



Using Health Belief Model as a theoretical basis for Implementation of Health Protection Strategies among School Children in the Post COVID 19 Era: Implications for Health Education

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Abstract

Infectious diseases are common health problems affecting school children in this dispensation. Amidst the innumerable infectious diseases, COVID-19 is the most dreadful. This disease affects all human species, irrespective of age, level or class. COVID-19 disease is caused by a virus named SARS-Cov2, which deleteriously hampers academic progress of school children due to severe complications underlying COVID-19 incidence. In the Post COVID-19 Era, the use of Health belief model through health protection strategies is necessary to effectively manage the spread of the disease and other infectious disease that may arise among the school children. The paper however, examined health protection strategies such as planning and preparedness; prevention and early detection; investigation and control; wider public health management and leadership this is aimed to further reduce the impact of COVID-19 in this Post COVID-19 Era by assessing the implication of health education for school children. It was concluded that health protection strategies could help prevent the spread of diseases in the post COVID-19 era; also it was recommended that health protection strategy should be encouraged through health education among school children.

Keywords: Health Belief Model, Health Promotion Strategies, School Children

Introduction

Every facets of the society across the globe are adapting to the evolving changes caused by Covid-19 pandemic. Children of all ages, and in all countries, are being affected, in particular the school aged children. Even, the mitigation measures of Covid-19 which may have inadvertently affected them negatively and positively (United Emergency Children Fund (UNICEF), 2021). School children are children who are enrolled in and attending a grade of kindergarten or above or who are of compulsory school age but is less than 18years old and eligible for special needs or protective child care benefits (Law Insider, 2023). School children are basically within the ages of 9 through 13; they are highly active and need more physical activity and peer approval, and want to try more daring and more adventurous behaviors. They reportedly have school experiences which significantly contribute to their feeling as members of the school community. When school children are asked more generally about what made them feel part of the school, some of the most common responses included, 'having a school uniform', 'having friends', 'playing sports', 'teachers' and 'school work/education' (Fenesi et al.,2022).

Covid-19 pandemic has created the largest disruption of education systems in history affecting nearly 1.6 billion learners in more than 190 countries and in all continents of the



world (United Nations, 2020). Corona virus, is a highly contagious pandemic disease labeled as one of the deadliest pandemics in history, caused by the corona virus it is also known as “Severe Acute Respiratory Syndrome Coronavirus 2”, or SARS-CoV-2 for short (World Health Organization(WHO), 2022). This crisis caused by Covid-19 has aggravated pre-existing educational disparities by reducing the educational opportunities for most children, especially the vulnerable school children by age, innocence and environment. For many school children, school is the only place where meaningful interaction with other children are initiated and sustained. According to IGI Global, (2022) a school is an institution where formal learning or education is conducted. it is a division of the education system consisting of students comprising one or more grade group or other identifiable groups, organized as one unit with one or more teachers to give instruction of a defined type and housed in one or more building or compound, as is the case when elementary and secondary school are housed in the same building or compound. Even in this Post-COVID-19 Era, many children have not had the usual physical access to friends, peers, school mates and relatives and social integration for a period of time (Ray et al., 2022).

During this period, children were not allowed to do what they usually do. Also, operations in the schools have not been as usual, there are substantial services constituted for the well-being and security of the school children, Services such as nutritional services, medical services and restorative services for safety and protection of school children in this Post-COVID-19 Era. Children of all ages and in all countries of the world are seriously suffering from the consequences of the pandemic. Post -COVID-19 related measures are having a profound effect on their health and well-being and for some the impact will be a life-long thing (WHO, 2022). Infectious diseases disrupt the environments in which children grow and develop, which require protective networks and services. Health protection is necessitated as the most efficacious intervention strategies to reduce the impact of COVID -19 on children Health protection is the protection of individuals, groups and populations through the effective collaboration of experts in identifying, preventing and mitigating the impacts of infectious diseases and of environmental, chemical and radiological threats. It encompasses activities ensuring healthy living and working conditions, and preventing the transmission of communicable diseases and epidemics (Health, 2020).The uncertainties of the COVID-19 pandemic have challenged school systems, especially educators, staff, and school administrators, to transform the ways that they connect with, teach, and support school children and families (National Child Traumatic Stress Network, 2019).

