

The Adherence of Selected School in Manila to Public Health Standards: Development of Institutionalized Health Management System

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Abstract

Healthcare is very important especially in a school community. This study is aimed to determine the adherence of selected school in Manila to the public health standard. This study made use of Embedded Mixed Method Design. This focus on the Thematic Areas of the evaluation included Prevention and Mitigation, Preparation Process, Response, and Recovery and Rehabilitation. The research also examined the following Core Processes: (a) Governance of the Administration; (b) Service Delivery of the Institution's Health Department; (c) Resource Management and Mobilization; and (d) Information and Knowledge Management. Regarding the Functional System, the research needed an examination of the school's Health and Emergency Response Team, Health Emergency Supplies, and Emergency Operations Center responders. At the end, an Institutionalized Health Management System.

The findings showed that the respondents strongly agreed that the Thematic Areas, Core Processes, and Functional System of the health system of the school. Also, there is no significant differences on the areas given on health system when grouped according to their demographic profiles. These were used in the making of the

Institutionalized Health Management System of the school focusing on the result and the recommendations.

Thus, it was concluded that the goal of the research was achieved. The Functional System and Thematic Areas of Disaster Risk Reduction and Management on Health were noted as the highest areas. However, the lowest was the Core Processes found in the health standard of the school that needed enrichment. The implication of the managing the Disaster Risk Reduction Management focused on Health was to strengthen the Physical Education and health aspects of the educative formation of the school. The management and implementation heighten the need for managerial prowess to be able to help the school develop the department for the enhancement of the institution.

The present study recommends using the proposed Institutionalized Disaster Risk Reduction Management focusing on Health. Since it implies a more stretched focus on the implementation and leadership aspect of the school, constant development is recommended not only in the presence of virus, but also other aspect that could bring negative circumstances to the members of the community.

Keywords: *Healthcare. Public Health Standard. Embedded Mixed Method Design. Institutionalized Disaster Risk Reduction Management.*

INTRODUCTION

As of December 2022, the coronavirus (COVID-19) was responsible for more than 192 million cases of disease and more than 4 million fatalities across the globe. In spite of the administration of nearly 3.5 billion vaccine doses, the number of infected patients continues to rise in the majority of nations. This is most likely due to the emergence of new strains of the virus, a shortage of vaccine supplies, and a failure to meet minimal health requirements. In addition, there is a shortage of vaccine supplies (MHS). In low- and middle-income countries (LMIC), such as the Philippines, there have already been around 27,000 fatalities as a result of approximately 1.5 million cumulative cases of the disease (World Health Organization, 2022).

As a direct response to the precipitous rise in the number of COVID-19 cases, the Philippines has initiated the rollout of a series of preventative measures across the nation beginning as early as March 2020. These treatments involve restricted lockdowns, limits on movement, and strict following to MHS protocols, such as masks or face shields, hand washing, and physical separation (Hapal, 2022). It is important, as the world starts to recover and nations return to their pre-pandemic states, to investigate how adherence to minimum health standards has influenced the COVID-19 dynamics of a country and how it should be adapted to the "new normal" that has been established as a result of the pandemic. This should be done in order to determine how a country can recover from the pandemic (Buhat and Villanueva, 2022).

Going back to its roots, the pandemic status of COVID-19 was announced by the World Health Organization (WHO) on March 11, 2020. Since then, society has been put to the test by the newly discovered coronavirus known as SARS-CoV-2, which is responsible for causing the ailment known as COVID-19. Personal hygiene and preventative measures, like being vaccinated and washing one's hands, are the most effective lines of defense against the spread of the virus. The behavioral sciences need to be utilized in order to develop trust, which will motivate citizens to fully implement the advice made by the public health sector (Schumpe, 2022).

