather than another test.

Besides, health workers were busy in COVID 19 management for instances contact tracing of COVID 19 patients, vaccination and they could not manage time for providing other essential health services including TB. The important interventions like contact tracing of TB patients, follow up of the TB patients were completely hindered during the pandemic situation. Since the TB medicine was shifted from Daily DOTS to providing monthly medicine, it might raise a question about TB treatment adherence. It is recommended to carry out research/in-depth analysis of TB treatment adherence of proving monthly medicine. It could also be an opportunity to revisit the daily DOTS strategy.

The limitation of the study is the findings are only based on field notes of the fact conversion during the monitoring and evaluation visit to health facilities. The researcher relied on memory and on personal discipline to write down and expand the observation and experiences of health workers. The study has low reliability since the circumstances of a particular event cannot be repeated. This means that another researcher cannot validate the original findings and conclusions.

It is recommended to integrate services of infectious disease during the pandemic situation especially with similar signs and symptoms which will reduce the delay in diagnosis. It is pivotal to expand TB diagnosis services to overcome occupancy during the pandemic situation and develop a systematic process to monitor TB treatment for a month-long duration.

Conclusion

COVID 19 has procrastinated initial seeking for TB services, delayed TB diagnosis and hampered TB treatment and follow-up tests. Therefore, we need to develop a system to integrate TB services with COVID 19 and develop a systematic process to monitor TB treatment for a month-long duration.

References

Infectious Disease Act, 2020(1964) – Nepal Law Commission. Accessed September 26, 2021. https://www.lawcommission.gov.np/en/archives/category/documents/prevailing-law/statutes-acts/infectious-disease-act-20201964.

NTCC. National Tubberculosis Program. Fact Sheet FY 76/77. Accessed September 26, 2021. https://nepalntp.gov.np/wp-content/uploads/2021/04/Factsheet_Final.pdf.

Second Wave of COVID-19 in Nepal | Nepal Economic forum. NEF. Published July 29, 2021. Accessed September 26, 2021. https://nepaleconomicforum.org/neftake/second-wave-of-covid-19-in-nepal/.

Tong A, Sainsbury P, Craig J. Consolidated criteria for reporting qualitative research (COREQ): a 32-item checklist for interviews and focus groups. Int J Qual Health Care. 2007;19(6):349-357. doi:10.1093/intqhc/mzm042.

WHO. Impact of the covid19 pandemic on TB detection and mortality in 2020. Published online 2021. Accessed September 21, 2021. https://cdn.who.int/media/docs/default-source/hq-tuberculosis/impact-of-the-covid-19-pandemic-on-tb-detection-and-mortality-in-2020.pdf?sfvrsn=3fdd251c_16&download=true.

WHO. WHO Director-General's opening remarks at the media briefing on COVID-19. Published March 11, 2020. Accessed September 26, 2021. https://www.who.int/director-general/speeches/detail/who-director-general-s-opening-remarks-at-the-media-briefing-on-covid-19---11-march-2020.

Yang Y, Xiao Z, Ye K, et al. SARS-CoV-2: characteristics and current advances in research. Virol J. 2020;17(1):117. doi:10.1186/s12985-020-01369-z.

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Risk Factors and Scenarios in a Rural Community

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Abstract

This article presents the results of a qualitative study of participatory action research corresponding to the first diagnostic stage of the project "Participatory action of the community of Tausa Cundinamarca in the construction of the emergency and disasters plan." Twenty-seven video talks and twenty-two interviews were collected and analyzed through a content analysis using Atlas.Ti 8 software. That to learn about the experiences and perceptions of the community regarding risk and emergencies in the municipality. As a result of the perception of the inhabitants of the municipality of Tausa, three main categories emerged: "risk factors" (composed of the subcategories "threat" and "vulnerability"), "risk scenarios," and "disasters." This research made it possible to identify the situations that generate concern among the inhabitants; to understand the state of alert and participation in risk management in the community; and confirm the need to complement and implement, with the help of the community, the municipal risk management plan, and response strategies (promoting joint action with municipal entities).

Introduction

The municipality of Tausa is in Colombia, South America, 65 km from Bogota, the capital city. This community is essentially rural, comprised of 15 villages, and inhabited by 6150 people -of which 90% live far from the urban area-. Its principal economic activities are agriculture, cattle raising, and mining. This municipality is considered a risk area, given the characteristic seismicity of the department of Cundinamarca, where it is located (Segura, 2015). Other aspects that affect and put at risk the quality of life of the inhabitants are landslides, floods -due to the proximity to the Neusa lake- forest fires and emergencies related to the industries of coal exploitation, clay, and brick manufacturing (Ministry of National Education, 2014; National Unit for Disaster Risk Management, 2016; Olaya, 2020). It is worth highlighting the existence of a factor that increases the vulnerability of the community of Tausa to such emergencies: its geographical context. Because of the geographical conditions of Tausa, the population's access to health services, care, and treatment is limited. For this reason, it is crucial the awareness of the community and the generation of collective action strategies that allow an adequate response to emergencies and disasters -that to mitigate the negative consequences of those events-.

In 2017 was identified the need to strengthen and build in conjunction with the community -which is unaware of the emergency plan structured by the municipal entities- new coping strategies for emergencies and disasters; that during the implementation of a research project in the municipality of Tausa-Cundinamarca designed by the research group on *Care for Cardiorespiratory Health* of the Faculty of Nursing at the National University of Colombia. For this reason, the research groups *Cardiorespiratory Health Care* and *Critical Care and Emergencies* jointly designed the research project "*Participatory action of the community of Tausa Cundinamarca in the construction of the emergency and disasters plan*." The purpose is to complement and implement that emergency and disasters plan -with the expectation of achieving active participation and adherence of the community to this proposal-. It aims to generate knowledge and capacity of a combined response from municipal institutions and the community.

The project had four stages: field diagnosis and preparation, proposal elaboration, implementation, and evaluation. This article presents the results obtained during the first stage, in which -based on the experiences and perceptions of the community of Tausa, health institutions, and municipal entities- was sought to identify needs and situations of risk and emergencies.

Method

The present work is a qualitative study approached from the methodology of participatory action research. The data obtained was collected through two strategies: video walks and interviews. The video walks consist of documenting through image and sound the journey that the researcher makes in the company of the community to recognize the risks present in the area. The semi-structured interviews identified people's perceptions of the risks to which they are exposed.

Twenty-seven video walks and twenty-two interviews were conducted in eleven villages in the municipality. Thirty-four people who met the inclusion criteria (over 18 years old and working or living in Tausa for more than two years) participated voluntarily. They were 20 women and 14 men who signed the provided informed consent. The ethics committee of the Faculty of Nursing has approved the proposal, and the mayor's office of the municipality has endorsed it. The biological, physiological, psychological, or social variables of the actors were not intervened or modified. Because of that, this research is risk-free. The ethical principles stipulated in Resolution 8430 of 1993 -which determines the scientific, technical, and administrative norms for health research in Colombia- were preserved.

The data obtained was transcribed using Bassi's (2015) adaptation of Jefferson's code and analyzed using a Qualitative Content Analysis with the support of Atlas.Ti 8 software. Each interview and video walk count with a classification code to guarantee the privacy of the participants. That code comprises four numerical codes separated by dashes which correspond to the following elements: *village-collection strategy-participant-consecutive number of the interview or video walk within each village*[i].

Results and Discussion

The risk factors perceived by the community of Tausa were grouped into two categories. The first, "threat," refers to those physical events that represent a latent danger for the community, as there is a possibility that they may occur with severity and lead to a disaster or emergency. This category includes four types of hazards: natural, anthropogenic, biological, and occupational. The second category corresponds to "vulnerability," which represents situations that increase the probability of suffering serious negative consequences when a disaster or emergency occurs. This category comprehends infrastructural damage, the community's lack of risk perception, and the non-use of helmets during motorcycle transportation.

In addition, the community relates risk factors, hazards, and vulnerabilities with scenarios that may be affected, or that could generate, such factors increasing the probability of an emergency or disaster occurring in the municipality. Within the "risk scenarios" category, which includes places and/or contexts that are perceived by the community as risky, are land cover, water bodies, housing, electrical networks, roads, recreation and tourism sector, educational institutions, climate change scenarios, productive infrastructure, and public attention settings.

As natural hazards, the community alleged five situations: drought, rain, terrain instability, frost, and winds. Such conditions are related to climatological phenomena that, according to Cabrera (2020), are catalysts of natural disasters. Participants pointed out that drought increases the probability of fires occurring in the forested areas of the municipality: "*in time of drought (x)we are prone to a fire because there is a lot of forests around*." *(04-01-06-02; 12-13)*. That perception is close to what is alluded to in the Incident Action Plan-PAI of Tausa (2020), where are pointed this kind of temperature variations as causing unexpected episodes in the municipality -like fires or water shortages in some villages-. All of this is consistent with Cabrera's research (2020), which assures that the amount of wooded areas in Tausa facilitates the spreading of fires, increasing damage.

Rain is considered a threat that affects scenarios in which the soil is used as swidden while increasing the risk of increases in the water bodies that can cause floods affecting nearby houses in the villages. As is mentioned by Cabrera (2020), floods are one of the most common disasters, given Tausa's richness in water bodies. Citizens also identified the instability of the terrain in the area as a threat (associated with the rain). That is a risk for houses and roads and is the origin of landslides in Tausa. Indeed, an inhabitant commented: "one of the main risks, especially here in the upper south zone, is the rain when there is rainy season. What those rains generate? sectorized floods and landslides." (01-01-01-01; 3-5).