These transformational changes have offered school systems the opportunity to build on the relationships they have formed with each other and with the school children and families to facilitate teaching and learning process in this Post- COVID -19 Era. Children are generally at low risk of infections, and if they become infected it is likely to be mild. However, some children and young people have had severe experiences with the disease, and few have died which necessitated the need for health protection (WHO, 2022). To achieve this, the most effective health protection strategies must be identified. Good health in children depends on several factors, such as their nutrition, hydration, sleep routine, hygiene, and physical activity. It may be difficult for children to ensure they are on the right track for all these parameters by themselves, which is when parents can help (Sravani, 2023). According to Igoe (n.d.) Health promotion strategies to reduce cardiovascular disease focus on teaching children healthy lifestyle habits (regular exercise, prudent eating, and abstinence from tobacco).

Health protection strategies include requiring food labels that contain information about fat and sodium content and publishing warnings about the hazards of tobacco use. Disease



prevention strategies encompass clinical counseling regarding control of blood pressure and weight. Having sufficient sleep also strengthens our immune system. Thus, it strengthens the bodies against germs and bacteria that can cause different types of illnesses; junk food should be removed from our refrigerator and cupboard. Replace it with healthy options like fruits, nuts, and vegetables; encourage children to go on for exercise; Having a water jug in every area of the home that a child frequents – the living room, bedroom and the kitchen, etc. This way, when the child feels thirsty, he can easily grab a glass of water (DetailXperts, 2023).

Centers for Disease Control and Prevention (CDC) (2021), -recommended actions to improve nutrition in schools are:

- Promote access to and participation in school breakfast and lunch.
- Ensure that all foods and drinks sold or served outside of school meal programme are nutritious and appealing.
- Offer healthy foods and drinks at school celebrations and events. Use only nonfood items as rewards.
- Provide more access to drinking water.
- Promote healthy foods and drinks—for example, by pricing them lower than less healthy items.
- Teach nutrition in health education classes, throughout the school day, and in after-school programme; for example, through school gardens and farm-to-school activities.
- Provide enough time for students (at least 20 minutes) once they are seated to enjoy their meal.

Theoretical Framework

The constructs as outlined in the Health belief model could also serve as a link for applying these health protection strategies among school children in the post COVID-19 era;

The Health Belief Model is a psychosocial compliance model developed to explain and predict health related behaviours at the level of individual decision making in uptake of health services. Hochbaum, (1958) proposed this theory among others. The health belief model proposes that people are most likely to take preventative action if they perceive the threat of a health risk to be serious, if they are personally susceptible and if there are fewer costs than benefits to engaging in any health practice or activity. The Health Belief Model was based on an assumption that people fear disease and that health actions are motivated in relation to the degree of fear (perceived threat) and expected fear reduction potential of actions, as long as that potential outweighs practical and psychological obstacles to taking actions(net benefits).

The four key constructs of the health belief model are identified as perceived susceptibility and perceived severity (two dimensions of “Threat”) and perceived benefits and perceived barriers (components of “net benefit action”). Recently, the model adapted the additional concepts, “cue to action” a stimulus to undertake behaviour, and self- efficacy, and the confidence one has on his ability to perform an action. Health belief model is fundamentally based on these constructs as an intervention that persuades individual to make healthy decisions and take actions. School children should be encouraged to see themselves susceptible to Covid-19.

