

PEER REVIEW HISTORY

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ARTICLE DETAILS

TITLE (PROVISIONAL)	A Qualitative Study Investigating the Health Needs of School-aged Children and Adolescents in Dubai
AUTHORS	Alahma, Ali Muneer; Belal, Sana Easa Belal; Koko, Fatima Hassan Mohamed; ALABADY, KADHIM

VERSION 1 – REVIEW

REVIEWER	Michaud, Pierre-André University Hospital Centre, Switzerland, Faculty of Biology and Medicine
REVIEW RETURNED	09-Dec-2023

GENERAL COMMENTS	<p>This is a well designed qualitative study focusing on the health needs of pupils from several private schools of Dubai and how to address them within the school setting. Although there is currently a large body of international scientific literature available in this area, the authors have to be congratulated to have set up their study in Dubai, given the relative paucity of available data from this region of the world. I have however several global comments regarding the design of the study. Although some of them cannot be addressed as the study is closed, the authors should discuss them either in the introduction, method or discussion/limitation section.</p> <p>The survey was implemented in private schools only, which, I suspect, attract pupils from the upper socio-economic class, and limits the generalization of the results: I tend to think that the health needs of these pupils could be very different from the ones of pupils attending public schools. Second, the WHO, UNFPA and UNICEF, among other institutions, insist since many years on the importance of youth participation in research projects or intervention planification. It is an important weakness of this paper that only adult experts and parents were involved, not any pupil. In addition, the balance between the input of experts and the one of health professionals seems to be biased (many more from the first group). Thirdly, the introduction focuses on the issue of cardiovascular disease prevention (which is indeed a problem in the region), but the content of the interviews is much larger and embraces a</p>
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	<p>whole range of other important issues. Why then focus on CVDs in the introduction ? Finally, I think that the paper mixes two important aspects of the role of school health services. On one hand, the article reviews the strategies used to meet the health needs of the pupils, such as policies, programs, interventions etc.; on the other hand, it also tackles the issue of the main topics to be covered, such as nutrition, physical education, mental health, substance use etc. The paper should be reformatted to clearly delineate what belongs to these two aspects of school health.</p> <p>Title: the wording is adequate</p> <p>Abstract: most of the content of the conclusion could rather be incorporated in the result section. I miss some concrete proposals regarding what can be implemented in the school setting. In the light of my previous comment on the issue of CVDs, the background section should be modified.</p> <p>Introduction: the context of the study should be better defined for international readers: how are the school health services organized in Dubai? Why and for which purpose was the study set up: was it the initiative of the authors or of the schools ?</p> <p>Methods: this section is well designed and the authors grasp the main aspects of a qualitative approach. I do not understand what is meant by "entities". I am puzzled by the fact that participants were asked to fill in the consent form after having participated in the discussion: this is not only strange, but contrary to ethical guidelines. My understanding is that only one single individual interview was conducted: with whom and with whom? Why only one?</p> <p>Results: it is difficult to appraise the extent to which some topics were brought spontaneously by the participants or whether they were mainly the ones brought by the facilitators. Were any differences between managers, parents and health professionals observed ? Knowing the societal context of Emirates, I was not expected a large number of comments on the issue of sexual behaviour, but I wonder whether any participant raised the issue of reproduction and sexual hygiene. If not, this absence could be discussed in the analysis of the results, as sexuality is one of the most adolescent health issue around the world.</p> <p>Discussion: The authors provide a thoughtful comparison of their results with other existing studies. It is mentioned in the introduction that, according to a review, mental health is the least important item cited as compared to others (nutrition, physical activity etc.); the results of</p>
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	<p>this study suggest on the contrary that it was discussed in several interviews. The authors should provide some comments on this issue, as we know from international studies (WHO, UNICEF, etc.) that children and adolescent mental health should be put high on the agenda of policy makers. While the author's premises and the results stress the importance of environmental measures to improve the health and well-being of the pupils, I wonder whether the issue of the school climate and the pedagogic approaches in place were touched on: we have more and more evidence that, beyond educational interventions, the quality of relationship between pupils and teachers and the emphasis put on values such as respect, collaboration etc. have a positive impact on the pupils' emotional state, health and even grades. Finally, why do the authors focus so much on new technologies, while their original intention was to explore health needs related to CVDs? The list of reference is adequate</p>
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REVIEWER	Aikpitanyi, Josephine UCLouvain
REVIEW RETURNED	27-Jan-2024

