

## Perceptions of adolescent health literacy in the Palestinian social context: a qualitative study

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**Objective:** Palestinians are exposed to chronic violence, which has a negative impact on health status. Health literacy is increasingly employed to increase people's control over their health. This qualitative research explored adolescents', parents' and teachers' views regarding important health-related issues to Palestinian adolescents, as a preliminary step to develop a health literacy tool sensitive to the Palestinian social context.

**Methods:** We conducted 22 semi-structured interviews with adolescents, teachers and parents in the Ramallah Governorate between January and February 2017. Sex and locality variations were taken into consideration. Conventional content analysis was used to analyze interviews and retrieve the main categories of health-related issues that are important to adolescents.

**Results:** Palestinian adolescents need to access information covering a wider range of health issues including reproductive health, lifestyle, personal hygiene, environmental health and mental health. Some of the adolescents linked violence to health status. Many of the participants identified adolescents' willingness to search for health information as a challenge and interviews revealed various health information sources for adolescents. The main sources of health information were mothers, friends, school and the internet among others.

**Conclusion:** Needs are high for Palestinian adolescents to improve their health literacy. Empowering them with health literacy competencies may be vital for alleviating the negative health impact of chronic exposure to violence. A context sensitive health literacy instrument can help conduct new research for understanding predictors of Palestinian adolescent health literacy.

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**Key words:** Health literacy, adolescent, exposure to violence, public health

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### Introduction

Health literacy has received wide interest globally in the recent decades<sup>1)</sup>. Health literacy is usually defined as "the personal, cognitive and social skills which determine the ability of individuals to gain access to, understand, and use information to promote and maintain good health"<sup>2)</sup>. In principle, health literacy is considered as an individual resource and asset that provides everyone the ability of decision making regarding healthcare,

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health promotion and preventing disease<sup>2,3)</sup>. Thus, health literacy is considered to be one of the determinants of health<sup>4)</sup>, as it can predict health outcomes more than sociodemographic factors<sup>3)</sup>. A lower level of health literacy is correlated with poor health<sup>5)</sup>. People with low health literacy are more prone to have harmful health behaviors<sup>3)</sup>, and they spend more on healthcare<sup>3,6)</sup>.

According to the World Health Organization (WHO), health information that concern adolescents include healthy lifestyle, mental health, personal hygiene, and reproductive health<sup>7)</sup>. Relevant health information must be provided to adolescents with health literacy skills. This can be attained by increasing adolescent's accessibility and comprehension of health information, followed by proper evaluation of the trustworthiness of the obtained information<sup>8)</sup>. To reduce the exposure to future health risks<sup>9)</sup>, such as being exposed to chronic violent conflict<sup>10)</sup>, it is essential to achieve an appropriate health literacy level from a continuous learning process starting from early childhood.

Palestine is suffering from complicated political conditions. This situation forces Palestinians to live under chronic conflict and violence throughout their life course<sup>11)</sup>. Chronic conflict has a negative impact on both physical and mental health status. In addition to the continuous exposure to stressors or injuries<sup>11,12)</sup>, health status can also deteriorate from the limited access to health care<sup>13)</sup>. To enable adolescents to reduce the impact of chronic conflict on their health status, health literacy may be useful.

Current health literacy measures mainly examine individuals' health literacy within medical settings. For example, the Health Assessment Scale for Adolescents (HAS-A), which focuses mainly on navigating health care system, such as the com-

munication between adolescents and doctors about health issues or knowledge regarding medicines or illnesses<sup>14)</sup>. A previous study was conducted in Egypt and utilized the Arabic versions of the Swedish Functional Health Literacy Scale (S-FHL scale) and the European Health Literacy Survey Questionnaire (HLS-EU-Q16). Authors recruited patients from a tertiary health care facility, including adolescents older than 15 years in their sample<sup>15)</sup>. The study disregarded the complexities and importance of family, community and population contexts, as they failed to deal with health literacy as a public health construct<sup>16,17)</sup>. Furthermore, the main focus of health literacy research is on the influence of parents' health literacy on their children's health<sup>9)</sup>. However, adolescents' health literacy is still under-researched, despite researchers' increasing attention in the past decade<sup>3,9)</sup>.