Perceived susceptibility is children understanding of their risk of contracting Covid-19 disease. It is a subjective assessment of risk of developing a health problem. The HBM predicts that persons who perceive that they are susceptible to a particular health problem will engage in behaviours to reduce their risk of developing the health problem. School children



should be encouraged to engage in health protection strategies to avert being predisposed to any inherent Covid-19 health conditions.

Perceived seriousness of the condition refers to the seriousness of the condition as perceived by the individual. It refers to the subjective evaluation of the seriousness of a disease condition and its potential consequences which may be in form of clinical and social consequences (hospitalization, disability, pain or death). It creates a pressure to act but does not determine how the person will act. At this stage, school children should understand that health problems resulting from their exposure to Covid-19 would be a serious one.

The sum of perceived susceptibility and seriousness is termed perceived threat. The perceived threat has cognitive impact, which is usually latent and generally influenced by information at that time. When school children feel threatened of by a particular disease, they are most likely to have a desire to protect themselves against threatened ailments. This desire will trigger some actions that they can comfortably take on for protection to avoid a Covid-19 health conditions, outcome and also maintain a pattern of healthy behavior. This can lead them to perceive benefits of any positive action.

Perceived benefits of a positive action is an individual's assessment of the value or efficacy of engaging in a health promoting behavior to decrease risk of health problem or disease. If the school children are meant to believe that their participation in health protection strategies will reduce their susceptibility to a health problems associated with COVID-19 or decrease its seriousness, then they will likely engage in those strategies regardless of objective facts regarding the effectiveness of their actions. Though, they may perceive some barriers which may hinder positive engagements.

Perceived barriers to adopting the recommended action. It is an individual's assessment of the obstacles to behavior change. Even if a school child perceives COVID-19 condition as threatening and believes that a particular action will effectively reduce the threat, barriers may prevent their engagement in health protection behaviours. That is to say that the benefits of these health protection strategies must outweigh the perceived barriers in order for behaviour change to occur. Example of perceived barriers to taking action among school children include perceived inconvenience of their engagements, fear of the health situation, pains associated with the recommended medical care and discomfort involved in engaging in the recommended health protection strategies.

Associated with HBM are stimuli to undertake a behavior and these are regarded as cues to action. These are factors that activate readiness to change; these are triggers necessary to encourage engagement to health-protecting behaviours. Cues to action include a multiple range of factors which triggers school children to indulge in health protection practices. These factors will help school children to initiate appropriate health behaviour good for their health. Cues can be internal or external. Examples of internal cues include pains and personal symptoms; external cues to action include media messages from health professionals about the illness, illness of a school mate, death of a loved one as a result of Covid-19 disease, product health warning labels, and mass media campaign.

Upon all these, school children should feel capable of engaging in this health protection behaviour and this is their self-efficacy. Self-efficacy refers to the school children perception of their competence to successfully perform a behavior. This model recognized that



confidence in one's ability to effect change in outcomes was a key component of health behavior change.

The construct are implicated to this study in the following ways; threat perceptions depend upon the perceived susceptibility to the illness arising if health protection strategies are ignored and perceived severity of the consequences of exposure to illness. These variables will determine the likelihood of school children to adopt and follow health protection strategies that will enhance their health during this critical period of Covid-19 and averting complications associated at this period.

The model asserts that school children will take action to ward off complications of Covid-19, if they regard themselves as susceptible to the condition or prone to Covid-19 or if they believe it to have potentially serious consequences on them or if they believe that their course of actions or practices required of them to adopt would be beneficial in reducing either their susceptibility to or the severity of the condition. These constructs will determine the likelihood of the school children to follow-up with health protecting strategies such as washing their hands regularly, refrains from touching their faces, or the faces of others, greeting people and expressing empathy without physically touching other people: avoid handshakes, hugs and kisses, maintaining a physical distance of 1.5 meters away from other people whenever possible and wearing of a face mask or a scarf to cover your mouth and nose (to remember to replace their masks with new ones after two hours).