With that being the matter at hand, the Department of Health in 2020 issued the Guidelines on the Institutionalization of Disaster Risk Reduction and Management in Health (DRRM-H) in Province-wide and City-wide Health Systems. With the constant threat of emergencies and disasters in the country and their resultant negative health consequences, Republic Act (RA) 10121, or the "Philippine Disaster Risk Reduction and Management Act of 2010," and the Implementing Rules and Regulations (IRR) of RA 11223, "The Universal Health Care Act," emphasize the need to adopt an integrated disaster risk reduction and management (DRRM) and climate change mitigation and adaptation approach and to develop province- and city-wide health systems (P/CWHS) with timely, effective, and efficient preparedness and response to public health emergencies and disasters, thereby ensuring the delivery of essential population-based health services.

In spite of the fact that a number of programs have been developed, relatively few studies have been conducted on the degree to which educational institutions are aware of these programs or put them into practice. In addition, because the pandemic brought about unforeseen developments, the holes in the procedures for putting the program into action need to be fixed. The suggestions made by the government should be followed by implementers, and the organizational structure of the program should be modified to include a person whose responsibility it is to follow the requirements made by the government. However, owing to these gaps, the study would also be relevant with the new usual scheme of the students having face to face lessons. This is because the students would be utilizing the set of rules in performing catastrophe drills, therefore the study would still be relevant with this new normal scheme. As a result, it is necessary



for these exercises to be carried out in compliance with the guidelines provided by the IATF about COVID-19 procedures.

Schools have been doing health protocols to ensure safety measures of their stakeholders. However, in the recent study conducted by UNESCO (2022), some schools' healthy protocols might not be enough. This was also the inspiration behind choosing the subject matter. The researcher would like to evaluate the Disaster Risk Reduction and Management in Health (DRRM-H) of a selected school in Manila. In effect, it will maximize the institutionalization of the program which advocates for the establishment of health systems that can withstand the natural, biological, technological, and sociological dangers that may threaten people's health. Linking it to the health aspect of MAPEH, this reports the health measures and safety protocols being done by the school to its stakeholders in the new normal. Despite the school's adherence to a specific protocol, implementing an institutionalized health management system would provide the school with a more adaptable approach to establishing a city-wide health system. This system would enable the school to promptly, effectively, and efficiently prepare for and respond to public health emergencies and disasters. Consequently, it would ensure the provision of vital population-based health services.

The study aims to evaluate the adherence to public health standards of a selected school in Manila. This shall be in relation to the development of a proposed institutionalized Disaster Risk Reduction Management in Health (DRRM-H). Specifically, the researchers sought to answer the following:

1. What is the demographic profile of the respondents in terms of:
 - a. Gender;
 - b. Age; and
 - c. Classification (Administrator, Teacher, Staff, Student, Stakeholders);
2. What is the evaluation of the respondents Thematic Areas of the DRRM - H of the institution in terms of:
 - a. Prevention and Mitigation;
 - b. Preparedness Procedure;
 - c. Response; and
 - d. Recovery and Rehabilitation?
3. What is the evaluation of the respondents of the Core Processes of the DRRM - H of the institution in terms of:
 - a. Governance of the Administration;
 - b. Service Delivery of the Health Department of the Institution;
 - c. Resource Management and Mobilization; and
 - d. Information and Knowledge Management?
4. What is the evaluation of the respondents of the Functional System of the DRRM - H of the institution in terms of:
 - a. Health and Emergency Response Team;
 - b. Health Emergency Commodities; and
 - c. Emergency Operations Center?
5. Is there a significant difference when the demographics were grouped according to:
 - a. Thematic Areas;
 - b. Core Processes; and
 - c. Functional System?
6. From the gathered data, what Institutionalized Disaster Risk Reduction Management in Health (DRRM-H) can be proposed by the researcher?