Frosts - included in the PAI (2020)- are another natural threat perceived by the community. These represent a risk for agricultural work. An inhabitant mentioned that: "*there are strong frosts that destroy agriculture, potatoes that are grown here, and the pasture for cattle rise*." (07-01-22-03; 33-34). (07-

01-22-03; 33-34). And finally, the winds, in that regard, one participant stated the following: "*it is unusual the house that the wind has... - the wind (x) is making it (incomprehensible min 0:54, 1,?). Some houses have collapsed*." (08-01-24-02; 12-13)

Four types of anthropic threats were identified. Deforestation is said to have an impact on land use, land cover, and climate change. However, the inhabitants who participated in this first stage did not perceive that deforestation increases the probability of landslides -as established in the study of emergency and disaster management in the municipality of Tausa, developed by Cabrera (2020)-. The author also argues that agricultural activities can cause landslides; nevertheless, the main risks associated with agricultural work perceived by the community were: intoxication from crop spraying and accidents due to the presence of cattle on local roads.

The most relevant anthropogenic threat perceived was the abandonment of dogs by tourists. The inhabitants mentioned that abandoned dogs form packs to survive. They have attacked animals and are a source of risks for children. For example, a teacher from the municipality commented: "the dogs... (x)let's say it is like a custom to come and throw them here in the moor... and then they become dogs, let's say stray dogs! in this zone, and that generates risks because to feed themselves they kill animals." (01-01-01-01; 36-39). Tarazona (2016), in her formulation of strategies for the management of dogs in municipalities under CAR's jurisdiction, has documented this problem. She states that dogs represent a health risk to humans by zoonotic diseases (such as rabies) and viral diseases (as parvovirus and distemper). She also mentions that the CAR has reported more than 100 attacks on sheep, cattle, and horses in Cundinamarca and Boyacá (Tarazona, 2016).

Finally, among the anthropogenic threats is atmospheric pollution, which is perceived mainly as a result of the work of the productive infrastructure. One inhabitant commented: "the contamination (x) from the coke ovens, at 5:00 o'clock in the morning you can see from a high point how this is practically a cloud of smoke." (05-01-07-01; 12-14). Faced with this, Solano (2014), Guerrero & Pineda (2015), and Olaya (2020) show that there is an environmental conflict due to pollution in the urban areas of the municipality surrounding these industries since pollution puts the human health of the inhabitants at risk. Solano (2014) also mentions other risks related to this scenario not perceived by the community during this stage of research: school dropouts to work in the mines, lack of access to health care for workers because lake of insurance, and contamination of water bodies.

The affectation of the soil by the extraction and transformation of clay and coal is another common element existing perception of the community and the studies developed in the municipality. These productive tasks increase the risk of physical and chemical degradation of the soil, as pointed by Guerrero & Pineda (2014). In this sense, an inhabitant commented: "What suddenly opens up the soil is the mines, that is really opening up the soil" (07-01-21-02; 11-12), another inhabitant said: "When a mine goes by, the soil sinks" (07-01-21-02; 11-12). (07-01-22-03; 22). The PAI also states that this type of production damages the leaves of plants, reduces their growth, and deteriorates the landscape in general by generating sulfur dioxide and other volatile compounds (Olaya, 2020).

Included in the biological threats -those that put human health at risk- are fungicide intoxication and respiratory illnesses caused by the contamination of the productive infrastructure: "*The truth is that you see and this is all smoke. I do not know how right I am, but I think that in the future this is going to be a very serious public health problem... I actually do not know, I do not have statistics on how many people are affected by lung diseases, but I do believe that as time pass this is going to be serious*" (05-01- 07-01; 58-62). Additionally, the inhabitants identify the Covid-19 infection as a threat present in the recreation and tourism sector, and in those scenarios where the public is attended: "*And the other issue is the Covid issue, which can affect the community because not all people put into practice the biosecurity protocols*." (05-01-07-01;31-32).

We included the category of occupational threats since an inhabitant who works in wood production perceived risks in his work activities. He stated: "*Well, at work I drive a tractor. I think that this is a risky job, right? Suddenly the machine might rollover, or the line that pulls the wood might burst and (x) bang you, cause an injury*." *(03-01-04-01; 24-26)*.

In terms of perceived vulnerabilities, in the video walks, the non-use of helmets during motorcycle transport was identified as a practice that increases the probability of suffering serious traffic emergencies. In the PAI there are no studies or evidence in this regard. Infrastructural damage makes part of the category of vulnerability. Some inhabitants expressed that the state of the roads in the villages causes a greater number of accidents. However, in the PAI (2020) it is established that the roads are in

good condition. The community of Tausa also highlighted as a vulnerability the fragility and cracking of the houses originated in the absence of adequate structural foundations. A participant mentioned: "*...cracks appear and what I do is put a "band-aid" and look year after year if it advances ↑ a bit of an inch or it does not advance↑. And that's what I do. But I hope it doesn't happen, that never an earthquake may affect the structure of this house because, in truth, those who know say that the foundations are very much needed*." (10-01-17-02; 72-75).

It is worth highlighting that not all the inhabitants of the municipality who participated in the first stage of the project perceived the existence of risks. Many of them described their villages as quiet places where they felt safe and free from danger. For example, the following was mentioned: "*And... we do not have or run the risk of landslides or anything like that, because <as I told you>, this is a very, very beautiful place in all its characteristics*." (03-01-09-02; 25-27). Faced with this perception of security of the inhabitants of Tausa, Olaya (2020) mentions that this has originated indifference towards risk management through the community. That explains the lack of attendance at events where is provided information about emergency prevention and mitigation strategies. That also indicates that a big chunk of the Tausa population do not have disasters and/or emergencies plan of action. That makes them more vulnerable to the negative consequences of adverse events.

Finally, the community of Tausa related some disasters that have occurred in the municipality -in addition to the risk factors and scenarios-. These are fires -stating that mostly they have been anthropogenic-; floods; landslides -which represent the type of disaster most mentioned by the community-; falling trees -which can fall on electrical networks and generate short circuits-; animal attacks; collapse in mines; and poisoning with fungicides. In this concern, Cabrera (2020) points to mass movements, floods, forest fires, and frost as the natural emergencies most likely to occur in the municipality. In turn, Olaya (2020) mentions within the PAI that the disasters that most threaten Tausa are avalanches, floods, gales, landslides, drought and forest fires, earthquakes, and gas pipeline explosions.

Conclusions

In conclusion, it should be noted that the most frequently perceived risk factors are those related to disasters that have occurred previously in the municipality, with landslides being the most frequent emergency and the one that generates the most concern among the inhabitants. It is also important to highlight the frequent complaints about contamination and soil damage around the productive industries zone and the request for solutions to these threats. The poor condition of the roads was another issue frequently perceived by the inhabitants and observed in the video walks, which is incongruent with the established in the PAI (2020).

On the other hand, the study of risk perceptions in the community of Tausa -besides allowing us to identify relevant factors that threaten and increase the vulnerability of the municipality to negative social, economic, environmental, and structural impacts- allowed us to understand the state of alert and participation of the inhabitants in risk management.

Thus, despite finding a wide range of risk factors in the perception of the community, not all inhabitants of Tausa identify or perceive risks; many of them described their villages as quiet, safe, and danger-free places. In addition, most participants are unaware of the existence of the emergency and disaster risk management plan. All this translates into a waste of institutional efforts in providing an effective response to such situations.

All of the above confirms the need to complement and implement, with the help of the community, the municipal risk management plan and response strategies (promoting joint action with municipal entities). That to generate committed, active, trained, and willing to work for the welfare of the whole in emergency and disaster situations community networks.

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References

Bassi, J. (2015). El código de transcripción de Gail Jefferson: adaptación para las ciencias sociales. Quaderns de Psicología, 17(1), 39-62.

Cabrera, J. (2021). Análisis de la gestión de riesgos de desastres del municipio de Tausa Cundinamarca, en relación con sus escenarios actuales de riesgo.

Jiménez, M. & Gaitán, O. (2011). Aproximación al análisis ambiental, económico y social de la actividad minera del carbón en el municipio de Tausa y Cucunubá. Revista Academia y Virtualidad, 4(1), 34-48.

Ministerio de Educación Nacional. (2014). República de Colombia-Plan de Emergencias. Bogotá. [internet] Retrieved from: https://www.mineducacion.gov.co/cvn/1665/articles-347375_recurso_1.pdf

Ministerio de Salud y Protección social. (1993). Resolución 8430 de 1993. Por la cual se establecen las normas científicas, técnicas y administrativas para la investigación en salud. Retrieved from: https://www.minsalud.gov.co/sites/rid/Lists/BibliotecaDigital/RIDE/DE/DIJ/RESOLUCION-8430-DE-1993.PDF

Olaya, O. (2020). Plan de Acción de Incidentes-PAI. Consejo Municipal de Riesgo de Desastres-CMGRD. Tausa-Cundinamarca.

Segura, O. (2015). Evaluación de amenaza sísmica en municipios del departamento de Cundinamarca (Doctoral dissertation, tesis, Facultad. Ing. Civil, Univ. Distrital., Colombia).

Solano, M. (2014). ¿ Es posible una minería con responsabilidad social empresarial?. Acercamiento al municipio de Tausa-Cundinamarca. Criterios, 7(1), 19-46.

Tarazona, L. (2016). Formulación de estrategias para el manejo de perros ferales, semi-ferales y domésticos en cinco municipios de la jurisdicción CAR.

Unidad Nacional para la Gestión del Riesgo de Desastres. (2020). República de Colombia Sistema Nacional de Gestión del Riesgo de Desastres -Material de Apoyo para el Taller Estrategia Municipal para la Respuesta a Emergencias. [internet] Retrieved from: http://www.gestiondelriesgo.gov.co/snigrd/archivos/Taller_EMRE.pdf

Useda, M. & Acevedo, V. (2016). Contaminación del suelo en la zona minera de Rasgata Bajo (Tausa). Modelo conceptual. Ciencia e Ingeniería Neogranadina, 26(1), 57-74.

[i] For example, coding 01-01-05-02 corresponds to Vereda San Antonio - interview - participant #5 - second interview conducted in that village. Coding 11-02-00-03, on the other hand, corresponds to Vereda La Florida - video walk - no participant - third video walk in that village.