Health Protection Strategies

A health protection strategy is a necessary thing in this Post COVID -19 Era in order to avoid health emergencies among school children. According to Ghebrehewet et al., (2016), Health Protection strategies entails four key health protection principles; they include;

1. Planning and preparedness
 2. Prevention and early detection
 3. Investigation and control
 4. Wider public health management and leadership
- **Planning and preparedness:** Preparedness is the process of ensuring readiness for an outbreak in advance so that the response will be more effective. Preparedness can lead to a faster, more efficient response, reducing both morbidity and mortality. A preparedness plan identifies the steps required to prepare for an outbreak, including gap analysis and capacity-building activities, pre-positioning of supplies, adapting and pre-positioning of materials, identification of partners and pre-defined agreements for response implementation and coordination. If a preparedness and response plan already exists, review the plan and update it regularly.

Prevention and Early Detection.: This involves practical approach. Vaccination is the most effective safeguard measure against COVID-19 and can reduce the risk of severe cases and fatalities. Schools at this stage should strengthen the promotion of vaccination to school children, parents, as well as their family members, and encourage them to get vaccinated actively. Also, adding the link of the website of the COVID-19 Vaccination Programme to the school website is necessary to facilitate parents and care –givers to obtain the latest vaccination information (Hawker, 2019).

Investigation and Control: this entails close monitoring to detect those who are COVID -19 positive earlier, thereafter controlling children's exposure to people who are positive. The schools should have full knowledge of whether there are any confirmed cases of COVID-19, or if there are any close contacts of confirmed cases with COVID-19 among staff and pupils.



Schools should stay vigilant if their staff or pupils have travelled outside the State, country or within the neighborhoods

Wider management entails encouraging schools to properly register and maintain records of school children vaccinations and the list of children who are certified temporarily to be medically unfit for vaccination, and keep track of the latest announcements by the Government and EDB, and inform all stakeholders (including all teachers, school staff, school bus operators, parents, nannies and volunteers, etc.) of the latest arrangements in a timely manner.

Implication for Health Education

Therefore, focusing primarily on non-medical interventions that is proper health education and practical demonstrations would be most beneficial and appropriate for school children ages three-to-eleven for healthy living. Preventive measures and protocols have been in place since the COVID-19 was declared a pandemic. Despite these protocols and preventive measures, only 42 percent of pupils showed excellent hand-washing cognition and behaviour which is below average. This justifies the need for health education. Health education is a communication process; hence communication is a core aspect of health education. It involves educating people by using educational and communication strategies that is, Information, Education Communication (IEC) as a channel to motivate people to adopt healthy lifestyles. It is absolutely difficult to promote health and prevent diseases without exchange of health information. As factual information is communicated to school children on health matters; it will enhance their level of understanding and thereafter enable them to make rational and intelligent decisions to improve their health status. Health education teaching series is meant to inculcate relevant skills and knowledge on disease and the necessity of protection.

Conclusion

Health protection strategy is a key factor in preventing disease and protecting health and well-being of school children. Children's health are closely linked to the environment in which they are born, grow, learn and age. Systematically assessing the environmental conditions of school children in rapidly evolving environment in this Post COVID -19 Era is vital and must be followed by action to ensure positive benefits to health. Health protection strategy becomes a necessary tool in this Post- COVID -19 to prevent further spread of COVID 19 disease and other health emergencies that may arise among school children. On the other hand, the challenge for schools and communities would be to create school environments where school children would be supported in developing health skills and capacities to thrive in this Post-COVID -19 Era. Doing this successfully involves leveraging and disseminating scientific health information through health education.

Recommendations

It is therefore recommended that health promotion strategies should be implemented both at school and in the home for the benefit of children in order to prevent the dangerous effect such outbreaks like COVID-19 had on people.

Schools and teachers should ensure that these health promotion strategies are put in place and properly enforced among school children.

Not only school children but teacher and parent should also practice these strategies as their children learn from them.



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