Literature Review

In the midst of the present global health crisis, the majority of students from all different levels have been coping with the new normal education outside of their classrooms for the last two years. This has occurred throughout the course of the previous two years. Online learning or learning through pre-assembled modules are also viable options here. Because of the dramatic shift in the structure of education away from face-to-face education and toward virtual education, the vast majority of students and parents, especially here in the Philippines, have been given reasons to be anxious about the future of education. Students are having problems adjusting to the new normal in terms of their educational experiences as a result of the COVID-19 issue, which caught them by surprise and caused them to be caught off guard. More than that, one of the objectives that schools have established in the paradigm of the "new normal" is the safety of the kids when they are within the confines of the school and being monitored by the teachers, staff, and administrators. This is a priority for the schools. Consequently, although society may have become more fearful, the pursuit of education has still ensured that the purpose of education has been met (Aucensillo, 2021).

Based on the study conducted by Tria (2020) following the lens of the Department of Education in a post-pandemic educational setting, it revolved around pedagogical development in a health-related lifelong learning. Nobody knows when the current COVID-19 epidemic will come to an end, despite the fact that it has brought about incredible difficulties and has had an impact on the educational sectors. Even while every nation is in the process of developing and putting into action strategies and protocols designed to limit the virus, the number of illnesses is still steadily climbing. In the realm of education, taking into account the new normal in the process of formulating and carrying out the "new normal educational policy" is something that has to be done in order to maintain and continue to deliver excellent education despite lockdown and community quarantine procedures. This article discusses options for reacting to challenges, problems, and trends that are presently developing and will arise in the future owing to the COVID-19 pandemic by looking at education in the Philippines - the new educational standard. These opportunities are presented via the lens of education in the Philippines.

In the reports posted by UNESCO (2020) in UNESDOC, as students and teachers return to school, it is imperative that everyone's physical wellbeing is prioritized. It is essential to have safe and healthy working circumstances in order to preserve motivation and productivity during and after the epidemic. Safe and healthy working conditions are crucial to decent work in schools. In order to make sure that students and employees at schools are safe and healthy, the safety and health precautions that are taken at schools should be adapted to the local context in accordance with any international treaties, national laws, and national health precautions that have been ratified. The authorities in charge of education should do the following: (1) Adhere to the general principles of occupational health and safety, in particular the COVID-19 guidelines released by international organizations (such as the World Health Organization), in which teachers and education support staff cooperate with school leaders to ensure their own safety as well as the safety of students and other colleagues. The teaching personnel should be provided with knowledge on potential dangers in the school environment. Additionally, free testing should be provided in suspected instances as well as free recurrent testing if it is practical. Finally, methods should be built to report suspected cases. (2) Take precautions against the spread of illness and ensure that individuals have access to personal protective equipment as well as training in its proper use. Encourage instructors to participate in conversations about how to implement international standards in their own classrooms as well as the rest of the institution. Establish criteria and notify instructors of requirements for restructuring classroom learning, including setting upper limits on numbers of students linked to physical distancing standards. Also include in this process the setting of higher limitations on the number of children who may sit at a single desk.



Before the rigorous quarantine measures to manage COVID-19 brought to the shutdown of schools, schools in Cebu had emphasized the necessity of disaster education in the school curriculum, with an emphasis on Health. To further the cause of disaster education, pilot schools participating in a grassroots technical cooperation project run by the Japan International Cooperation Agency (JICA), the non-profit organization SEEDS Asia, and the Department of Education (DepEd) Region 7 collaborated to develop operations and response manuals as well as a disaster risk reduction and management model. For the time being, educators at seven pilot schools in Bogu, Carcar, Cebu, Daanbantayan, Danao, LapuLapu, Mandaue, Naga, Talisay, and Toledo in Cebu Province have disseminated localized response guides that are modeled after the Hyogo Framework design for disaster education. Teachers and students in Cebu Province received training on disaster risk reduction strategies through a project called Promotion of School Disaster Risk Reduction and Management specific to Health. These strategies were also created by Japan's Hyogo Prefecture Board of Education (Japan International Cooperation Agency, 2021).