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From One Global Pandemic to A Second, the Emerging Mental Health Pandemic

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Abstract

This paper is based on a Keynote speech the author gave at the 6th Global Public Health Conference on 11th October 2021. The paper gives some background to Covid-19 to contextualise the situation for an international audience. This is followed by a brief personal reflection of the Covid-19 impact before discussing the emerging second pandemic, the emerging Mental Health Pandemic. Suggestions of how to ensure sustainable, low-cost, evidence based non-medical interventions, linked to a revised WHO Global Action Plan is proposed as one solution.

Introduction

At the time of the presentation, we are fast approaching two years since the first cases of Covid-19 were diagnosed (Gallagher 2020). One year on from when it started, there were 100,000 deaths from Covid-19 in the UK recorded (Official UK Coronavirus Dashboard, https://coronavirus.data.gov.uk/details/deaths). At the same time, globally the death toll reached 2.1 million, however, within a month it had reached almost 2.5 million, according to the World Health Organization (WHO) COVID-19 Dashboard, https://covid19.who.int)/. As of 6:36pm CEST, 4 October 2021 there were 4,800,375 deaths.

Monday 23 March 2020 was the day that radically changed the lives of those in the UK. The country entered lockdown and virtually everyone were told to stay home to protect the National Health Service (NHS), to help save lives. This changed the way the nation functioned, people were urged to work from home where possible, but there were some people still delivering key services at workplaces in addition to the NHS (police, paramedics, fire service, bus and train staff and universities amongst others).

COVID-19 changed many aspects in the world, including business, education, healthcare, industry, family life and as we are clearly aware, travel and conference attendance. Money was thrown at developing a vaccine and these were eventually produced and approved in record time. Millions of people, especially in the West, received their first, then second vaccination. But there were many countries around the world who did not have that same access to vaccines, money or other assistance. Interestingly many of those same countries with limited vaccinations did not have the same incidence or deaths from Covid as did Europe and the United States of America!

In the UK a furlough scheme was introduced. The UK Government paid a significant percentage of people's salaries to protect them and the businesses employing them. Other financial help was available in different ways also. The isolation we in the UK were asked to undertake to minimise the spread, led to an upsurge in e.working. Meetings via MS Teams and Zoom became the norm. General Practitioners (GP) introduced screening when people rang the GP for an appointment. Telephone consultations increased massively, not only with GPs but also with hospital staff caring for people with on-going conditions.

Gradually, over time the number of people getting Covid-19 reduced, the numbers admitted to hospital stabilised and the number of deaths began to fall. Restrictions are being lifted.

This gives some context behind what I mainly wanted to discuss. But before I discuss the mental health pandemic, I want to briefly share my experience of 2020, to exemplify how mental health can be impacted by Covid and other factors.

My Experience

Just preceding the pandemic hit the UK, in January 2020, I was diagnosed with mouth and neck cancer. Surgery went ahead immediately prior to the start of the pandemic, early February. After the pandemic lockdown had started, I commenced 6-weeks of chemo/radiotherapy treatment.

Prior to the radiotherapy, I had to cut my hair very short and shave off my beard completely, to enable a mask to be made for me to be fastened onto the table to make the radiation therapy hit exactly where needed. I have had a beard since 1976, you may be surprised to hear this was quite a traumatic thing for me. It was a loss, the person I saw looking back at me in the mirror wasn't me.

For six weeks, I had daily visits, Monday to Friday, involved arriving at the treatment Centre, wearing a face mask, using hand cleanser on several occasions, signing in and sitting at least two meters apart from other patients, without communicating with hardly anyone, staff or other patients, other than staff administering the chemo and radiographers. Quite an isolating experience.

When, fifteen years previously, I had been diagnosed with bowel cancer, there was regular communication with other patients when attending for chemotherapy and out-patient follow-up. This communication and comradery would often involve humour, quite often dark humour. It helped to reduce isolation and get through the treatments. This time when attending for chemo and radiotherapy, nothing. We didn't have the opportunity to chat to each other. A very strong feeling of isolation developed, not just the isolation of family or friends through having to shield, but the isolation of not communicating with others in a similar position to oneself. In all I had 6 months off sick, one month taking accrued annual leave, but nowhere to go, so stayed home, then 12 months working from home.

You can see how easy it was for my mood to lower, and it did. However, I am not unique. Wang et al (2020) demonstrated a high prevalence of mental health problems and gaps in mental health care for cancer patients, and showed high distress from COVID-19 increased risks. Nevertheless, the whole of the UK and parts of the world were isolating whether they had cancer or not. Many are experiencing mental health distress, fear and difficulty coping in a variety of countries globally (Rahman et al 2021).

Mental Health Pandemic

The WHO Global Action Plan (GAP) for Healthy Lives and Well-being for All (https://www.who.int/initiatives/sdg3-global-action-plan), that several major global health agencies signed, provided a framework for collective action leading towards universal health for all and would accelerate progress in relation to Sustainable Development Goals for Health. The Covid-19 pandemic has greatly impacted on all our lives and it has also impacted adversely on progress in relation to Mental Health in respect of GAP. We are a long way from achieving the targets. The Covid-19 pandemic has also shown how flimsy health systems are particularly for the mental health of global populations.

The fear of Covid-19 and the ability to cope varies by country. There are some groups with higher risks and greater susceptibility. There is growing evidence the pandemic has, and will continue to adversely affect the mental health of the world's population across all age groups, (Girdhar et al 2020; Shuja et al 2020 and Tanaka & Okamoto 2021).

On the positive side, there is growing evidence that non-medical, local and culturally sensitive interventions are successful in helping people with their mental health (Doukani et al., 2021) and (Raghavan et al. 2020). This would suggest sustainable mental health care could be achieved globally.

We need to put equal time, effort and money into appropriate interventions, interventions that need tailoring to individual countries and society's needs. Now is the time to consider if the WHO Mental Health Action Plan (WHO 2013) needs radically rethinking. The Western medical model(s) hasn't worked. Do we, therefore, reach out to alternative, less costly and more sustainable approaches? I believe we must.

We must now refocus and modify how we address the mental health pandemic that is upon us post Covid. The WHO Sustainable Development Goals (SDGs), specifically Target 3.4, https://sdgs.un.org/goals/goal3 could be better achieved through revising and reconfiguring WHO Mental Health Action Plan. By doing so, it will greatly assist to get the globe back on track, from a mental health perspective.

But we need to be mindful that globally, publications relating to the negative impact COVID-19 has had on the mental health of people across different age ranges, has grown. For example; perinatal and offspring in Spain (Caparros-Gonzalez et al., 2020), children and adolescents in China (Duan et al., 2020) and adults in Indonesia (Siste et al., 2020) have all seen a significant impact. While Girdar et al.

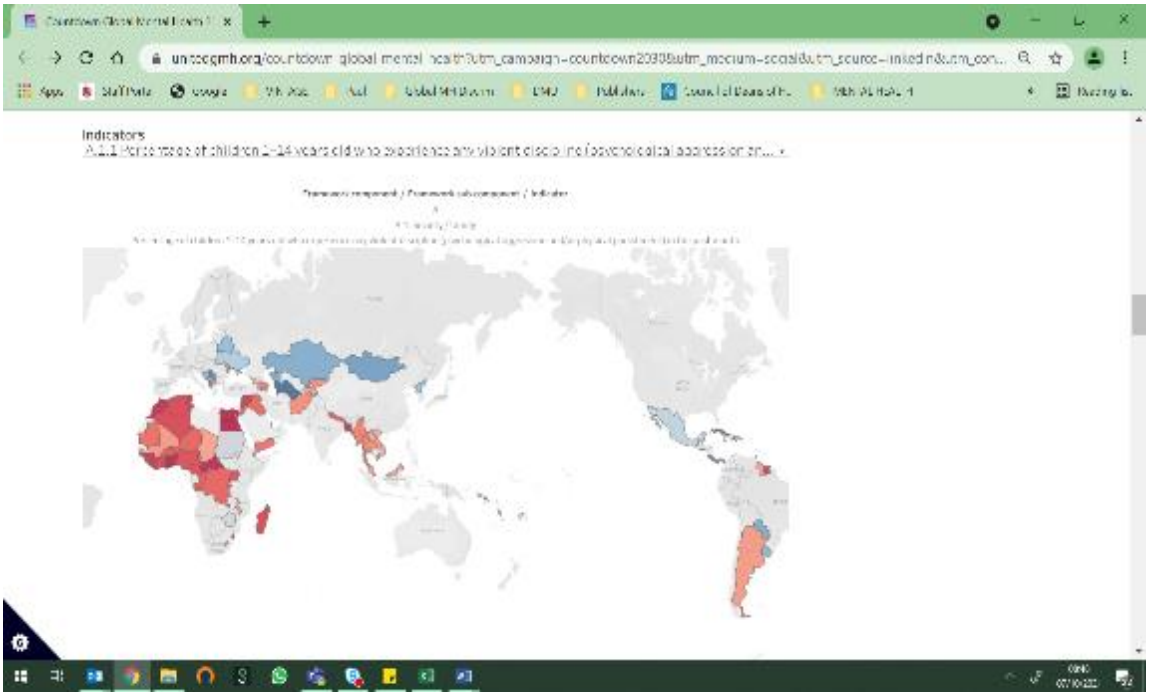
(2020) cautioned that the elderly in India was at risk from social isolation as a result of COVID-19, though García-Fernández et al. (2020) found older people in Spain had significantly less emotional distress than other age groups. One study shows this varied mental health response to Covid. Evidence from the Mental Health Foundation (2020) Coronavirus: Mental Health in the Pandemic study demonstrated a varied experience, dependent on their social and/or economic situation in society. They rather nicely and succinctly state "…we are all in the same storm, but we are not all in the same boat….''

