

The Current Landscape of School Health Research in the Philippines: A Scoping Review

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ABSTRACT

Objectives. This study aimed to map the different comprehensive and coordinated school health program (CCSHP) components and topics of published school health research in the Philippines in order to identify gaps and areas with sufficient depth for future research direction.

Methods. Databases (PubMed and Herdin), and website (<https://ejournals.ph>) were searched for published studies on school health in context of Philippine school. Identified records were deduplicated, screened, and assessed for eligibility for inclusion. Information on the characteristics of the published studies were extracted and were presented as frequency and percentages. CCSHP components and topics were mapped in a tree map.

Results. Two hundred sixteen (216) studies were included for characterization and mapping. The two most common school health component studied was counselling, psychological and social services, and health services, with the corresponding topics mental health and soil-transmitted helminthiasis. There were gaps on the topic delivery of services, and school-home-community coordination.

Conclusion. There is an abundance of researches about mental health in Philippine school setting. On the other hand, there is paucity of researches in delivery of health services and school-home-community coordination. Mental health, including suicide and bullying, warrants a systematic review to provide evidences for policy creation. Further studies are needed regarding delivery of services, and school-home-community coordination.

Keywords: school health, research, publication, Filipinos

INTRODUCTION

Reciprocity is present between health and education – children learn best when they are healthy, and more educated person knows how to best take care of their health. The field of school health therefore is multidisciplinary, focusing on strategies to improve both health and education outcomes.^{1,2} School health services are commonly limited in low- or middle-income countries like the Philippines. The services are limited to what teachers can deliver, such as first aid to physical injuries and occasional mass deworming. This represents a missed opportunity to cover diverse disorders which may affect learning, and risk behaviors that have major impact to future adult mortality and morbidities. To address this need, the World Health Organization (WHO) initially launched the Global School Health Initiative in 1995, which was updated in 2021 as a guideline for implementation of comprehensive school health services in schools.³ In our country, the Philippine Academy of Physicians in School Health, Inc. (PAPSHI) adapted this WHO recommendation and advocates a comprehensive and coordinated school

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health program (CCSHP) composed of eight components: 1. Health education; 2. Physical education and other physical activities; 3. Health services; 4. Nutrition and food services; 5. Health promotion for staff; 6. Counseling, psychological, and social services; 7. Healthful school environment; and 8. School-home-community coordination for health. Through this CCSHP, both health and education efforts are aligned and all the eight components are complementing one another, in order to provide a wide coverage of healthcare services to influence achievement of learning.⁴ Maintenance of school health will help the learners achieve their optimal productivity, not only for themselves but also for the society.⁵

Despite the known benefits of the maintenance of school health, there still are barriers to delivery and improvement that needs to be addressed.⁶ This is where school health research comes in. School health research is needed to identify potential problems.⁷ Likewise, it is needed to provide evidences to support decision making for resource allocation, and in order to deliver high-quality and effective school health programs and services.⁸ However, it should not end with just doing research, but publishing and making it public is the next step, so that others can be guided on how to approach when they encounter similar situations or problems.

This scoping review was conducted in order to map the different CCSHP components and topics of researches done on Filipino school health. Knowing this information will guide the different school health professionals or advocates on which areas need more researches to advance the school health of Filipinos.

METHODS

The study protocol was registered with the Research Grants Administration Office (RGAO) of the University of the Philippines Manila (UPM) on February 19, 2024, with RGAO reference no. RGAO-2024-0313. It was subsequently given a classification “exempted review” by the UPM Research Ethics Board (UPMREB) on February 27, 2024, with study protocol code UPMREB 2024-0205-EX.

The Population-Concept-Context (PCC) framework was used to identify the main concepts of the research question and guide the search strategy. The population is Filipinos; the concept is comprehensive and coordinated school health program; and the context is Philippine schools.