GENERAL COMMENTS	<p>1) The study is very relevant, but it would be better if the discussions from the focus groups were presented more elaborately. For example, it would be nice to know what the participants thought about the link between cyberbullying and the health outcomes of school-age children. It might also be good to understand how these issues could be addressed.</p> <p>2) At its current state, the manuscript does not clearly reflect the research objectives. I think there is a need for more review of the literature to bolster the points raised by the authors.</p>
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VERSION 1 – AUTHOR RESPONSE

Reviewer: 1

Dr. Pierre-André Michaud, University Hospital Centre, Switzerland

This is a well designed qualitative study focusing on the health needs of pupils from several private schools of Dubai and how to address them within the school setting. Although there is currently a large body of international scientific literature available in this area, the authors have to be congratulated to have set up their study in Dubai, given the relative paucity of available data from this region of the world. I have however several global comments regarding the design of the study. Although some of them cannot be addressed as the study is closed, the authors should discuss them either in the introduction, method or discussion/limitation section.

Comment 1: The survey was implemented in private schools only, which, I suspect, attract pupils from the upper socio-economic class, and limits the generalization of the results: I tend to think that the health needs of these pupils could be very different from the ones of pupils attending public schools.

Comment 2: Second, the WHO, UNFPA and UNICEF, among other institutions, insist since many years on the importance of youth participation in research projects or intervention planification. It is an important weakness of this paper that only adult experts and parents were involved, not any pupil.

Comment 3: In addition, the balance between the input of experts and the one of health professionals

seems to be biased (many more from the first group). Comment 4: Thirdly, the introduction focuses on the issue of cardiovascular disease prevention (which is indeed a problem in the region), but the content of the interviews is much larger and embraces a whole range of other important issues. Why then focus on CVDs in the introduction ? Comment 5: Finally, I think that the paper mixes two important aspects of the role of school health services. On one hand, the article reviews the strategies used to meet the health needs of the pupils, such as policies, programs, interventions etc.; on the other hand, it also tackles the issue of the main topics to be covered, such as nutrition, physical education, mental health, substance use etc. The paper should be reformatted to clearly delineate what belongs to these two aspects of school health.

Author Response:

Thank you for your comments, we are thankful for your insightful review. We appreciate your time and effort greatly and have therefore responded to all of the comments and have taken action to improve the manuscript.

Comment 1: We added in the limitation that public schools were not included in the study. However, it is also important to note that in the academic year of 2022-2023, there were 216 private schools and 13 public schools in Dubai (Knowledge and Human Development Authority, 2022; Ministry of Education, 2024). Therefore, the majority of students are in private schools. It is also worth noting that no survey was used during this study, it was mainly focus groups and one-in depth interview.

Comment 2

The study lacked any involvement from students. This point is now added in the limitation.

Comment 3

We included 4 quotes from the community (parents) to balance between the experts/health professionals input.

Comment 4: We have added two additional studies in the introduction that discuss childhood risk factors and adulthood comorbidities to ensure that CVDs are not the only issue we are concerned about. We have also modified the statements at the end of the paragraphs to emphasize the aim of the study. Finally, we reflected these changes in the abstract's background.

Comment 5: We have added an explanation in the results section to clarify this concern. "In the context of school health themes, the terms services and programs, health education sessions, and policies signify distinct aspects of student wellness in this study. The services refer to the clinical services provided in the school clinic along with mandatory services provided in schools such as physical education. In contrast, programs in this study refers to activities or interventions that promote health in schools. Health education sessions and policies could also be referred to as programs but were given a distinct theme to emphasize certain areas. For example, in the health education theme focused on educating the students in specific topics to raise awareness. In addition, the policy theme emphasized on the laws or mandates that should be implemented to support the school health services and programs."

Title: the wording is adequate

Abstract: most of the content of the conclusion could rather be incorporated in the result section. I miss some concrete proposals regarding what can be implemented in the school setting. In the light of my previous comment on the issue of CVDs, the background section should be modified.

Introduction: Comment 1: the context of the study should be better defined for international readers: how are the school health services organized in Dubai? Comment 2: Why and for which purpose was the study set up: was it the initiative of the authors or of the schools ?

Author Response:

Abstract comment: This adjustment is now applied in the abstract. We have taken into consideration the previous comments you kindly provided with regards to CVDs.

Introduction comments:

Comment 1: The Dubai Health Authority (DHA) sets standards for all school health clinics in private schools in the emirate of Dubai. A paragraph has been added in the introduction to explain what role school health services have in Dubai.