The SDG declaration stresses that to realize the overall health goal, 'we must achieve universal health coverage (UHC) and access to quality health care" (WHO 2019). But that is not detailed enough. SDG3 Target 3.4 references mental health but does not have its own target. In its place it states; "By 2030, reduce by one third premature mortality from non-communicable diseases through prevention and treatment and promote mental health and well-being. Within Target 3.4, suicide rate is an indicator (3.4.2). We need to question why such a significant and increasing global issue has not got its own target.

Even now the website doesn't even refer to the impact of Covid on mental health when you first open their webpage. Instead reproductive health, maternal health and child health, all very important, are cited as potentially being stalled by Covid. Yet there is a wealth of evidence mental health is being adversely impacted now! (https://sdgs.un.org/goals/goal3 [accessed 06/10/2021)

Why hasn't the WHO built on work undertaken on strengthening mental health resilience, rather than traditional western medical intervention, as in the Mental Health Action Plan (MHAP) 2013-2020 (WHO, 2013)? Clearly it was not on track to reach its targets prior to COVID-19. As stated, evidence is building which shows non-medical, local and culturally aware interventions are successful (Doukani et al., 2021 and Raghavan et al., 2020).

However, a significant development will help all of us to get up-to-date data on mental health to achieve sustainable mental health. United for Global Mental Health in partnership with the WHO, UNICEF, GlobalMentalHealth@Harvard, Global Mental Health Peer Network and The Lancet, have developed a free and interactive dashboard. GLOBAL MENTAL HEALTH 2030: DATA TO DRIVE ACTION AND ACCOUNTABILITY allows searches of mental health data by country using a range of indicators, combined with an annual monitoring report on what the latest data shows. There are various means of looking at the data for example, this one shows the percentage of children (1-14 years old) who have experienced violence.



https://unitedgmh.org/countdown-global-mental health?utm_campaign=countdown2030&utm_medium=social&utm_source=linkedin&utm_content=countdown2030 [accessed 06/10/2021].

And finally, a particularly vulnerable group are front-line health and other workers who have been utilised in a variety of areas, not always in their primary area of work, in an attempt to contain the pandemic. Numerous risk factors will impact these staff groups, including inadequate personal protective equipment, stigma and discrimination because of their profession and coming into contact with people who are Covid positive, personal fears of infecting their own families, isolation from family members. The mental health impact of the pandemic on health and other workers showed up as experiences of trauma and confusion, something akin to post traumatic stress. But interestingly De Koch, Latham et al (2021) didn't find any studies looking at Corvids impact on social care staff. As yet, there appears to be no planning for the long-term support of these workers

Conclusion

I believe 'Peoples Mental Health Matters' should be the mantra of all health and social care professionals and governments. Mental health should be as prominent and as well funded as the Covid pandemic. Further the WHO Mental Health Action Plan should have specific mental health actions. We all need to look wider than traditional western medical interventions for solutions to the mental health pandemic. We need to do it now, as the global mental health pandemic will last a long time.

References

Caparros-Gonzalez, RA. Ganho-Ávila, A. & de la Torre-Luque, A (2020) Editorial. The COVID-19 Pandemic Can Impact Perinatal Mental Health and the Health of the Offspring. Behavioral Science. 10(162) https://www.doi:10.3390/bs10110162

Doukani, A., Van Dalen, R., Valev, H., Njenga, A., Sera, F. & Chibanda, D. (2021). A community health volunteer delivered problem-solving therapy mobile application based on the Friendship Bench 'Inuka Coaching' in Kenya: A pilot cohort study. Global Mental Health. 8, E9. https://www.doi:10.1017/gmh.2021.3

Duan, L., Shao, X., Wang, Y., Huang, Y., Miao, J., Yang, X., & Zhu, G. (2020). An investigation of mental health status of children and adolescents in china during the outbreak of COVID-19. Journal of Affective Disorders. 275, pp112–118. https://doi.org/10.1016/j.jad.2020.06.029

Gallagher, J (2020) Coronavirus: Two cases confirmed in UK BBC News https://www.bbc.com/news/health-51325192

García-Fernández, L., Romero-Ferreiro, V., López-Roldán, PD., Padilla, S. & Rodriguez-Jimenez, R. (2020) Mental Health in Elderly Spanish People in Times of COVID-19 Outbreak. The American Journal of Geriatric Psychiatry. 28(10) pp1040-1045. https://doi.org/10.1016/j.jagp.2020.06.027

Girdhar R, Srivastava V, Sethi S. (2020) Managing mental health issues among elderly during COVID-19 pandemic. Journal of Geriatric Care and Research, 7(1) pp32-35

Global Mental Health 2030: Data to Drive Action And Accountability https://unitedgmh.org/countdown-global-mentalhealth?utm_campaign=countdown2030&utm_medium=social&utm_source=linkedin&utm_content=countdown2030 [accessed 7th Oct 2021]

De Kock, J.H., Latham, H.A., Leslie, S.J. et al. (2021) A rapid review of the impact of COVID-19 on the mental health of healthcare workers: implications for supporting psychological well-being. BMC Public Health 21, 104. https://doi.org/10.1186/s12889-020-10070-3

Kola. L et al (2021) COVID-19 mental health impact and responses in low-income and middle-income countries: reimagining global mental health. Lancet Psychiatry 8 (6) pp535-550 https://www.thelancet.com/journals/lanpsy/article/PIIS2215-0366(21)00025-0/fulltext [accessed 2nd Oct 2021]

Mental Health Foundation (2020) Coronavirus: The divergence of mental health experiences during the pandemic. https://www.mentalhealth.org.uk/coronavirus/divergence-mental-health-experiences-during-pandemic [accessed 10th July 2020]

Raghavan, R., Coope, J., Jamwal, S. & Pendse, T. (2020) Reflections on the use of mental health resilience concepts in migration and global mental health. International Journal of Mental Health. 48:4, 299-308

Rahman, M.A., Islam, S.M.S., Tungpunkom, P. et al. COVID-19: Factors associated with psychological distress, fear, and coping strategies among community members across 17 countries. Global Health 17, 117 (2021). https://doi.org/10.1186/s12992-021-00768-3

Shuja KH, Aqeel M, Jaffar A and Ahmed A. (2020) COVID-19 Pandemic and Impending Global Mental Health Implications. Psychiatria Danubina. 32 (1) pp32-35 https://doi.org/10.24869/psyd.2020.32

Siste K, Hanafi E, Sen LT, Christian H, Adrian, Siswidiani LP, Limawan AP, Murtani BJ and Suwartono C (2020) The Impact of Physical Distancing and Associated Factors Towards Internet Addiction Among Adults in Indonesia During COVID-19 Pandemic: A Nationwide Web-Based Study. Frontiers in Psychiatry 11:580977. https://www.doi:10.3389/fpsyt.2020.580977

Statista (2020) Covid-19's Widespread Impact on Mental Health. (Source: The Commonwealth Fund). https://www.statista.com/chart/22503/share-of-adults-who-experienced-mental-health-problems-during-the-pandemic/ [accessed 15th May 2021]

Tanaka T and Okamoto S (2021) Increase in suicide following an initial decline during the COVID-19 pandemic in Japan. Nature Human Behaviour https://doi.org/10.1038/s41562-020-01042-z

Wang, YY., Duan, Z. et al. (2020) Epidemiology of mental health problems among patients with cancer during COVID-19 pandemic, Translational Psychiatry 10:263. https://doi.org/10.1038/s41398-020-00950-y [accessed 17th Dec 2020]

WHO (2013) Mental Health Action Plan 2013 – 2020. https://www.who.int/publications/i/item/9789241506021

World Health Organization (WHO) COVID-19 Dashboard, https://covid19.who.int)/. [accessed 5th Oct 2021]

WHO Global Action Plan for Healthy Lives and Well-being for All https://www.who.int/initiatives/sdg3-global-action-plan [accessed 6th Oct 2021]

WHO Sustainable Development Goals (SDGs) (2019), Target 3.4, https://sdgs.un.org/goals/goal3 [accessed 6th May 2021].

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Delayed Child Healthcare Utilization during the COVID-19 Pandemic in Indonesia: A Cross-sectional Online Study

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Abstract

***Background**: Since the start of the pandemic, health care providers and patients have worked to reduce COVID-19 transmission by limiting direct contact. As a result, many children are missing out or delay their health care utilization.*

***Objective**: This study aims to assess factors associated with delayed children healthcare utilization during COVID-19 pandemics.*

***Method**: A cross-sectional online survey was conducted in August-October 2020, gathering a total of 10,728 mothers with under five years old children. Respondents were residing in 33 provinces in Indonesia. Data were assessed using binary logistic regression to analyze factors associated with delayed children healthcare utilization. Healthcare utilization among under-five children includes growth monitoring, development monitoring, immunization, and treatment care for sick children.*

***Result**: Among 10,728 respondents, 36% respondents reported delaying healthcare for their children due to the COVID-19 pandemic. Growth monitoring (20%) was type of healthcare with the highest percentage of delayed healthcare. Furthermore, treatment care for sick children (13%) was the lowest percentage of delayed healthcare. Regarding multivariate analysis, we found that region, COVID-19 zonation, child's age, and maternal education were significantly associated with delayed children healthcare utilization. Respondents who live in Kalimantan (AOR:1.12; 95% CI: 1.01-1.26) or Sulawesi (AOR:1.61; 95% CI: 1.37-1.92) were more likely to delay children healthcare utilization compared to respondents who lived in Java-Bali. Delayed healthcare utilization is also 23% higher in children who live in the red zone and 40% higher in children aged 24-59 months. Respondents with high education were 1.5 times (95%CI: 1.29-1.65) more likely to delay children healthcare utilization than those with low education.*

***Conclusion**: COVID-19 pandemic triggers delaying in the utilization of children's healthcare. Government and health providers should consider modified healthcare services using telemedicine to reduce delayed utilization. Targeted efforts to assist children in catching up for delayed check-ups, immunizations, screenings, and therapies could help mitigate or avoid adverse effects on children health.*

Keywords: Children Healthcare, COVID-19 Pandemic, Delayed Utilization.