Health literacy has been addressed in some Middle Eastern countries<sup>18)</sup>. For example, a Lebanese study tried to validate an Arabic versions of the Rapid Estimate of Adult Literacy in Medicine revised (REALM-R) and the Short Test of Functional Health Literacy for Adults (S-TOF-HLA). The results presented the value of these measures in measuring adults health literacy in the Lebanese context and the surrounding Arab countries<sup>19)</sup>. Health literacy has been addressed in recent studies in Palestine as well<sup>20,21)</sup>. Both studies targeted adult patients with type 2 diabetes mellitus, resulting in the positive influence of health literacy on glycemic control and medication adherence of those patients.

In contrast, a few studies in the Middle East targeted adolescents<sup>22-24)</sup>. One study found that adolescents in Iran had low levels of health literacy, calling on policymakers to adopt interventions to target adolescents and improve school curricula by introducing the topics of reproductive and mental

health<sup>23)</sup>. In other studies conducted in Iran<sup>22)</sup>, and Turkey<sup>24)</sup>, the Health Literacy Measure for Adolescents (HELMA) and a Turkish version of Health Literacy for School-Aged Children (HLSAC-T) scales were developed respectively, showing validity and reliability for measuring health literacy for adolescents.

In this study we sought to explore the perceptions of adolescents, parents and teachers about what adolescents need to know to be considered health literate, in the Palestinian social context. This is a preliminary step of developing a health literacy tool specific to the Palestinians.

## Methods

### Research design

In this qualitative research, we conducted multiple semi-structured interviews with adolescents, teachers and parents within school settings in the Ramallah Governorate. We followed consolidated criteria for reporting qualitative research (COREQ) to report information regarding research team, methods, analysis and interpretation<sup>25)</sup>.

### Background context of the research site:

In the Ramallah Governorate, exposure to violence is considered as with lower rate compared to the exposure of other Palestinian areas. Regardless, Palestinians living in the Ramallah Governorate are still exposed to chronic violence throughout their life, particularly adolescents and young adults. In addition, those who live in refugee camps are the most prone to being exposed to different forms of violence, especially political violence.

### Sampling and participants recruitment

We used the maximum variation sampling method to recruit adolescents, teachers and parents through school settings in the Ramallah Governorate. This sampling method can increase het-

erogeneity of the sample and strengthen the results of studies with small samples<sup>26)</sup>. When we conducted interviews, we applied theoretical sampling<sup>27)</sup>, to collect information, generate codes and a preliminary theory of Palestinian adolescents' health literacy.

We approached schools to maximize the variety of their characteristics, including school location (i.e. urban, semi-urban, rural areas and Palestinian refugee camps) and administration (i.e. public and private schools, and schools administered by the United Nations Relief and Works Agency for Palestine Refugees in the Near East (UNRWA)). The Palestinian Ministry of Education and Higher Education (MOEHE) is the higher body responsible for education in Palestine. The MOEHE directly manages governmental public schools, and has the role of supervising private and UNRWA schools. While private schools accept students who come from various contexts and socio-economic backgrounds, UNRWA schools accept mainly Palestine refugee students and operate in the West Bank, Jerusalem and Gaza strip<sup>28,29)</sup>.

We approached adolescents, teachers, and parents in person within schools, with the help and reference from school principals. In this research, we included adolescents of 12–15 years old in seventh, eighth or ninth grades. We also included teachers, who were currently teaching adolescents. Finally, we included parents who had an adolescent child. We selected at least one male and female participant from each cluster of adolescent, teacher, and parent groups from different schools to maximize the various characteristics of participants (Figure 1). No one refused to participate or refrained from finishing the interviews at the time of collecting data, and no one withdrew from the research.