To be included in this scoping review, the published research papers or case studies need to be focusing on the different CCSHP components in context of Philippine schools. There is no language and publication date limitation. Papers were excluded if they did not fit the PCC framework of the study, or if they were non-original articles, such as commentaries, letters to the editor, and opinion.

To identify relevant papers for this scoping review, the PubMed and Herdin databases were searched from database inception until February 29, 2024 using the combined MeSH and keywords search: 1. (“school health” OR “school based”

AND (Filipino OR Philippines) for PubMed; and 2. (“school health” OR “school based”) with filter “journal” for Herdin. There were no language restrictions applied. Due to the limited indexing of Philippine-based journals, additional papers were sought through the website <https://ejournals.ph>, with keyword “school health.”

The search results were initially screened through the titles, metadata, and abstracts. After which, full-texts were sought for further review. Articles without retrievable full-text document were still included in this scoping review, if all the needed data items are present in the title, metadata, and abstract.

Data charting was done independently using Microsoft Excel spreadsheet. The following data items were extracted: 1. year of publication; 2. journal (Philippine-based vs foreign-based); 3. first author (Filipino vs foreign); 4. Filipino co-author (with Filipino co-author/s vs no Filipino co-author); 5. affiliation of Filipino author/ co-author/s (academic, government agency, vs non-governmental organization); 6. target population (Filipino vs multi-country including Philippines); 7. study design (case report/ case study, descriptive/ qualitative, observational/ analytical, vs interventional/ program evaluation); 8. data source (primary data collection vs secondary data collection); 9. source of the secondary data; 10. topic; and 11. funding source (not reported/not identified, no funding, industry sponsored, non-industry sponsored). Additional variable - school health component (health education, physical education, health services, nutrition, health promotion for staff, counselling-psychological-social services, healthful school environment, vs school-home-community coordination) was derived from the topic of interest.

The extracted data were encoded and analyzed using Stata version 17. There were no observed missing values for this dataset. The characteristics of the published studies on Filipino school health were summarized by frequency and percentages. Tree map was constructed to show the frequencies of the different school health component and the topics being studied. Component bar graph was constructed to show the distribution of the topics being studied across the different time periods.

RESULTS

The databases search strategy yielded 209 records and nine duplicates were removed. Among the remaining 200 records, 98 were excluded because these were not about school health among Filipinos. The remaining 102 records were reviewed; there were four records unable to be retrieved and without sufficient information about the variables of interests in the title, metadata, and abstract. The remaining 98 publications were assessed, 17 were excluded, two of which were published protocols and 15 of which were commentaries, letters to the editors, correspondence, and the likes. Eighty-one (81) publications from the databases were included in this scoping

review. Additional 169 papers were identified from <https://ejournals.ph>. There were 34 records that were not retrieved and without sufficient information about the variables of interests in the title, metadata, and abstract. The remaining 135 reports were assessed for eligibility, and all of them were included in this scoping review. This scoping review included a total of 216 studies (Figure 1).

The oldest publication among the included studies about school health among Filipinos was published in 1994. The number of publications were increasing though out the years, with a sharp increase during 2020-2023 ($n = 128/216$, 59.26%), which coincides with the COVID-19 pandemic. Most of the published studies were authored by a Filipino ($n = 175/216$, 81.02%) which were published mostly in Philippine-based journals ($n = 158/175$, 90.29%). Filipino authors/co-authors were mostly from an academic institution ($n = 172/216$, 79.63%). Almost half of the studies were observational/ analytical studies determining associated factors with their topic of interest ($n = 96/216$, 44.44%). Most of these observational studies did their primary data collection ($n = 73/96$, 76.04%). Secondary data analysis was the methodology implemented by foreign authors without Filipino co-authors ($n = 23/25$, 92.00%) using the data from the Global school-based health survey ($n = 21/23$, 91.30%). The characteristics of the included studies are summarized in Table 1.