Introduction

Malnutrition is still the world's most serious health problem and the single leading cause of child mortality. Malnutrition is directly or indirectly responsible for more than half of all childhood deaths.[1,2] Indonesia still faces a high prevalence of stunting. Prevalence stunting in Indonesia was 30.8%. Delayed child development is also still one of the problems in Indonesia. Based on Riskesdas 2018, 12% of children age 3-4 years old in Indonesia faced delayed development. Immunization is also the most significant public health achievement of the past 100 years. However, an increasing number of parents have expressed concerns about immunizations. Immunization coverage in Indonesia is still low, 60% based on Riskesdas 2018 data.[3]

Indonesia has some routine children healthcare, including growth and development monitoring and vaccination to ensure children heath status. Immunization reduces children morbidity and mortality due

to vaccine-preventable diseases (VPDs). Children growth and development monitoring also have some benefits; (1) If the child is developing typically, health workers can provide reassurance, support parenting competence, and anticipatory guidance; (2) if the child is at developmental risk or has an established or emerging delay or difficulty, this can be detected early and addressed; and (3) in both cases, caregivers can be supported and informed about how to improve their child's development. At the population level, developmental monitoring can inform policy about the prevalence of developmental difficulties, allowing existing interventions to be appropriately allocated, their effectiveness to be monitored, and the need for additional interventions to be determined.4 Delays in seeking medical attention may result in adverse outcomes and increased mortality. This is especially important for pediatric patients, for whom a delay in treatment could have long-term consequences. Furthermore, pediatric patients' healthcare-seeking behavior and disease spectrum differ from adult patients.[5]

Since its onset in December 2019, the COVID-19 pandemic has significantly impacted people's lives worldwide. The pandemic prompted significant changes in government policies, including the healthcare system. The COVID-19 pandemic also resulted in insufficient delivery of many services, including routine children's health services. This widespread curtailment of activities was intended to prevent the spread of the infection in the community and allow medical services to prepare for the pandemic. On the other hand, the regular healthcare system was disrupted, and people encountered difficulties seeking medical advice.[6] From the user perspective, fear in the community about the risk of contracting the COVID-19 virus has been hypothesized to cause delayed child healthcare utilization.[7] Previous studies found that children healthcare utilization decreased during the outbreak. A systematic review about healthcare utilization during Ebola outbreaks found that reproductive, maternal, and child health services decreased in Africa. This study found that health-seeking for diarrhea and acute respiratory infection (ARI) decreased at health centers. The vaccine distribution and children who received full vaccination decreased.[8]

Research on child healthcare utilization not during the pandemic has found that socioeconomic factors such as maternal education, maternal working status, and income were associated with child healthcare services. Indonesia still faces disparities in child healthcare utilization due to face geographical barriers. However, previous studies have suggested that the families may behave differently during epidemics, which may be somewhat epidemic-specific. This study aims to assess factors associated with delayed children healthcare utilization during COVID-19 pandemics.

Material and Method

Using an online questionnaire, the Ministry of Health adopted a cross-sectional survey design to evaluate the delayed child healthcare utilization during the COVID-19 pandemic. This study was government monitoring and evaluation study that had not been reviewed by any research ethics committee. The survey was conducted via an online platform to minimize personal contact during the pandemics. Google form-based questionnaire was distributed via what app. Respondents who met inclusion criteria can fill the questionnaire. Inclusion criteria in this study were women age 15 years old or above and have under five years old children. The data collection was conducted from August to October 2020. The respondents provided electronic informed consent that appeared on the first page of the survey, and the Ministry of Health protects anonymous respondents' confidentiality. Over 11,000 subjects completed the surveys, and a total of 10,728 respondents were included in the analysis after excluding incomplete responses.

The manuscript also reported on data from an online survey of the petition signers that had not been reviewed by a research ethics committee.For non-interventional studies (e.g. surveys), where ethical approval is not required (e.g. because of national laws) or where a study has been granted an exemption by an ethics committee, this should be stated within the manuscript with a full explanation. Where a study has been granted exemption, the name of the ethics committee which provided this should also be included. However, if the researcher is in doubt, they should always seek advice from the relevant department before conducting the study.

The outcome variable was child healthcare utilization. Child healthcare utilization including growth monitoring, development monitoring, immunization, and treatment care for sick children. We converted the responses into binary answers. We categorized delayed healthcare utilization if

respondents reported delayed at least in one item. Independent variables, including sociodemographic factors. We divided the region into five categories (Sumatra, Java-Bali, Kalimantan, Sulawesi, and East-Indonesia). East Indonesia including North Nusa Tenggara, West Nusa Tenggara, North Moluccas, Moluccas, Papua, and West Papua). Regarding demographic characteristics, we also included COVID-19 zonation that was measured based on the respondent's report. We also collected data regarding socioeconomic including age (mothers and children), maternal education, working status, and income.

We conducted statistical analyses using STATA 15.1 SE. All results of quantitative variables were reported by frequency (%). The logit model for regression was performed to determine the role of factors associated with delayed child healthcare utilization. The factors associated with delayed child healthcare utilization were showed as Adjusted Odds Ratio (AOR) and 95% Confidence Interval (95% CI). A p-value below 0.05 was determined as factor associated with delayed child healthcare utilization.

Result and Discussion

This study found that 36.0% of respondents reported that they delayed the healthcare utilization for their children. Growth monitoring was child healthcare utilization with the highest proportion of delays (20.0%). While seeking treatment care for the sick children was the type of healthcare service with the lowest percentage of delays (12.8%).

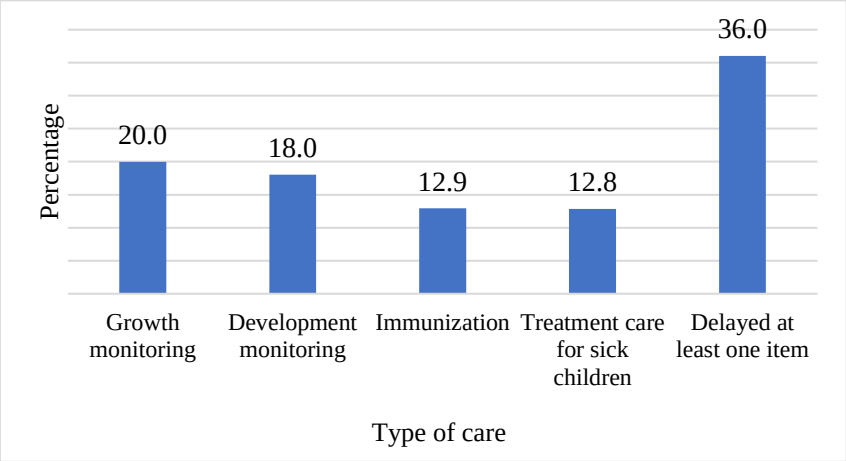

Figure 1: Percentage type of delayed children healthcare utilization.

We also captured the disparities of child healthcare utilization between provinces. We found that delayed child healthcare utilization was higher in the Papua, West Papua, and Provinces in the Kalimantan dan Sulawesi Islands, as shown in Figure 1. Also, the delay of child healthcare utilization was lower in the province in Sumatra Island. The most important finding of this study was the high percentage of delayed child healthcare utilization during the COVID-19 pandemic. Almost 40% of respondents reported delay child healthcare utilization for their children. Delayed child healthcare utilization during the pandemic can have detrimental child health consequences. For instance, patients may suffer from delayed routine care, diagnoses, and elective procedures, while halting clinical trials could have long-term negative effects on medical research. Delayed immunization can lead to an increased incidence of vaccine-preventable diseases. Delayed seeking care for sick children will increase morbidity and mortality. The pandemic encouraged to self-isolate for an extended period. This could significantly generate long-term severe health consequences via decreased healthcare utilization. Some previous studies demonstrated that healthcare utilization decreased during the COVID-19 pandemic.[9–11] The delay in child healthcare utilization could be explained by mothers having difficulties accessing child health services during their scheduled follow-up visit or intentionally missing their visit due to fear of contracting the virus or being forced to quarantine.[12,13] A study in Nepal reported that maternity services, immunization, and supply of essential medicine were the worst affected areas of health care delivery during the COVID-19 pandemic.[14]

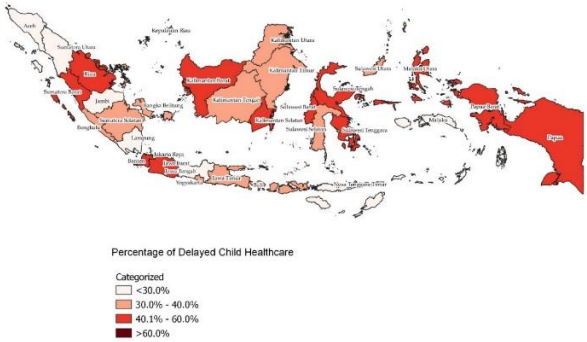

Figure 2: Distribution of delayed children healthcare utilization.

Table 1 describes the delayed of child healthcare utilization regarding characteristics of the respondents. The delayed of child healthcare utilization were higher among children who lived in Eastern Indonesia (46.4%) and in the red zone (42.0%). Regarding socioeconomics characteristics, the delay of child healthcare utilization was higher among children with high education mothers (42.1%), working mothers (38.8%), and high income (46.4%).

Table 1. Distribution of child healthcare utilization by background characteristics.