Comment 2: The authors have initiated this study. It is part of the 2016-2021 Dubai Health Authority (DHA) Strategy to support all children to reach their full potential in health and well-being in Dubai. The DHA strategy also supports the development of a healthy school environment, school health education, and appropriate school health services for students (Dubai Health Authority, 2022). In addition, various needs assessments are conducted to support school health policies as part of the DHA's efforts to improve and protect children's health. As a result, this study was conducted to investigate the health needs of school-aged children and adolescents in Dubai. This investigation will help DHA plan better and implement impactful initiatives in this area. The above points have been mentioned in the introduction of the study. In addition, we have added one statement at the end of the introduction to emphasize the researchers objectives and aims in this study.

Methods: Comment 1: this section is well designed and the authors grasp the main aspects of a qualitative approach. I do not understand what is meant by "entities". Comment 2: I am puzzled by the fact that participants were asked to fill in the consent form after having participated in the discussion: this is not only strange, but contrary to ethical guidelines. Comment 3: My understanding is that only one single individual interview was conducted: with whom and with whom? Why only one?

Author Response:

Methods comments:

Comment 1: An entity in this study refers to an organization. We have mentioned in the limitations that "the nominated participants from the entities preferred that their entities be anonymized when signing the consent form. Therefore, this study did not list the entities' names and the sectors they represent. However, the participants' occupations were listed to preserve the benefits of their specialties and roles in the study."

Comment 2: Regarding the consent form. We understand it is unusual to have the consent forms filled after the sessions. However, we ensured that the participants are well informed verbally before and during the focus groups and interview. We have sent the agenda of the focus groups, as well as the focus group overview to the participants prior to the session. In addition, our entity is considered a paperless organization in which we have strict rules to avoid any use of papers and therefore we have decided to request the consent forms through email. We have added this statement in paragraph titled "data collection".

Comment 3: The in-depth interview was planned to be a focus group, however, due to the absence/non-attendance of the participants in the focus group session, we have converted it to an in depth interview. The researchers (AMA, SEN, FHK, and KA) conducted the interview with the participant from entity #8. We have added this statement to the paragraph titled "Participants Selection, Recruitment, and Sample Size".

Results: Comment 1: it is difficult to appraise the extent to which some topics were brought spontaneously by the participants or whether they were mainly the ones brought by the facilitators. Were any differences between managers, parents and health professionals observed? Comment 2: Knowing the societal context of Emirates, I was not expected a large number of comments on the issue of sexual behaviour, but I wonder whether any participant raised the issue of reproduction and sexual hygiene. If not, this absence could be discussed in the analysis of the results, as sexuality is one of the most adolescent health issue around the world.

Author Response:

Results Comments:

Comment 1: Kindly note that the questions designed for the parents, managers, and health professionals are slightly different as shown in appendix 1 Table 1. We also mention how these questions were developed in the paragraph titled "study design". Therefore, due to the different types of questions asked per group, the responses were also different. However, sometimes there are

certain questions that have similar structure for the different categories of participants in which it resulted with similar answers. For example, Focus group 6, Q6 and Focus group 9, Q5 asked about the health education topics needed and have resulted in similar responses for topics such as nutrition, physical activity, and others as reported in the manuscript.

Comment 2: Indeed the social context in the emirates and UAE perceives sexual health as a sensitive topic and therefore it is often categorized under the topic of puberty and reproductive health. This topic has been mentioned during the focus groups, however it was not prominent as the other topics that were reported in the manuscript.

Discussion:

Comment 1: The authors provide a thoughtful comparison of their results with other existing studies. It is mentioned in the introduction that, according to a review, mental health is the least important item cited as compared to others (nutrition, physical activity etc.); the results of this study suggest on the contrary that it was discussed in several interviews. The authors should provide some comments on this issue, as we know from international studies (WHO, UNICEF, etc.) that children and adolescent mental health should be put high on the agenda of policy makers. Comment 2: While the author's premises and the results stress the importance of environmental measures to improve the health and well-being of the pupils, I wonder whether the issue of the school climate and the pedagogic approaches in place were touched on: we have more and more evidence that, beyond educational interventions, the quality of relationship between pupils and teachers and the emphasis put on values such as respect, collaboration etc. have a positive impact on the pupils' emotional state, health and even grades. Comment 3: Finally, why do the authors focus so much on new technologies, while their original intention was to explore health needs related to CVDs?