The school health component counselling, psychological and social services was the most studied ($n = 106/216$, 49.07%). The component with the least number of studies was health promotion for staff, with only one included study. The most studied topic was mental health ($n = 87/216$, 40.28%), which was composed of general mental health ($n = 53$), COVID-19 pandemic-related mental health ($n = 30$), mental health wellness program ($n = 3$), and mental health education ($n = 1$). It was followed by soil-transmitted helminthiasis (STH) and other parasitism ($n = 18/216$, 8.33%), which was composed of STH prevalence and deworming ($n = 17$) and STH education ($n = 1$) (Figure 2). The summary of topics is listed in Table 2.

The topic of mental health was mostly explored during the period of 2015 to 2023, with its total number even exceeding the number of studies in the preceding years. The bulk of mental health studies was during the COVID-19 pandemic, half of which studied about the effect of COVID-19 pandemic and the shift to the online learning to the mental health of both students and teachers. Similarly, topics on bullying and suicide were tackled during this period. Interestingly, the topic of water, sanitation, and hygiene in schools have been only in focus starting the period of 2010-2014. Topics like STH, physical activity, nutritional disorders, oral health, and communicable diseases were well represented across the different time periods (Figure 3).

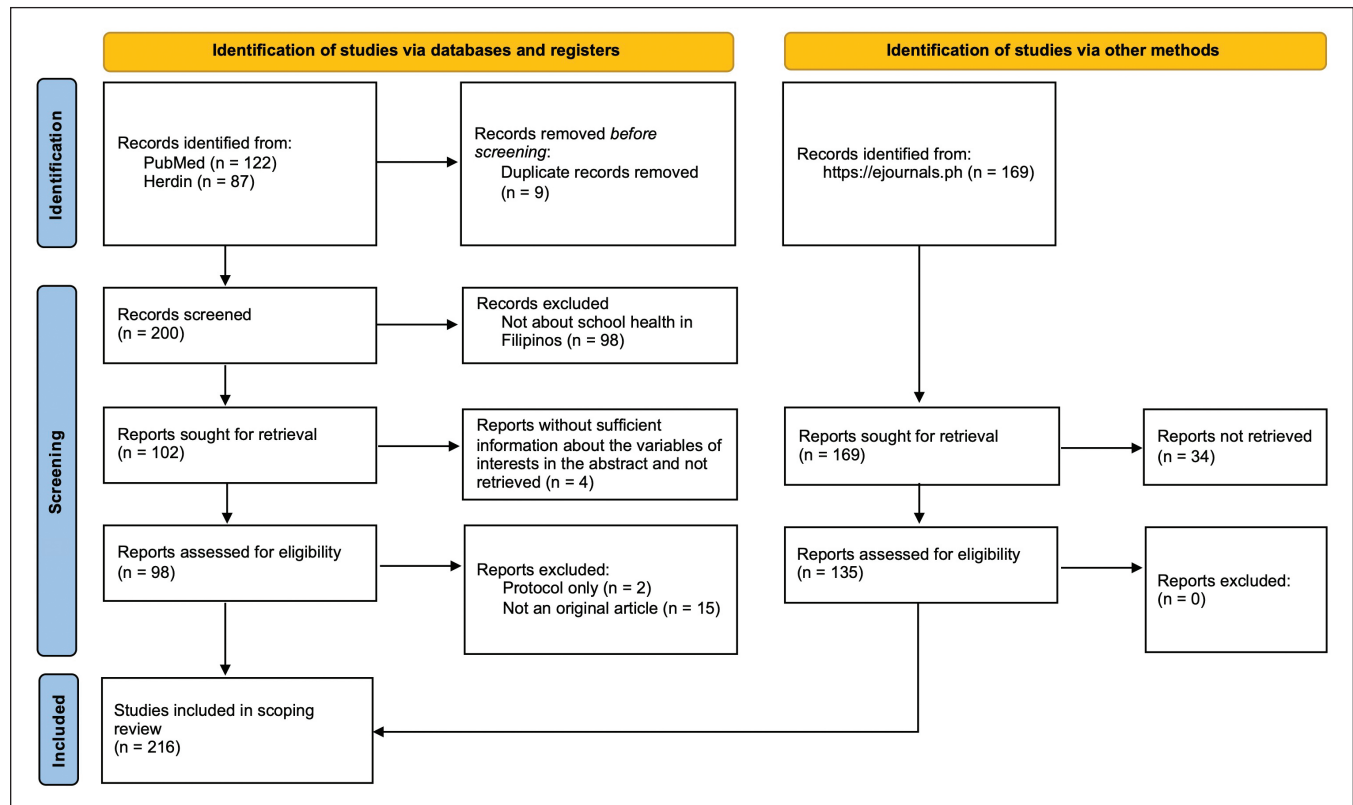


Figure 1. PRISMA flow diagram.

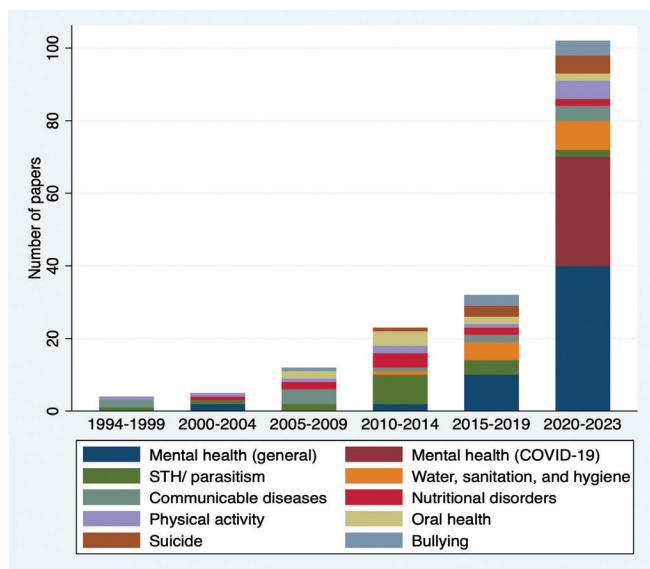


Figure 3. Distribution of the top ten topics across the different years.

DISCUSSION

This scoping review had identified 216 studies about school health among Philippine schools published in the past three decades, from the year 1994 to 2023. Most of the studies were written in an academic setting. This may be due

to the reason that writing and publishing academic papers is considered a daunting task for non-academicians compared to academicians who find it easy.⁹

The most common topic of interest was about mental health, followed by STH. The bulk of these published studies on mental health was from the past five years. It correlates with the relative increase in students readily disclosing mental health conditions in the recent years. This translates to an increased demand for mental health services, in which researches have been made to understand the situation and develop effective solutions.¹⁰ This was also compounded by the COVID-19 pandemic which led to school closures and adaptation of online learning, negatively affecting the students' and teachers' mental health.¹¹ On the other hand, published studies on STH has been a regular topic. It may have stemmed from the consistently high prevalence throughout the years.¹² Therefore, it is imperative that more research should be undertaken in order to improve control of STH in our school children.

Six of the eight components of CCSHP are represented with at least 10 included studies. The component with most published studies is the counselling, psychological, and social services, due to the bulk of mental health researches in the past five years. The second highest was the component health services, focusing on medical and dental management of school health-related diseases. It makes sense because school health services play an important role in the management of health conditions.¹³ However, there are only few studies