In the study of Nandi (2022), natural disasters, biological disasters, technical disasters, and social disasters are the four categories that may be used to categorize health crises that cause dangers and damages to human lives and properties, ultimately resulting in economic losses. The primary components of disaster risk management are as follows: (i) limiting exposure to hazardous pre-agents and reducing vulnerabilities, which in turn reduces the likelihood that a disaster will occur; (ii) developing strategies and making preparations, which includes gathering resources and developing a plan of action; (iii) providing real-time response during a disaster; and (iv) recovering and rehabilitating those who have been affected. The currently ongoing pandemic, which is being caused by COVID-19, has resulted in the incorporation of health care into overall catastrophe risk management measures. The purpose of this chapter is to work toward the development of a blueprint for integrating the management of health or biological disasters into the overarching protocols and principles of disaster risk management. It also suggests moving away from the traditional approach of providing a response after an outbreak or the occurrence of a health disaster and toward a more proactive approach of health risk mitigation. This would involve building capabilities across the nation by developing healthcare services and infrastructure that can be used to combat health disasters. Outbreaks of illnesses and other natural catastrophes or disasters can indirectly cause health emergencies or disasters, which can result in the disruption and collapse of healthcare facilities and restrict the ability of the majority of people to receive healthcare services.

The thirteenth Sustainable Development Goal addresses the necessity of taking immediate action and outlines specific goals to achieve in order to mitigate the effects of climate change on the occurrence of natural catastrophes. Within the context of the light disaster risk reduction (DRR) framework, other topics covered include the ways in which risks and losses may be reduced during COVID-19 as well as the necessary preventative actions that must be performed during a pandemic. As a result, the rules that have been produced in this chapter seek to construct a healthcare infrastructure that is robust, in addition to guaranteeing the provision of essential necessities such as water, food, medication, energy, and communication in the event of an emergency (Nandi, 2022). In addition to this, it undertakes an economic analysis of the costs and benefits associated with building a suitable healthcare infrastructure for disaster management and assesses the costs involved in relation to the country's budget or Gross Domestic Product (GDP).

The purpose of the study conducted by Amamag at Patalinghug (2022) was to evaluate the progress that has been made in the execution of the DepEd-based disaster risk preparedness program with a primary focus on Health. In this study, descriptive research methods were used, and an appropriate statistical tool was used to analyze the data using mean, percentage, and the z-test to determine whether or not there was a significant difference in the degree of preparation between the respondent groups. According to the findings regarding the DRR implementation, the vast majority of the respondent groups were not



completely satisfied with the following aspects of the school's facilities and equipment in preparation for disaster; the environment in terms of the likelihood of the place to adopt and easily cope-up with disaster; the preparation in terms of the plan on what to do and avoid during the disaster; and finally, the implementation of the designed preparation on different types of disasters. As a result of the findings of the data analysis, which demonstrated that there are no significant disparities in any aspect of the implementation between the instructors and the parents, it was determined that the hypotheses are not incorrect. The findings suggest, when viewed as a whole, that there is a need to enhance and raise the schools' catastrophic preparation in terms of their health management. This is indicated by the fact that there is a demand to do so.

Fundamental research, assessment of program results, and evaluation of program processes are the three main subfields that are able to be split down into when discussing research and evaluation of school health programs. When we talk about "basic research," we are referring to the exploration of the ways in which behavior may be changed, as well as the investigation of the fundamental causes of behavior. Fundamental research serves a number of vital goals, one of the most significant of which is to offer guidance for the development of therapeutic approaches, which are then put to the test in studies that evaluate their effectiveness. In outcome evaluation, the empirical research of treatments on expected outcomes is what is included as part of the process. This investigation uses the methods of randomized clinical trials, and it covers both experimental and control groups in its scope. The objective of a process evaluation is to determine whether or not a tested intervention was carried out in the right manner and to analyze the factors that may have contributed to the success or failure of the intervention. The conduct of research of a basic character and the evaluation of results are often the responsibility of professional researchers who are engaged by universities or other research organizations; these duties are mainly outside of the competence of local education agencies (National Library of Medicine, 2020).