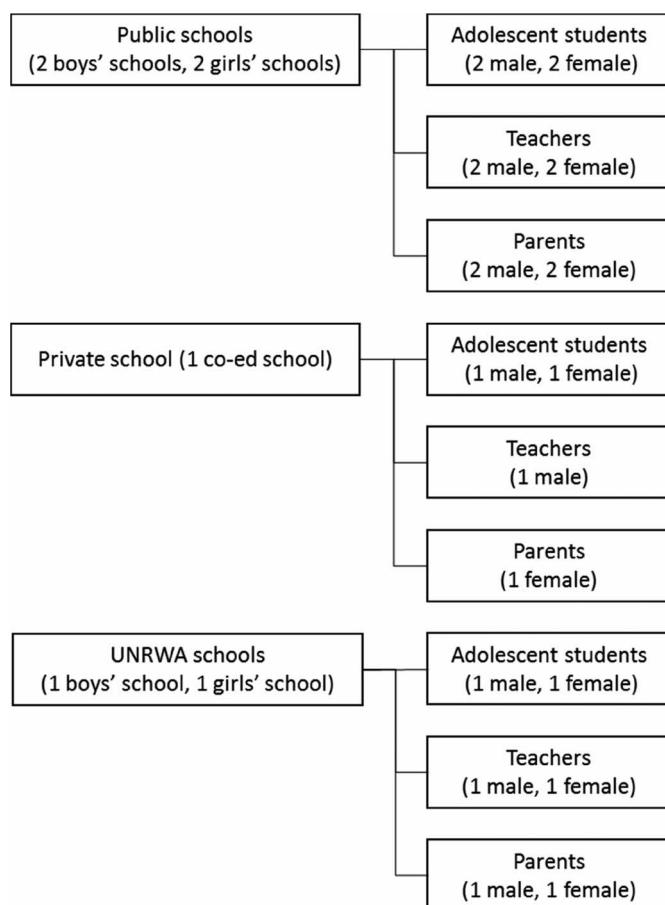


Figure 1 Sample distribution according to school type and gender

### Data collection

We conducted 22 face-to-face semi-structured interviews between January and February 2017. The first author was the main interviewer who conducted all the interviews. The main interviewer was assisted by a female research assistant, who cooperated in taking notes during interviews. Interference by the assistant included clarification of any misunderstood question to the participants. We conducted all interviews in local Palestinian Arabic dialect. Interviews lasted on average 30 minutes. At the end of each day, we discussed the field notes and the main points observed throughout interviews with the last author.

Following the research ethics guidelines of Birzeit University, and due to the local contextual sensitivity, we requested respondents to provide

verbal informed consent, instead of a written one, prior to starting the interviews. Signing a written form brings political or legal suspicion, as well as doubts of confidentiality from the participants' perspective. Therefore, in the Palestinian context, oral approval is acceptable. The researcher audio recorded the interview, only after obtaining the interviewees' approval to participate in the research and permission to record the interview.

All interviews took place at the respective schools. The school administration provided us a room, the school counselor's office in most cases, for conducting the interviews with the participants. Interviews were taken in private, with only the main interviewer, the assistant and the participant present during the data collection.

### Interview guide

We piloted the interview guide questions (n=3) as we checked for clarity, relevance and the average duration of interviews. Through the pilot-testing, we refined the final interview guide trying to understand how adolescents define health, including what Palestinian adolescents consider the most important context-specific health-related issues, and if they have the willingness to obtain and access health information for their daily life, in order to build a health literacy questionnaire that fits the Palestinian context (Table 1).

### Data analysis

We transcribed the recorded interviews into Arabic verbatim. We gave each participant a specific code. For example, we called the adolescent, teacher, and parent from the first school "S1", "T1" and "P1" respectively. We followed the same strategy for all participants. A native English speaker, who is fluent in Arabic, translated the transcribed interviews into English. The first author checked the accuracy of transcriptions by comparing audio recordings with the Arabic transcripts, and then compared the Arabic and English transcripts to ensure they were matching. The last author double-checked the English transcripts, confirming they were translated properly.

After several readings of the transcripts, we followed content analysis (CA) method<sup>30</sup>, specifically conventional CA, allowing codes and themes to emerge from data<sup>31</sup>. We extracted units of meaning relevant to the research's objectives from the interviewees' quotes, and then condensed those units into smaller phrases keeping the meaning of the quote intact<sup>32</sup>. We clustered all related and similar meaning units into common codes. We determined main themes, representative of the main interview findings, based on the previously extracted codes. The first author conducted the initial analysis, and then the last author re-read the transcripts, the codes and themes separately. After multiple revisions and continuous feedback to the first author by the last author, the final results were confirmed. Finally, the third author made a third revision and approved the results.