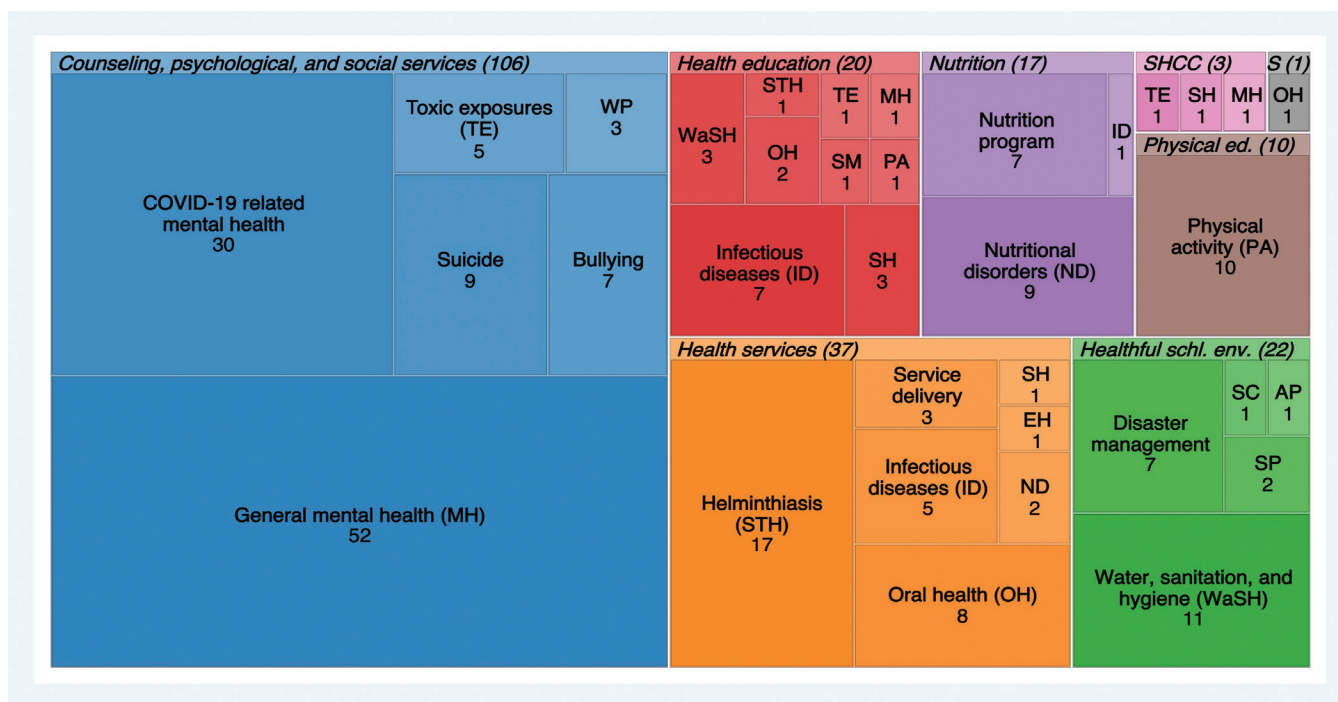


Figure 2. Tree map of the school health component and corresponding topics.

AP - anti-bullying policies, EH - eye health, OH - occupational safety and health, S - health promotion for staff, SC - school climate, SH - sexual and reproductive health, SHCC - school-home-community coordination, SM - social media use, SP - safety practices, WP - mental health wellness program.

about delivery of health services. Aside from improvement of management of medical and dental conditions, it is also important to do operations research, in order to improve and optimize the delivery of health services. It is of note that the component health promotion for staff have only one included study. It is hypothesized that the reason for this artificial absence of published study is that the health promotion for staff component is one and the same as occupational health. The published occupational studies are already applicable for school staff, therefore, studies specific for occupational health of the school staff are not anymore undertaken. School-home-community coordination is second least studied component. This component can be a good direction for future researches because uncoordinated engagements lead to unsustainable

family and community commitment to actively support their children's learning and development.¹⁴

Findings from this study is similar with other developing countries. A similar study mapping school-based interventions for health promotion in developing countries focused primarily on similar topics such as soil-transmitted helminthiasis, hygiene, nutrition, and oral health.¹⁵ This shows that in developing countries, the Philippines included, poverty-related diseases are still a large burden in school health. There is an apparent contrasting finding regarding mental health topics, their scoping review included only four studies on mental health in comparison to the 87 in this review. This may be explained by the fact that their scoping review included studies up to the year 2016, while the bulk