Variables	On-time n (%)	Delayed n (%)	p-value
Region			0.000
Java-Bali	3446 (63.9)	1944 (36.1)	
Sumatra	1967 (69.0)	884 (31.0)	
Kalimantan	1067 (59.9)	714 (40.1)	
Sulawesi	355 (54.6)	295 (45.4)	
Eastern Indonesia	30 (53.6)	26 (46.4)	
COVID-19 Zonation			0.000
Red	1598 (58.0)	1158 (42.0)	
Orange	849 (61.0)	543 (39.0)	
Yellow	1140 (65.4)	603 (34.6)	
Green	2313 (68.9)	1045 (31.1)	
Do not know	965 (65.3)	514 (34.7)	
Mother's age			0.036
<20 years	227 (62.0)	139 (38.0)	
20-35 years	5618 (64.6)	3083 (35.4)	
>35 years	1020 (61.4)	641 (38.6)	
Child's age			0.000
<24 months	5004 (66.5)	2522 (33.5)	
24-59 months	1861 (58.1)	1341 (41.9)	
Education			0.000
Low	1782 (68.4)	823 (31.6)	
Middle	2674 (67.5)	1286 (32.5)	
High	2409 (57.9)	1754 (42.1)	
Working status			0.000
Don’t working	3792 (66.4)	1916 (33.6)	
Working	3073 (61.2)	1947 (38.8)	
Income			0.000
<2 million	5213 (66.0)	2690 (34.0)	
2-5 million	1517 (59.0)	1056 (41.0)	
>5 million	135 (53.6)	117 (46.4)	

Findings from the multivariate analysis are presented in Table 2. We found that region, COVID-19 zonation, child age, and maternal education were associated with child healthcare utilization. Respondents who lived in Sulawesi were 1.61 times more likely (AOR:1.61; 95% CI:1.37-1.92) to delayed child healthcare utilization than those in Java-Bali. Indonesia still faces disparities in healthcare utilization between regions due to demographic barriers. This study found that mothers who live in Kalimantan or Sulawesi Islands were more likely to delay child healthcare utilization than those who live in Java-Bali. Even COVID-19 cases in Sulawesi and Kalimantan were less than in the Java-Bali Island, but delayed child healthcare utilization in these islands was higher than Java-Bali.[15] The geographical conditions of Indonesia make disparities in healthcare utilization between regions. Geographical conditions in the form of islands make some regions very difficult to reach. The availability of regular transportation also influences healthcare utilization.[16] A study in West Shoa Zone, central Ethiopia, regarding maternal healthcare utilization during the COVID-19 pandemic found that mothers who traveled longer to reach the health facility had lower odds of maternal health service utilization.[10]

Table 2: Factors associated with delayed child healthcare utilization during COVID-19 pandemic.

Variables	OR	95% CI	p-value
Region			
Java-Bali	Reference		
Sumatra	0.85	(0.77-0.95)	0.002
Kalimantan	1.12	(1.01-1.26)	0.044
Sulawesi	1.61	(1.37-1.92)	0.000
Eastern Indonesia	1.44	(0.83-2.52)	0.196
COVID-19 Zonation			
Red	1.23	(1.08-1.42)	0.002
Orange	1.17	(1.00-1.36)	0.054
Yellow	0.96	(0.83-1.11)	0.559
Green	0.83	(0.73-0.95)	0.007
Do not know	Reference		
Mother's age			
<20 years	Reference		
20-35 years	0.73	(0.59-0.92)	0.007
>35 years	0.83	(0.65-1.06)	0.128
Child's age			
<24 months	Reference		
24-59 months	1.40	(1.28-1.53)	0.000
Education			
Low	Reference		
Middle	1.05	(0.94-1.16)	0.429
High	1.46	(1.29-1.65)	0.000
Working status			
Do not work	Reference		
Working	0.98	(0.90-1.09)	0.764
Income			
<2 million	Reference		
2-5 million	1.11	(0.99-1.23)	0.064
>5 million	1.25	(0.97-1.63)	0.092

Also, delayed child healthcare utilization was almost 25% higher (AOR: 1.23; 95% CI: 1.08-1.42) in respondents who lived in the red zone than those who reportedly did not know zonation status. A

previous study in India showed that the declining immunization coverage in the red zone was higher than in other COVID-19 zones. It was caused by the suspension of healthcare services to due activity restriction. Even though immunization or regular monitoring is not emergency services, the risk of vaccine-preventable infectious disease outbreaks in these areas must be weighed against the risk of COVID-19 spread through immunization outreach.[17] The delay of utilization could be because the government's stay-at-home order contributed to disparities in health service utilization, as movement restrictions in the red zone. Also, the closure or restriction of public transportation in the red zone has added to the extreme hardships among the general population that ranged from not fulfilling their routine activities and, importantly, not attending health services for non- COVID illnesses.[13]

Children with high education mothers were 1.46 times more likely (AOR:1.46; 95% CI: 1.29-1.65) to delay child healthcare utilization than those with low education mothers. Children with high education mothers were also more likely to delay child healthcare utilization. A few pieces of literature not in the pandemic era showed the consistent association between maternal education and child healthcare utilization. maternal education was a powerful indicator of the higher likelihood of optimal child healthcare utilization.[2, 19-21] In the pandemic context, high education will increase the knowledge about COVID-19 including prevention, and risk to exposure with the virus. Refused to contract with other people, including health professionals, is one way for COVID-19 prevention. High-educated mothers are also more likely to do self-monitoring for their children, such as weight and height monitoring.

The odds of delayed child healthcare utilization are also higher in children age 24-59 months than those aged 0-23 months. Children aged 24-59 months were almost 1.5 times more likely (AOR:1.40; 95% CI: 1.28-1.53) to delay child healthcare utilization than those aged 0-23 months. The child's age was an important determinant of the differences in seeking child healthcare services.[18] The possible reason for this finding was that the number of routine health services that must be obtained by children aged 24-59 months is less than children aged 0-23 months. For example, basic immunization is received at the age of 0-12 months.

Conclusion

The delay in child healthcare utilization summarized in this review makes a compelling case for prioritizing efforts that address the unmet needs of those with non-COVID-19 illnesses. Public campaigns, especially in the high-risk group to seek medical care when they need it and better preparedness for reducing the extent of missed care in future waves of the pandemic. In addition, health providers must ensure child essential health services in the community.

Acknowledgments

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References

Alsuhaibani M, Alaqeel A. Impact of the COVID-19 pandemic on routine childhood immunization in Saudi Arabia. Vaccines. 2020;8(4):581.

Brolin Ribacke KJ, Saulnier DD, Eriksson A, Von Schreeb J. Effects of the West Africa Ebola virus disease on health-care utilization–a systematic review. Front public Heal. 2016;4:222.

Chandir S, Siddiqi DA, Mehmood M, Setayesh H, Siddique M, Mirza A, et al. Impact of COVID-19 pandemic response on uptake of routine immunizations in Sindh, Pakistan: an analysis of provincial electronic immunization registry data. Vaccine. 2020;38(45):7146–55.

Colvin CJ, Smith HJ, Swartz A, Ahs JW, de Heer J, Opiyo N, et al. Understanding careseeking for child illness in sub-Saharan Africa: a systematic review and conceptual framework based on qualitative research of household recognition and response to child diarrhoea, pneumonia and malaria. Soc Sci Med. 2013;86:66–78.

Ertem IO, Dogan DG, Gok CG, Kizilates SU, Caliskan A, Atay G, et al. A guide for monitoring child development in low-and middle-income countries. Pediatrics. 2008;121(3):e581–9.

Feleke FW, Adole AA, Bezabih AM. Utilization of growth monitoring and promotion services and associated factors among under two years of age children in Southern Ethiopia. PLoS One. 2017;12(5):e0177502.

Geldsetzer P, Williams TC, Kirolos A, Mitchell S, Ratcliffe LA, Kohli-Lynch MK, et al. The recognition of and care seeking behaviour for childhood illness in developing countries: a systematic review. PLoS One. 2014;9(4):e93427.

Goyal M, Singh P, Singh K, Shekhar S, Agrawal N, Misra S. The effect of the COVID-19 pandemic on maternal health due to delay in seeking health care: experience from a tertiary center. Int J Gynecol Obstet. 2021;152(2):231–5.

Jain R, Chopra A, Falézan C, Patel M, Dupas P. COVID-19 related immunization disruptions in Rajasthan, India: A retrospective observational study. Vaccine. 2021;39(31):4343–50.

Kassie A, Wale A, Yismaw W. Impact of Coronavirus Diseases-2019 (COVID-19) on Utilization and Outcome of Reproductive, Maternal, and Newborn Health Services at Governmental Health Facilities in South West Ethiopia, 2020: Comparative Cross-Sectional Study. Int J Womens Health. 2021;13:479.

Laksono AD, Wulandari RD, Soedirham O. Regional disparities of health center utilization in rural Indonesia. Malaysian J Public Heal Med. 2019;19(1):158–66.

Lee M, You M. Avoidance of Healthcare Utilization in South Korea during the Coronavirus Disease 2019 (COVID-19) Pandemic. Int J Environ Res Public Health. 2021;18(8):4363.

Ministry of Health of Indonesia. Indonesia Basic Health Survey (Riskesdas) 2018. Jakarta: National Institute of Health Reseach and Development; 2018.

Moynihan R, Sanders S, Michaleff ZA, Scott AM, Clark J, To EJ, et al. Impact of COVID-19 pandemic on utilisation of healthcare services: a systematic review. BMJ Open. 2021;11(3):e045343.

Pokhrel S, Sauerborn R. Household decision-making on child health care in developing countries: the case of Nepal. Health Policy Plan. 2004;19(4):218–33.

Singh DR, Sunuwar DR, Shah SK, Karki K, Sah LK, Adhikari B, et al. Impact of COVID-19 on health services utilization in Province-2 of Nepal: a qualitative study among community members and stakeholders. BMC Health Serv Res. 2021;21(1):1–14.

Temesgen K, Wakgari N, Debelo BT, Tafa B, Alemu G, Wondimu F, et al. Maternal health care services utilization amidstCOVID-19 pandemic in West Shoa zone, central Ethiopia. PLoS One. 2021;16(3):e0249214.