### Permissions and ethical approvals

We obtained ethical approval from the Birzeit University wide Committee on Research Ethics (reference number: 161013). We declare that our research followed the ethical considerations of the Declaration of Helsinki and International Ethical Guidelines for Health-related Research Involving Humans. Moreover, we obtained approvals from MOEHE, UNRWA and the private school adminis-

Table 1 Interview guide

#### For parents and teachers

1. What do you think the students/children know about health?
2. Do you think students/children try to find information about health?
3. What are the sources that the students/children may try to find this information from?
4. What are the health issues that you think that the students/children do not know about, and must to know or learn?
5. Would the students/children benefit from the health knowledge that they gain? How?

#### For Students

1. What do you know about health?
2. Do you try to find information about health?
3. What are the sources that you try to find this information from?
4. What are the health issues that you think you do not know about, and must to know or learn about?
5. Would you benefit from the health knowledge that you gain? How?

tration to conduct the research.

## Results

According to participants in this research, adolescents' understanding of health is linked to both physical and mental well-being. Most parents and adolescents identified health as the absence or healing of diseases, physical strength, nutrition and physical activity. On the other hand, half of the adolescents and a minority of parents and teachers emphasized the importance of mental health as an integral part of adolescents' health. Some adolescents linked mental health to physical health. Moreover, a few adolescents linked violence to health when asked about their knowledge of health. One adolescent said:

"Health includes both mental and physical

health. Health means the individual does not suffer from violence...and is not under pressure, this way he will have a good healthy life (S2, female)"

We identified several areas of health-related issues from the participants' interviews. These include: healthy lifestyle, mental health, reproductive health, personal hygiene, and environmental health. Medical-related issues, such as navigating the health care system, and dealing with health care professionals, which were indicated in previous research, were rarely addressed during interviews. In addition, interviews revealed reports on adolescents' willingness to search for health information, and the most common sources they utilize to obtain health-related information (Figure 2).

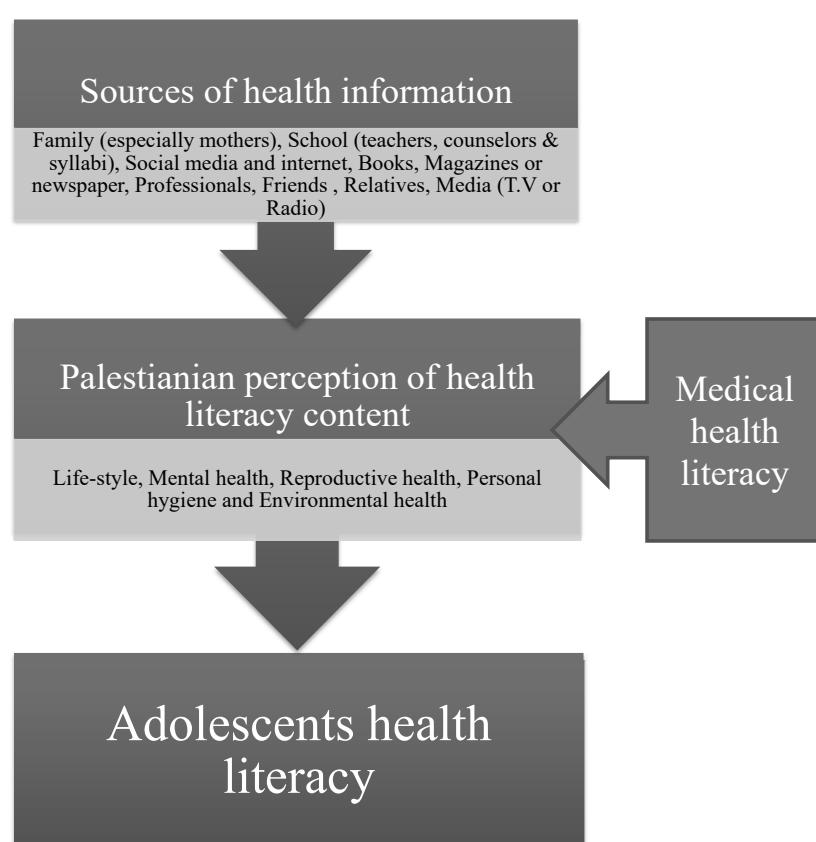


Figure 2 Framework of adolescent health literacy relying on Palestinian adolescents' perception of health