Table 1. Characteristics of Included Studies

Characteristic	Frequency (n)	Percentage (%)
Year of publication		
1994-1999	4	1.85
2000-2004	8	3.70
2005-2009	13	6.02
2010-2014	26	12.04
2015-2019	37	17.13
2020-2023	128	59.26
Journal		
Philippine-based	159	73.61
Foreign-based	57	26.61
Author		
Filipino first author	175	81.02
Filipino co-author of foreign first author	16	7.41
No Filipino co-authors	25	11.57
Affiliation of Filipino author/ co-author		
Academic institution	172	79.63
Government agency	14	6.48
Non-governmental organization	5	2.31
Target population		
Filipino only	194	89.81
Multi-country including the Philippines	22	10.19
Study design		
Case report/ case study	2	0.93
Descriptive/ qualitative study	71	32.87
Observational/ analytical study	96	44.44
Interventional/ program evaluation	47	21.76
Data source		
Primary data collection	189	87.50
Secondary data analysis		
Global school-based health survey	24	88.89
Philippine national oral health survey	2	7.41
Cebu longitudinal health and nutrition survey	1	3.70
Source of funding		
Not reported/ identified	180	83.33
Not sponsored	8	3.70
Industry sponsored	4	1.85
Non-industry sponsored	24	11.12

Table 2. Research Topics among Different Included Studies

Topic	Frequency (n)	Percentage (%)
Mental health (general)	54	25.00
Mental health (COVID-19 pandemic-related)	30	13.89
Soil-transmitted helminthiasis and other parasitism	18	8.33
Water, sanitation, and hygiene	14	6.48
Communicable and other infectious diseases	13	6.02
Nutritional disorders	11	5.09
Physical activity and non-communicable diseases	11	5.09
Oral health	10	4.63
Suicide	9	4.17
Bullying (including anti-bullying policies)	8	3.70
Disaster risk reduction and preparedness	7	3.24
Nutrition program	7	3.24
Smoking, alcohol, and substance abuse (toxic exposures)	7	3.24
Sexual and reproductive health	5	2.31
Delivery of health services	3	1.39
Mental health wellness program	3	1.39
Safety practices	2	0.93
Eye health	1	0.46
Occupational health and safety	1	0.46
School climate	1	0.46
Social media use	1	0.46

of mental health studies in this review were from 2020-2023. Findings from this study is much different from the United States (US). A scoping review specifically for school-home-community coordination component among US schools was able to map 67 studies in contrast to only three in this study. The US study was able to synthesize different types of family and community engagement strategies in order to promote physical activity and healthy eating among their students.¹⁶ There is disparity between developed countries like the US and the developing countries. Their concerns are leaning more on obesity, which they address by promoting physical activity and healthy eating, in contrast to the burden of poverty-related diseases in developing countries. In addition, this shows that the component school-home-community coordination plays an integral role in health promotion in schools.

This scoping review have several limitations. The databases searched were only limited to PubMed and Herdin. Print-only publications were not sought in this review. These limitations were partially addressed by additional search from <https://ejournals.ph> to include publications in Philippine-based journals that are not indexed in the mentioned databases and several print-only journals submit scanned copies in this website. The effect of these limitations is the underestimation of the actual numbers of published studies for the different CCSHP components and topics.

CONCLUSION

This scoping review has mapped the different CCSHP components and topics of researches done on Filipino school health. It has been shown that there is an abundance of researches about mental health in Philippine school setting. A systematic review about mental health, including suicide and bullying, can be a topic of future research to provide evidences for creation of policies in this area for the protection of not only by the learners, but the faculty and non-academic personnel as well. The paucity of researches in delivery of health services and school-home-community coordination were the identified gaps in Filipino school health research that are potential foci of future researches.

Statement of Authorship

The author certified fulfillment of ICMJE authorship criteria.

Author Disclosure

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