Author Response:

Discussion Comments:

Comment 1: We agree. We have added a comment in the discussion and the methods section where the review was mentioned to emphasize this point. It is also worth noting that the review (McLoughlin et al. 2021) included mental health under the wellness category as well "Given the broad range of policy topics, we felt it useful to list "wellness policy" as a topic for measures where two or more topics were included in the measurement tool (e.g., physical activity, mental health, nutrition) to avoid over-categorization of measures". This could be a reason why mental health was low as it is already included in the wellness category, which is one of the most frequently mentioned topics according to the review.

Comment 2: Yes, we agree that the pedagogical approaches affect the students wellbeing in schools but it was not mentioned directly during the focus groups. However, it is also worth noting that something similar to this topic was prominently mentioned in the focus groups. For example, in the theme titled essential policies, one of the most prominent areas in this theme was regarding "health literacy curriculums". These curriculums aim to promote health and wellbeing among students on regular basis rather than conduct random health educational sessions. In addition, the innovative health technologies theme, some of the approaches mentioned in it were to improve the relationship between the students and teachers/counselors. For example, we wrote "use software applications that act as a communication channel between students, teachers, counselors, and parents. The application should enable students to send urgent and non-urgent issues to their teachers and counselors." These points could also be considered part of the school climate because it establishes a relationship of trust, collaboration, and safe space between the students and their teachers/counselors.

Comment 3: Regarding the question on why we have focused on technology in this manuscript. As you kindly already know that our study did not focus on the health needs in relation CVDs only but on the overall health of students, The aim is to investigate the health needs of school-aged children and adolescents in Dubai. As a result, the solutions suggested throughout the focus groups aimed to improve student health. One of the most prominent themes that emerged to improve health included

technology. The most important and interesting thing is that the questions for all of the participant categories did not ask about technology yet still this theme emerged. This shows the importance of technology in improving students health. A similar trend was observed for the data quality measures theme. Finally, based on your kind input in the previous comments, we have added in the abstract and introduction other issues in addition to CVDs to make it clear that our main objective is the overall health needs of students.

The list of reference is adequate

Reviewer: 2

Dr. Josephine Aikpitanyi, UCLouvain

Comments to the Author:

1) The study is very relevant, but it would be better if the discussions from the focus groups were presented more elaborately. For example, it would be nice to know what the participants thought about the link between cyberbullying and the health outcomes of school-age children. It might also be good to understand how these issues could be addressed.

Author Response: Thank you for your insightful comments, we have worked on your comments and adjusted the manuscript accordingly. We included 4 quotes that further explain the issue and at the same time provide solutions to them.

2) At its current state, the manuscript does not clearly reflect the research objectives. I think there is a need for more review of the literature to bolster the points raised by the authors.

Author Response: We agree, based on your kind comments and reviewer 1's comments, we have modified the introduction to further clarify the research objective. We have also added articles from the literature to indicate the importance of the study and the effects of childhood risk factors on adulthood's health.

References:

1. Knowledge and Human Development Authority. (2022). Number of private schools in Dubai increases to 216 in 2022-23 academic year. <https://web.khda.gov.ae/en/About-Us/News/2022/%D8%AA%D9%82%D8%B1%D9%8A%D8%B1-%D9%84%D9%87%D9%8A%D9%8A%D8%A9-%D8%A7%D9%84%D9%85%D8%B9%D8%B1%D9%81%D8%A9-%D9%81%D9%8A-%D8%AF%D8%A8%D9%8A-%D9%8A%D8%B8%D9%87%D8%B1-%D8%A7%D8%B1%D8%AA%D9%81%D8%A7%D8%B9-%D8%B9%D8%AF%D8%AF-%D8%A7%D9%84%D9%85%D8%AF%D8%A7%D8%B1%D8%B3>
2. McLoughlin, G. M., Allen, P., Walsh-Bailey, C., & Brownson, R. C. (2021). A systematic review of school health policy measurement tools: Implementation determinants and outcomes. *Implementation Science Communications*, 2(1), 67. <https://doi.org/10.1186/s43058-021-00169-y>
3. Ministry of Education. (2024). Open Data. <https://www.moe.gov.ae:443/En/OpenData/pages/home.aspx>

VERSION 2 – REVIEW

REVIEWER	Michaud, Pierre-André University Hospital Centre, Switzerland, Faculty of Biology and Medicine
REVIEW RETURNED	01-Apr-2024