## Health-related-issues

### Lifestyle

During the interviews, various lifestyle-related issues such as nutrition, physical activity and smoking cigarettes emerged as important to consider. Participants repeatedly reported the tendency of adolescents to follow unhealthy lifestyles. Nutritional literacy was the only topic which all interviewees agreed should be included in the health literacy. The topic of nutrition was brought up in various ways. Some participants emphasized the importance of avoiding unhealthy diet such as fast food and sugar-sweetened beverages, food preservatives as they may damage their health. Others reported on what they believed is healthy nutrition, as one teacher said:

"Here at our school, teachers can play a good role through guiding students to eat healthy food...they don't let students to bring sweets or chocolate...all students have to bring a nutritional tupperware that has an apple, a banana for example... it has all things related to fruit and health (T4, male)"

Moreover, a few parents and teachers stressed the importance of sports and their association with health. Many adolescents emphasized physical activity and engagement in sports, as one adolescent said:

"Health relates to a healthy body, when one plays sports like gymnastics, that person must have good health... (S3, male)"

Most teachers emphasized the danger of smoking cigarettes to be part of health literacy, pointing out that adolescents know that smoking has a

harmful effect on health. Some reported that although having this knowledge, adolescents continue to smoke. Some teachers listed reasons such as insufficient parent follow up, lack of supervision, or negative role models (i.e. smoking parent or doctor) to lead to unhealthy behaviors of their adolescents.

### Mental health

Half of the adolescents and a minority of parents and teachers emphasized the importance of not only physical health, diet or hygiene, but also mental health as an integral part of adolescent health. For example, a female adolescent said:

"Health is the human ability to do anything...to be free of any physical and mental illness/disease and for his psyche to be relaxed...his thinking to be clear (S5, female)"

### Reproductive health

All parents, most teachers, and half of the adolescents identified reproductive health as a major issue for adolescents to know about at this stage in their lives. They mainly focused on body changes that occur during puberty and adolescence. One teacher said:

"We should clarify information not more...during puberty you will go through this and that; you will start having facial hair, a change in your voice and things like this... (T3, male)"

Adolescents, teachers or parents rarely brought other topics like the menstrual cycle. A mother mentioned briefly, with signs of discomfort that her daughters have knowledge about the menstrual cycle and its symptoms, and how to deal with them. The only adolescent who acknowledged the topic displayed signs of shyness through

her facial expressions and speaking, as she briefly claimed her knowledge about this matter.

#### Personal hygiene

Personal hygiene is another important aspect of health literacy, which most parents and teachers raised. Adolescents, parents, and teachers emphasized the necessity of knowing topics related hygiene such as the need to bathe, changing dirty clothing, using bathrooms properly and cutting nails. A female adolescent said:

“Like you should maintain your bodily hygiene on your own without anyone informing you of this…cut your nails, take care of yourself so that your health and appearance are well (S7, female)”

#### Environmental health

Less than half of participants emphasized the importance of including environmental health in adolescent health literacy. A parent reported that adolescents' understanding of pollution and its association to health and various illnesses is limited:

“I believe they (adolescents) do not really understand pollution and how it affects them… (P5, female)”

#### Medical-related issues

One adolescent reported that a healthy lifestyle prevents them from various illnesses and keeps them from visiting doctors. In addition, the importance of regular medical check-up visits was also acknowledged. One teacher suggested the need for increasing awareness of adolescents on regular check-ups:

“We need to raise their awareness to complete

physical examinations by doctors every now and then (T6, male)”

Meanwhile, none of the parents reported the importance of medical-related issues for adolescent health literacy.