The primary goal of evaluating a program, according to the study of Erdogan and Gurol (2018), was to find ways to improve its overall quality. Consequently, the objective of this research was to assess the efficacy of the Health Education Program (HEP) for students in the ninth grade using Eisner's Educational Criticism Model. The qualitative research approach was utilized throughout the course of the study's execution. In this particular piece of research, a comprehensive single case design was used. Because we were interested in the normalcy or typicality of the case, we selected the typical case sample methodology as our method of data collection. Respondents were given a questionnaire that they may fill out on their own time. In this particular study, we encouraged respondents to express their thoughts and feelings through the use of open-ended questions. Individually, over the course of roughly two months, semi-structured interviews and group discussions were held with each participant. The texts that were received from the interview were analyzed through the use of the MAXQDA 12 program for content analysis. In terms of HEP and language, HEP and information and communication technologies, living, personal, and interpersonal skills, critical and creative thinking, methods and methodologies, and evaluation, the HEP was headed in the correct direction. Nevertheless, it needs to be enhanced in terms of program goals and objectives, program dimensions, time and supplies, and staff development. It has the ability to improve the quality of education if HEP undergoes the modifications that are necessary and continues to undergo transformation.

METHODOLOGY

This study utilized a mixed-methods approach with an embedded design, where quantitative data constituted the major analytical source, while qualitative data were incorporated to enhance and substantiate the findings. The quantitative aspect employed a descriptive research design to assess the adherence of a public secondary school to public health and safety standards, whereas the qualitative aspect utilized a



social inquiry approach to obtain in-depth insights into health management practices and guide the establishment of an institutionalized health management system in accordance with DRRM-Health guidelines.

The participants comprised 60 individuals from the school community, including administrators, educators, support staff, students, and stakeholders. Participants were chosen by stratified random selection to provide proportional representation among groups.

Data were collected via a validated normative survey questionnaire consisting of five sections: demographic profile, assessment of theme areas, core processes, functional systems, and qualitative inquiry of public health adherence. Responses to numeric items were assessed using a four-point Likert scale, whilst open-ended questions produced qualitative data. The instrument was subjected to face and content validation by professionals and assessed for reliability by Cronbach's alpha.

Data collection adhered to ethical norms, encompassing institutional authorization and informed consent. Quantitative data were evaluated utilizing frequency distribution, mean, standard deviation, ANOVA, and independent samples t-test, employing SPSS and Microsoft Excel. Qualitative data were examined using open coding, facilitating the emergence of themes inductively. The consolidated findings formed the foundation for recommending an Institutionalized Health Management System for the school.

RESULTS

The study examined the level of adherence of a selected public school in Manila to public health standards as a basis for developing an Institutionalized Disaster Risk Reduction Management focused on Health (DRRM-H).

Respondent Profile

A total of sixty (60) respondents participated in the study, representing various sectors of the school community. Most respondents belonged to the age group below 15 years old (25%), followed by those aged 41–45 (23.3%) and 31–35 (20%). Female respondents comprised the majority (65%), while males accounted for 35%. In terms of classification, teachers formed the largest group (33.3%), followed by students (26.7%), stakeholders (20%), administrators (10%), staff members (8.3%), and one DRRM representative (1.7%). This distribution ensured representation from both internal and external stakeholders involved in school health and safety.

Thematic Areas of Disaster Risk Reduction Management

The comprehensive assessment of the Thematic Areas resulted in a composite mean of 3.62, interpreted as Strongly Agree. Among the components, Prevention and Mitigation achieved the highest mean score of 3.69, followed by Disaster Preparedness at 3.66, Disaster Response at 3.63, and Disaster Rehabilitation and Recovery at 3.53. The results demonstrate a significant perception of compliance with public health norms across all DRRM thematic domains.