GENERAL COMMENTS	<p>The authors have adequately addressed my comments and suggestions and have modified the article accordingly. I have only two minor requests.</p> <p>First of all, the opening sentence of the abstract is still a bit misleading, as it states "Children's health has been linked with comorbidities such as cardiovascular events, type 2 diabetes, and obesity in adulthood". Comorbidities refers explicitly to the occurrence of several medical conditions, which does not necessarily tackle the issue of diabetes or obesity (I would say morbidities). I also suggest to mention the fact that the epidemiological transition as well as the evolution of the social context in this region of the world leads to the appearance or increase of novel health problems and needs (for instance mental health, which is repeatedly mentioned by the parents and includes the abuse of internet)</p> <p>Second: the two comments on the ethical aspects of the study are not aligned: we are said on page 8 line 35-37 that the consent was gathered through an email, while on page 17, lines 16-19, we are said that the consent was sent back signed and returned to the researchers. Please clarify</p> <p>Finally, I draw the attention of the authors to a comprehensive document recently published by WHO and that could be used in the discussion: https://www.who.int/publications/i/item/9789240029392</p>
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REVIEWER	Aikpitanyi, Josephine UCLouvain
REVIEW RETURNED	09-Apr-2024

GENERAL COMMENTS	Some comments about the manuscript were made during the first round of the review process. It would be good to see a point-by-point explanation of how the authors have addressed those comments.
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VERSION 2 – AUTHOR RESPONSE

Reviewer: 1

Dr. Pierre-André Michaud, University Hospital Centre, Switzerland

The authors have adequately addressed my comments and suggestions and have modified the article accordingly. I have only two minor requests.

Comment 1: First of all, the opening sentence of the abstract is still a bit misleading, as it states "Children's health has been linked with co-morbidities such as cardiovascular events, type 2 diabetes, and obesity in adulthood". Comorbidities refers explicitly to the occurrence of several medical conditions, which does not necessarily tackle the issue of diabetes or obesity (I would say morbidities). I also suggest to mention the fact that the epidemiological transition as well as the evolution of the social context in this region of the world leads to the appearance or increase of novel

health problems and needs (for instance mental health, which is repeatedly mentioned by the parents and includes the abuse of internet).

Comment 2: Second: the two comments on the ethical aspects of the study are not aligned: we are said on page 8 line 35-37 that the consent was gathered through an email, while on page 17, lines 16-19, we are said that the consent was sent back signed and returned to the researchers. Please clarify

Comment 3: Finally, I draw the attention of the authors to a comprehensive document recently published by WHO and that could be used in the discussion:
<https://www.who.int/publications/i/item/9789240029392>

Author Response:

Dear Respected Dr. Pierre-André Michaud, we thank you and appreciate your efforts and constructive comments.

Comment 1: We agree that the word morbidities is more appropriate than co-morbidities in this context. We have adjusted it accordingly (made sure it is adjusted in all parts of the manuscripts). We have also added the recommendation regarding the social context in the abstract. We believe this addition highlights and distinguishes the current study from other published studies in these areas. However, due to the abstract word limit of 300 words, we kept it as brief as possible and added more information regarding it in the introduction.

Comment 2: Thank you for your concern. Please note that these statements are supposed to discuss the same process. We have modified the text (added the word "via email" to page 17) to further clarify this process.

Comment 3: Thank you for the excellent suggestion, which we have included in the discussion.

Reviewer: 2

Dr. Josephine Aikpitanyi, UCLouvain

Comments to the Author:

Comment 1: Some comments about the manuscript were made during the first round of the review process. It would be good to see a point-by-point explanation of how the authors have addressed those comments.

Comment 2: The comments have not entirely been addressed as the study still lacks a concrete explanation of the research objectives.

Comment 3: The authors might also need to use some form of language editing services to make the manuscript easier for readers to comprehend.

Author Response: Dear Respected Dr. Josephine Aikpitanyi, we thank you and appreciate your efforts and constructive comments.

Comment 1: We highly appreciate your feedback, which helps us improve the manuscript. Kindly note that we have provided point-by-point response and explanation to all of the points mentioned by the editor, reviewer 1, and reviewer 2 (your kind comments). Please kindly request it from BMJ Open editorial office as we have responded to every point as well as modified the manuscript with track changes option to illustrate what we have improved.

Comment 2: Thank you for your comments. Please note that we have improved the research objectives since the last review based on the comments provided (point-by-point response and adjustments to the manuscript). We have ensured that the research objective in the abstract matches the objectives mentioned at the bottom of the introduction with slightly more details. If you feel we should add a particular statement or word to make it clearer, we are more than happy to apply your kind recommendation.

Comment 3: We agree that the manuscript requires improvement in the language. Therefore, we have requested support from an editing service to ensure the manuscript is easy to read and comprehend. The editing is reflected in the entire manuscript using the track changes option.