#### Willingness to search for health information

There was a general agreement between most parents and teachers that most adolescents lack the willingness and motivation to search for health information by themselves. In other words, adolescents are thought to have low learning motivation, according to teachers and parents, as one teacher said:

“If a teacher requests an adolescent to search for a topic, they may search for information… I think it is quite rare for a student to search about health-related materials of benefit to him on his own (T3, male)”

There were differences between adolescents' reports regarding their willingness to search for health information, as some of them search or obtain health information from various sources. As one adolescent said:

“The Internet, I also like to read some books and magazines about health…if someone writes about health or how to maintain health, I like this…because this is beneficial (S2, female)”

In contrast, one female adolescent considered herself to be a healthy person and does not need such knowledge:

“Not much (searching for health information) because my health is good and I do not need

this information (S6, female)"

One of the teachers mentioned that technology distracts adolescents from acquiring beneficial information. In his perspective, technology attracts adolescents to play games and leisure activities, instead of searching for academic or health information, which may influence their academic performance in adverse ways:

"The central thing which kids are interested in is their phones, internet and games...there is an observed decrease in their academic level and achievement in general, because they get preoccupied with the computer and laptop and phones... (T3, male)"

According to a few teachers, even when adolescents search for information, they tend to only utilize the internet, the easiest and most accessible method. This was a view that some students disagreed on. They reported on using various sources for health information, such as books, magazines, television and radio, and others.

Overall, according to interviews, adolescents' willingness to search for health information may be influenced by their perception of their health status and lack of need for such information or the commitment to other interests (i.e. playing games).

#### Sources of health-related information

Interviews revealed a variety of sources that adolescents rely on to obtain health information. Most parents reported that their children's health knowledge comes from what they learn at home. Parents, especially mothers, were considered a main source that many adolescents relied on for health information. For example, one adolescent said:

"First of all, I always ask my mother -my parents have more experience than I do- in what is right and wrong, also I try to ask one of my relatives, as he is a doctor, about these things...I also benefit from the newspaper or the internet, on Google, for example I search about what this or that is made of...it is good to benefit from more than one source... (S2, female)"

Most parents, teachers and adolescents agreed that school is also one of the main sources of health information for adolescents either through teachers, counselors or the health and environment syllabus.

Most parents, teachers and adolescents reported that the internet is also a main source of health information for adolescents. However, the reliability of information obtained from the internet was questioned by some of adolescents, teachers and parents. One teacher explained:

"Internet is a main source (of health information) nowadays, but with internet, information can go either way. It is not necessarily true that all the sources are reliable... (T6, male)"

From the adolescents' point of view, internet is a reliable source of information especially when parents or teachers fail to provide them with the knowledge they seek. A few adolescents reported the dependency on search engines such as Google to search for health information.

Additionally, a few parents and teachers and half of adolescents reported that friends can be a source of health information. One teacher reported the positive impact of communication between friends:

"...They exchange information and benefit from

each other, and ask one another...they can understand the simple information from one another better than the information comes from me (T2, female)"

Moreover, interviews revealed other possible sources of health information including books, magazines or newspapers, relatives, and media (e.g. television/radio). Most teachers and parents reported firmly that adolescents have no willingness to read books in particular; however, most adolescents claimed the contrary that they obtain health information through reading books, magazines or newspapers. Finally, while few disagreed, only a few parents and teachers reported that the media (i.e. television/radio) is an informative source, recommending adolescents to watch health-related shows.

### Discussion

This research demonstrated the Palestinian adolescents' needs for access to knowledge covering a wider range of health issues. Emerged themes include lifestyle (i.e. nutrition and physical activity), mental health, reproductive health, personal hygiene and environmental health. Many of the participants identified willingness to search for health information as a challenge. However, interview results revealed that adolescents' were mainly relying on parents, especially mothers, school (teachers, counselors and health and environment syllabus), internet and friends to obtain health information along with a group of other sources.

Some of the adolescents linked violence to health; this can be understandable as Palestinians are exposed to different forms of chronic violence<sup>11)</sup>. A Swedish longitudinal study found that chronic exposure to violence during adolescence

can have a long-term health effect that may manifest at adulthood<sup>10)</sup>. However, there is limited literature to show the association between health literacy and exposure to violence<sup>33)</sup>. Health literacy may serve as one of the key asset which helps Palestinian adolescents to maintain and control their own health while facing the possible negative impacts of exposure to violence.

In this study, possessing knowledge on healthy lifestyle, and translating this knowledge into practice was considered an integral part of health literacy. Our results showed that Palestinian adolescents are prone to follow an unhealthy lifestyle. The WHO reported that unhealthy lifestyle can affect adolescents' growth and development. Moreover, it makes adolescents susceptible to various diseases<sup>34)</sup>. Our results were consistent with studies reporting the importance of health literacy for adolescents and young adults for having better food choices<sup>35, 36)</sup>, doing physical activity, and non-smoking status<sup>37)</sup>. Therefore, being literate on healthy lifestyle seems to be vital for adolescents to have healthier lives.