The World B. Repositioning Nutrition as Central to Development. A Strategy for Large-Scale Action. Int Bank Reconstr Dev. 2006;

Treleaven E, Whidden C, Cole F, Kayentao K, Traoré MB, Diakité D, et al. Relationship between symptoms, barriers to care and healthcare utilisation among children under five in rural Mali. Trop Med Int Heal. 2021;

World Health Organization. Coronavirus disease 2019 (COVID-19): situation report, 60. World Health Organization; 2021.

Yan H, Li X, Lu X, Zeng S, Yuan Y, Hu X, et al. Changes in pediatric healthcare utilization in Hunan Province, China, during the COVID-19 pandemic: a multi-center cross-sectional study. Transl Pediatr. 2021;10(4):870.

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Factors Influencing Breastfeeding in the First Six Months of Age in the State of Kuwait

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Abstract

Aim: To determine the factors influencing breastfeeding continuation for the first six months of a baby's life.

Method: A cross-sectional study was conducted by the research team via an interview-based questionnaire and interviewer at Al-Sabah Maternity Hospital. A total of 316 Kuwaiti and non-Kuwaiti subjects participated in this study. Chi-square tests and logistic regression analysis were conducted to examine the factors influencing breastfeeding.

Results: A total of 196 (62%) of the mothers practiced any feeding, including formula and/or breast milk. Only 12.3% of the mothers exclusively breastfed their babies for the first six months of life. Highly educated mothers were less likely to breastfeed than less educated mothers (OR: 0.14; 95% CI: 0.05-0.45). Not using pacifiers was positively associated with breastfeeding (OR: 2.15; 95% CI: 1.32-3.51). More than a third of the mothers reported stopping breastfeeding due to lack of lactation places in public and workplaces (50%) and insufficient milk production to support infant growth (32%).

Conclusion: Our findings highlight the importance of creating a supportive environment in workplaces and public areas to encourage mothers to breastfeed. Interventions for enhancing knowledge and promoting breastfeeding are advised, focusing on factors associated with early cessation.

Keywords: breastfeeding, infant growth, exclusive, formula-feed.

Introduction

The World Health Organization (WHO) recommends initiating breastfeeding within one hour of birth and exclusive breastfeeding up to 6 months of age [1]. Breastfeeding is given great emphasis due to its benefits to mothers and their children. Studies have shown that breastfeeding protects mothers from premenopausal breast cancer, ovarian cancer, retained gestational weight gain, type 2 diabetes, myocardial infarction, and metabolic syndrome [2]. Breastfeeding is also beneficial to infants; breast milk contains essential nutrients that are important for the physical and mental development of the baby. It also protects babies against certain infections and other conditions in early childhood [3].

On the other hand, infants who did not receive breast milk are more likely to suffer from infectious morbidity, childhood obesity, diabetes, leukemia, and sudden infant death syndrome [3]. In 2019, 30.5% of children and adolescents aged 6 –18 years in Kuwait were obese, and the incidence of type II diabetes was reported as 2.56 per 100,000 Kuwaiti children and adolescents per year [4]. Therefore,

understanding the factors associated with breastfeeding practices among mothers could be important for diabetes and obesity prevention in Kuwait.

In 2010, only 10.5% of the mothers in Kuwait exclusively breastfed their babies until six months [5]. Research has shown that several factors could play an important role in preventing mothers from breastfeeding [6]. Some factors are: level of education, the feasibility of breastfeeding at work, self-perceived adequacy of breast milk, separate housing, and higher maternal age [6]. Whether these factors affecting mothers feeding practices in Kuwait need further investigations. Understanding the contributing factors to breastfeed will significantly impact children, mothers, and the community. Therefore, the current study aimed to determine the factors influencing breastfeeding continuation for the first six months of the baby's life in Kuwait.

Materials and Methods

Procedures for recruitment were established for mothers and their newborn infants in Al-Sabah Maternity Hospital. This hospital is one of the biggest general hospitals in Kuwait that offers health-related services to the population of the Capital governorate. Mothers who had full-term babies (37+ weeks) and babies with normal birth weight (≥2.5 Kg) were eligible to participate in the study. Of the total 612 mothers informed, only 316 agreed to participate and signed the consent form. Information was collected using an interview-based questionnaire to ensure the questions were fully understood and enhance the answers' quality. The questionnaire included three sections. The first section contained information about the newborn, such as birth date, sex, weight, height, and gestational age. The second and third sections addressed general information concerning the mother and father, such as their birth date, nationality, weight, height, education level, monthly income, and residence. This study was approved by the Ethical Committee at the Ministry of Health in Kuwait.

Statistical Analysis

We first described the characteristics of study participants using counts and percentages. We then compared the proportions of participants' characteristics by feeding practices using chi-square and Fisher exact tests. Finally, the associations between the significant variables from the chi-square test and feeding practices (any breastfeeding vs. bottle-feeding) were performed using a logistic regression model. All statistical analyses were performed using SAS version 9.4 (SAS Institute). All tests were two-sided, and a p-value of <0.05 was considered statistically significant.

Results

The characteristics of study participants are presented in **Table 1**. The majority of the participants were aged less than 30 years old (67.1%), Kuwaiti nationals (79.1%), had a bachelor's degree or above (50.6%), had a full-time job or a student (75.6%), had an income of 1500 Kuwaiti Dinar or above (86.1%), and lived with their families (54.7%). Three-fourths of the mothers had a normal birth (75%), and more than half of the mothers gave birth to boys (53.2%) and used pacifiers for their babies (57.0%).

Table 1 Characteristics of participants (N=316)

Characteristic	N	(%)
Maternal age range (year)		
<30	212	67.1
≥30	104	32.9
Maternal education level		
High school or below	35	11.1
College student or diploma	121	38.3
Bachelor' degree or above	160	50.6
Maternal occupation		
Student or employed	239	75.6

Unemployed	77	24.4
Family monthly income (Kuwaiti Dinar)		
<1500	44	13.9
≥1500	272	86.1
Nationality		
Kuwaiti	250	79.1
Non-Kuwaiti	66	20.9
Housing		
Separate house	143	45.3
Family related	173	54.7
Delivery mode		
Normal	237	75.0
Caesarean section	79	25.0
Sex of infant		
Girl	148	46.8
Boy	168	53.2
Pacifier use		
Yes	180	57.0
No	136	43.0

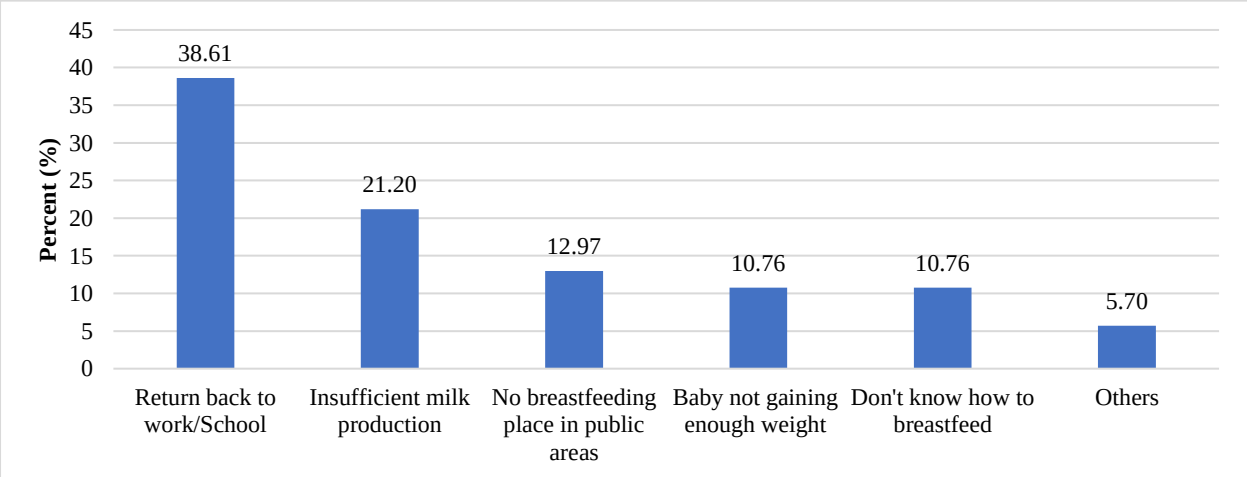

Figure 1 Factor reported by mothers for stopping breastfeeding

About 38% of the mothers reported stopping breastfeeding after some time. The reasons behind abstaining from breastfeeding were mothers had no time to breastfeed due to return to work or school, milk was insufficient, no place for breastfeeding in public places, babies not gaining enough weight, and inadequate knowledge of how to breastfeed (**Figure 1**).

Table 2 presents the chi-square tests of feeding practices by participants' characteristics. Only maternal education level (P= 0.0007) and pacifier use (P= 0.002) were significantly associated with breastfeeding continuation for the first six months of a baby's life. About 89% of less-educated mothers reported that

they breastfed their infants compared to 62% of the highly-educated mothers. Approximately half of the mothers (54.4%) who used pacifiers to their infants practiced breastfeeding compared to 72% who did not use pacifiers. Maternal occupation may also play a role in breastfeeding (P= 0.059), employed or student mothers were less likely to breastfeed their infants than unemployed mothers.