Core Processes of Disaster Risk Reduction Management

The Core Processes achieved an overall composite mean of 3.57, which is interpreted as Strongly Agree. Information and Knowledge Management achieved the highest mean score of 3.62, closely



succeeded by Resource Management and Mobilization at 3.61, and Administrative Governance at 3.59. Service Delivery received the lowest mean score of 3.49, however still remained inside the Strongly Agree category.

Functional System of Disaster Risk Reduction Management

The Functional System recorded an overall mean of 3.62, signifying Strongly Agree. The Health and Emergency Response Team component had the highest mean score of 3.70, followed by the Emergency Operations Center at 3.61 and Health Emergency Commodities at 3.54.

Significant Difference

Statistical studies indicated no significant variations in respondents' assessments of the Thematic Areas, Core Processes, and Functional System based on gender, age group, and categorization. This indicates uniformity in assessments of public health compliance among various demographic groupings.

Proposed Institutionalized Disaster Risk Reduction Management

Based on the results, an Institutionalized Disaster Risk Reduction Management Guidelines focused on Health was developed to further strengthen and formalize the school's health management system.

The results reveal that the chosen school exhibits a strong compliance with public health requirements, as evidenced by consistently high ratings in the Thematic Areas, Core Processes, and Functional System of DRRM-H. The robust grades in Prevention and Mitigation and Health and Emergency Response Team indicate that the school emphasizes proactive health initiatives and emergency readiness, essential for reducing health-related hazards within the school community.

The comparatively lower average achieved by the Core Processes, especially in Service Delivery, indicates that although policies and frameworks exist, there is potential for improvement in operational execution. This discovery highlights the necessity to enhance institutional frameworks that convert plans into reliable and enduring health care.

The lack of notable variances across demographic characteristics indicates a common viewpoint among administrators, instructors, students, staff, and stakeholders concerning the school's health and safety protocols. This consistency signifies a shared consciousness and endorsement of public health procedures, which is crucial for efficient catastrophe risk reduction management.

The findings corroborate the preventative Motivation Theory, as the substantial consensus among participants signifies acknowledgment of health-related concerns and the perceived imperative for preventative measures. The establishment of an Institutionalized Health Management System corresponds with this theoretical framework by offering organized and continuous strategies to mitigate susceptibility to health hazards.

The restricted engagement of staff from the Disaster Risk Reduction Management Office surfaced as a limitation, highlighting the necessity for expanded expert input to further authenticate and improve the system. Notwithstanding this constraint, the study illustrates that an institutionalized DRRM-H framework is versatile and relevant across educational institutions, contingent upon contextual adjustments.

The findings underscore the necessity of enhancing catastrophe risk reduction management centered on health within the framework of comprehensive educational development. The amalgamation of health management, physical education, and administrative leadership fosters a safer and more resilient educational environment.

Recommendation

From the gathered data, the recommendations were pointed:

1. Institutions can use the proposed Institutionalized Disaster Risk Reduction Management focusing on Health. This would give the institution the guidelines on how to mitigate issues regarding health-related issues of the school and nearby-related extensions of the institution.
2. The institution can also customize the Institutionalized Disaster Risk Reduction Management based on the nature of their organization. Furthermore, monitoring and evaluation of the Institutionalized Disaster Risk Reduction Management focusing on Health should be strengthened by the managers, or administrators. They should focus and strengthen the Core Processes as they enrich the Functional System and Thematic Areas of the aforementioned management system.
3. Disaster Risk Reduction Management sector of the city or barangay is also recommended to use this study as an extension of the National Disaster Risk Reduction Management for the community.
4. Since it implies a more stretched focus on the implementation and leadership aspect of the school, constant development is recommended not only in the presence of virus, but also other aspect that could bring negative circumstances to the members of the community.
5. For the future researchers, they can research for the impact of the Institutionalized Disaster Risk Reduction Management focusing on Health. They can also enrich the number of respondents coming from the Disaster Risk Reduction and Management as they assess the health protocols used by the research locale. Because the theory was already affirmed in this study, the use of other related theory is recommended.

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