For reproductive health, knowledge was found to be the key to the understanding of the various bodily and physiological changes, which occur to both male and female adolescents at this phase of their life. However, other topics, such as sexual life and behaviors, Human Immunodeficiency Virus (HIV), other sexually transmitted diseases and contraception, were not mentioned at all. The conservative nature of the Palestinian society considers discussions of such topics as unacceptable and as a taboo, making it difficult for adolescents to freely discuss such topics.

In this study, only a few voiced the importance of regular health checkup visits, while none mentioned the need for adolescents to know how to navigate through the medical setting by them-

selves. Our results indicate that it will be beneficial to develop a locally relevant adolescent health literacy instrument beyond the medical settings, for achieving disease prevention and health promotion<sup>17)</sup>. The few existing published adolescent health literacy measures are mainly about the ability to navigate through the health care system and dealing with doctors, such as the Health Assessment Scale for Adolescents (HAS-A)<sup>14)</sup>. Health literacy instruments focusing on public health related topics may provide a better reflection of adolescents' actual needs and health knowledge.

In this study, mothers were found to be a key source of information, as similar findings which were reported by Iranian adolescents living in a resource-limited context<sup>38)</sup>. Our results were concurrent with the literature, concluding that parental knowledge and awareness levels are essential for adolescents' reception of health information and therefore health literacy<sup>8,39)</sup>. Furthermore, in this study, half of the adolescents mentioned peers/friends as an important source of health information. Peers/friends along with family may have an influence on adolescent health literacy, lifestyle, and health behaviors<sup>8,9,33)</sup>, through their norms, behaviors, and social support<sup>9)</sup>. Adolescents can also acquire health literacy skills through interacting with their friends at school, in addition to what they obtain from the syllabi, in-school activities, and teachers' guidance, instructions, and support. Schools are believed to be the settings where promoting health literacy among adolescents must take place<sup>8,40,41)</sup>. Parents, friends and schools play a vital role in relation to adolescents health literacy.

Internet was considered another source of health information for Palestinian adolescents in this study. Spanish and American adolescents<sup>42,43)</sup> relied on search engines such as Google for health

information search. However, health information sources from the internet are thought to be of questionable quality and harmful at sometimes<sup>44)</sup>, therefore, this study calls for the necessity of guiding adolescents to benefit from the huge amount of good information the internet can provide.

This research has several limitations. Since the interviewers were affiliated with an academic facility, some of the teachers overstated their responses, trying to discuss issues that are not directly relevant to the research topic. Also, a few female participants may have not spoken about reproductive health issues as one of the interviewers was a male. However, our female research assistant could have reduced the impact of this limitation. Next, as this research highlights what an adolescent health literacy instrument should contain for use among adolescents in the Palestinian context, the results may not be age-appropriate among other groups. Moreover, due to the nature of this qualitative study, we cannot generalize the results for the whole Palestinian adolescent population. As we only conducted this study in the Ramallah district, the findings may not apply to other Palestinian districts with different characteristics. However, to overcome this issue, we followed the maximum variety sampling method to ensure having a group of diverse participants. It assisted us in gaining a better understanding of the issue of interest, which can be considered a strength of this research. An additional strength is conducting this research in a school setting, away from the medical health care setting; moreover we interviewed adolescents themselves along with teachers and parents.

## Conclusion

Palestinian adolescents need to know more about health and we call for developing a health

literacy measure that is compatible with the Palestinian context, and perhaps elsewhere in our region with similar contextual characteristics, including exposure to chronic violence. This step is essential for future research, which may focus on having a better understanding of health literacy and its associated predictors and risk factors among Palestinian adolescents. Research that works to find out how health literacy can help Palestinian adolescents to overcome the negative health impacts of exposure to chronic violence is important given the current situation of chronic exposure to violence with no end in sight.

### Statements

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#### Conflict of Interest

AK is an employee of UNRWA as of December 2018. The authors have no other conflicts of interest to declare.

#### Data sharing

The data used and/or analyzed during the current research are available from the corresponding author on reasonable request.

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