Table 2 Chi-square tests of feeding practices by participants' characteristics

Characteristic	Any breastfeeding N (%)	Formula feeding N (%)	*P* Value*
Maternal age range (year)			0.46
<30	128 (60.4)	84 (39.6)	
≥30	68 (65.4)	36 (34.6)	
Maternal education level			0.0007
High school or below	31 (88.6)	4 (11.4)	
College student or diploma	66 (54.5)	55 (45.5)	
Bachelor or above	99 (61.9)	61 (38.1)	
Maternal occupation			0.059
Student or employed	141 (59.0)	98 (41.0)	
Unemployed	55 (71.4)	22 (28.6)	
Monthly income (Kuwaiti Dinar)			0.62
<1500	29 (65.9)	15 (34.1)	
≥1500	167 (61.4)	105 (38.6)	
Nationality			0.57
Kuwaiti	153 (61.2)	97 (38.8)	
Non-Kuwaiti	43 (65.2)	23 (34.8)	
Housing			0.35
Separate house	93 (65.0)	50 (35.0)	
Family related	103 (59.5)	70 (40.5)	
Delivery mode			0.60
Normal	149 (62.9)	88 (37.1)	
caesarean Section	47 (59.5)	32 (40.5)	
Sex of infant			0.42
Girl	88 (59.5)	60 (40.5)	
Boy	108 (64.3)	60 (35.7)	
Pacifier use			0.002
Yes	98 (54.4)	82 (45.6)	
No	98 (72.1)	38 (27.9)	

*Fisher's exact test

On multivariable logistic regression analysis, maternal education level and pacifier use were significant factors for breastfeeding (**Table 3**). Mothers who did not use pacifiers for their infants were two times more likely to breastfeed than mothers who used pacifiers (OR: 2.15; 95% CI: 1.32-3.51). Compared with less educated mothers, college student mothers and mothers who had diplomas were 86% (OR: 0.14; 95% CI: 0.05-0.45) less likely to breastfeed. Similarly, mothers with a bachelor's degree or above were 81% (OR: 0.19; 95% CI: 0.06-0.63) less likely to breastfeed than mothers with a high school or below.

Table 3 Odds Ratios (95% Confidence Intervals) of the associations between significant predictors and continuation of breastfeeding for the first six months.

Variable	OR[a] (95% CI)
Maternal education level	
High school or below	1.00
College student or diploma	0.14 (0.05 - 0.45)*
Bachelor's degree or above	0.19 (0.06 - 0.63)*
Monthly income (KD)	
<1500	1.00

≥1500	1.38 (0.61 - 3.17)
Pacifier use	
Yes	1.00
No	2.15 (1.32 - 3.51)*

[a]Adjusted for maternal education level, monthly income, and pacifier use.
**Statistically significant at P* Value <0.01

Discussion

The present study determined the factors influencing breastfeeding and further evaluated these factors with the continuation of breastfeeding in the first six months of an infant's life. Our study has shown that 12.3% of the mothers in Kuwait exclusively breastfed their babies until six months. This prevalence was higher than that reported in Kuwait in 2007/2008, with only 2% of the participants exclusively breastfed for six months [7]. In this study, the prevalence of any breastfeeding was also higher than that reported previously, 62% vs. 39.0%, respectively. The higher prevalence of breastfeeding in our study compared to the previous studies shows the successful efforts made by the Ministry of Health (MOH) in Kuwait to raise the awareness of the importance of breastfeeding [8]. Since 2012, the MOH has integrated specialized breastfeeding clinics in all public hospitals. These clinics are equipped with nurses who are specialized in breastfeeding and postpartum care and are provided with posters and brochures explaining the benefits of breastfeeding. A campaign on the benefits of breastfeeding has also been launched to spread information in simple and clear messages in multiple languages to cover all members of this diverse community [9]. This study suggests that the efforts made by the MOH were successful in increasing the rate of breastfeeding among women living in Kuwait

The prevalence of any breastfeeding varied across the Gulf Cooperation Council (GCC) countries ranging from 40% to 62%. The lowest rate was observed in Saudi Arabia (Jeddah) [10] and the United Arab Emirates [9]; 40% and 40.8% of the participants are breastfed until their child reached the age of six months, respectively. Followed by Qatar, 49.9% of Arab mothers have continued breastfeeding for six months [11]. The highest breastfeeding rates were observed in Kuwait and Oman, where 62% and 60.4% of the mothers breastfeed their babies until six months of age, respectively [12].

We found that higher maternal education and pacifier use were the two significant factors negatively associated with continuing breastfeeding at six months in Kuwait. This highlights the need to inform mothers of the negative consequence of early pacifier use. Consistent findings were observed in Kuwait [9], Saudi Arabia, and Qatar [13]. Literature has found other factors considered barriers to continued breastfeeding; include mothers' perception of pain, body image, body changes, embarrassment from breastfeeding in public, and breastfeeding at work [14]. However, these factors were out of the scope of our study and should be assessed in future work.

More than a third of the mothers in our study reported stopping breastfeeding after some time. Consistent with other studies in the GCC [9-12-13], we found that mothers having to return to work or school and no appropriate places for breastfeeding in public places were two of the most important reasons for stopping breastfeeding. This shed light on the importance of providing breastfeeding break time and creating suitable areas for lactating mothers in workplaces. These lactation rooms should be equipped with breast pumps, refrigerators, and necessities to encourage nursing mothers to express their milk during workdays. This will help mothers maintain their milk production, relieve breast engorgement during long working hours, and appropriately store breast milk for babies to feed when the mother is at work [15]. Public places should also consider establishing clean, comfortable, and private lactation rooms to encourage mothers to breastfeed. The other two reasons reported by mothers for stopping breastfeeding were that the milk was insufficient for the baby and the baby is not gaining enough weight. Despite the MOH's great effort on breastfeeding as reported earlier, our study found that there are still more gaps in mothers' knowledge regarding breastfeeding.

Conclusions

The percentage of exclusive breastfeeding women in Kuwait appears to be slightly increasing. Implementing the World Health Organization 10 Steps for Successful Breastfeeding program in Kuwait's Ministry of Health hospitals in 2012 [8] seems to successfully raise awareness and knowledge of breastfeeding among mothers in Kuwait. However, there is still a gap in knowledge regarding breastfeeding practices among mothers. Moreover, policymakers should consider providing breastfeeding-friendly places in workplaces and public areas to further increase exclusive breastfeeding rates and prolong the duration of breastfeeding.

Competing Interest:

The author(s) declare that they have no competing interests.

References

1. World Health Organization, Indicators for Assessing Infant and Young Child Feeding Practices, Washington D.C. Geneva, WHO, 2008.

2. A. Stuebe, The Risks of Not Breastfeeding for Mothers and Infants, *Reviews In Obstetrics & Gynecology*, vol. 2 no. 4, 2009, p. 222–231.

3. The Benefits of Breastfeeding for Parents and Baby, https://www.eufic.org/en/healthy-living/article/the-benefits-of-breastfeeding-for-parents-and-baby? (Updated 01 August, 2021).

4. H. Al-Kandari, D. Al-Abdulrazzaq, L. Davidsson, P. Sharma, A. Al-Tararwa, F. Mandani, F. Al- Shawaf, F. Al- Hussaini, M. Qabazard, D. Haddad, M. Al-Mahdi, F. Al-Jasser, A. Alanezi, H. Al-Sanea, I. Al-Basari, A. Al-Adsani, A. Shaltout and M. AbdulRasoul, Incidence of Type 2 Diabetes in Kuwaiti Children and Adolescents: Results from the Childhood-Onset Diabetes *Frontiers in Endocrinology*, vol.10, no. 836, 2019.

5. M. Dashti, J. A. Scott, C. A. Edwards & M. Al-Sughayer, Determinants of Breastfeeding Initiation Among Mothers in Kuwait, *International Breastfeeding Journal*, vol. 5, no. 7, 2010.

6. K. M. Krol and T. Grossmann, Psychological Effects of Breastfeeding on Children and Mothers, *USA Journal of Leitthema*, vol. 61, no.8, 2018, P 977–985.

7. M. Dashti, J. A. Scott, C. A. Edwards & M. Al-Sughayer, Breastfeeding Duration among Women in Kuwait: Results of a Prospective Cohort Study, *Nutrients Journal,* , vol. 6, no. 2, 2014, p. 711-728.

8. WHO, Nutrition and Safety, Ten steps to Successful Breastfeeding, https://www.who.int/teams/nutrition-and-food-safety/food-and-nutrition-actions-in-health-systems/ten-steps-to-successful-breastfeeding, 2021

9. Z. Taha, A. Hassan, L. W. Scott and D. Papandreou, Factors Associated with Delayed Initiation Cessation of Breastfeeding Among Working Mothers in Abu Dhabi, the United Arab Emirates, *International Journal of Women's Health*, vol. 13, 2021, p 539–548.

10. M. Kornides, and P. Kitsantas, Evaluation of Breastfeeding Promotion, Support, and Knowledge of Benefits on Breastfeeding Outcomes, *Journal of Child Health Care,* vol. 17, no.3, 2013, p 264–273.

11. World Health Organization, Geneva, Switzerland WHO/UNICEF, Baby-Friendly Hospital Initiative, http://www.who.int/nutrition/topics/bfhi/en/, (accessed 15 July 2016).

12. TM. Al-Mamari, MS. Al-Ghafri, MS. Al-Wahaibi, SA. Ambusaidi and SH. Hassan, Breast Feeding and Bottle (formula) Feeding Habits among Omani Babies, *Madridge Journal of Nursing*, vol. 2, no.2, 2017, p.81-86.

13. A. Nasser, F. Omer, F. Al-Lenqawi, R. Al-awwa, T. Khan, A. El-Heneidy, R. kurdi and G. Al-Jayyousi, Predictors of Continued Breastfeeding at One Year among Women Attending Primary Healthcare Centers in Qatar: A Cross-Sectional Study, *Nutrients Journal,* vol. 10, no. 983, 2018.

14. Barriers to Breastfeeding in the United States, https://www.ncbi.nlm.nih.gov/books/NBK52688/, 2011.

15. V. Fernandes, E. dos Santos, A. L. Erdmann, D. E. de Pires, M. Zampieri and V. Gregório, Establishment of lactaton rooms in public and private companies: potentialities and difficulties, *Rev. Gaúcha Enferm*, vol.37, 2016.