

# What are Adolescent Health Information Needs in the Pandemic Era?

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## Abstract

Adolescence is a time when a person will face many challenges and changes. The pandemic has an impact on adolescent health with limited access to health services and access to health information. This study aims to identify the needs of adolescents in efforts to prevent Triad of Adolescent Reproductive Health problems in the pandemic era. This research method is quantitative with cross-sectional study design. Data collection was carried out online through a survey monkey. The result was that 251 adolescents filled out the questionnaire. All variables are presented in the form of a frequency distribution table. The majority of respondents strongly agree that reasons for accessing health information were to improve their health (49%), the majority of participants interested and would like to know more about physical activity (43%), they strongly agreed that accessing health information can provide benefits to better understand healthy behavior (41.2%), the majority of respondents agreed that they received enough health information (66.5%), they wanted to receive more health information (50.6%), and they will use online sources to access health information (57.4%). In the pandemic era, adolescents were interested and wanted to know more about physical activity. However, adolescent health information in the pandemic era should match the needs of adolescents in each region. Before there are adolescent health education activities, there is a need for an assessment step.

**Keywords:** adolescent, health information, pandemic, good health, wellbeing.

## INTRODUCTION

Adolescence is a transition period that is prone to face a variety of complex problems related to physical changes, nutritional adequacy, psychosocial development, emotions and intelligence that eventually cause conflict in him that then affects his health (WHO, 2004). The COVID-19 pandemic has an impact on adolescent health with limited access to health services and access to health information. Lack of health information in media that are easily accessible and interest adolescents can affect

the knowledge and health of adolescents (UNICEF, 2020). Advice during the COVID-19 pandemic one of them as much as possible to stay at home or social restrictions, it can increase sedentary activities due to more time spent in front of screens (Nogueira-de-Almeida et al., 2020). Limited mobility for outdoor activities and school learning that is carried out online can decrease the physical activity of adolescents. Sedentary physical activity patterns cause the energy expended is not

maximal resulting in obesity (Kemenkes, 2018a).

The trend of obesity in children and adolescents in the world increased tenfold from 11 million in 1975 to 124 million in 2016 (WHO, 2017). The prevalence of obesity in adolescents aged 19 years in Indonesia in 2013 by 4.4% and the age of 20-24 years is greater at 7% (Kemenkes, 2013). The prevalence of obesity in adolescents aged 19 years in Indonesia in 2018 by 8.9% and the age of 20-24 years is greater at 12.1% (Kemenkes, 2018b). The trend shows an increase from 2013 to 2018.

As a result of the COVID-19 pandemic adolescents are also aggravated by internal pressures (reduced workforce, unable to communicate directly with friends, teachers). This results in the potential for stress in adolescents to be higher (Duffy, Twenge, & Joiner, 2019). Mental health cases in adolescents in the world have reached 10-20% of which 50% are adolescents aged 14 years and 75% are in their mid-20s (WHO, 2019). Mental health disorders in adolescents account for 20% of cases and contribute to an increase in suicides. This case became the third cause of death in children aged 15-19 years in the world (UNICEF, 2019). The prevalence of adolescents aged 15-24 years suffering from emotional mental disorders by 10% or 157,695 cases in 2018 (Kemenkes, 2018b). This prevalence is higher than in 2013 by 5.6% (Kemenkes, 2013). All of age groups, young people (ages 18-24) were most likely to experience high or very high levels of psychological distress (15.2%) in 2017-2018 (AIHW, 2020a).

Overall, adolescents are positive about using the internet to seek health-related information, this information covers sensitive topics such as sexual health and violence, as well as less sensitive topics such as exercise and nutrition (Park & Kwon, 2018). A person who obtains health information through the internet, making the internet as the first source of information because of the limited time of consultation with doctors and barriers in accessing health services and broad scope of information is an advantage, while the credibility and

trustworthiness of health information is a limitation of the internet or web. The main types of information sought are a healthy lifestyle (healthy eating and physical exercise), prevention of chronic diseases or infections (Chu et al., 2017).

The most explored topics in health promotion or health education activities with adolescents are mental health, reproductive and sexual health, oral health, and violence (Schaefer et al., 2018). According to the scientific literature, interventions in this population group should respond to the needs of adolescents (Vinagre & Barros, 2019). During the COVID-19 pandemic, there was an increased risk of developing symptoms of anxiety, depression, and other psychological problems. This is due to the growing stress of the characteristics of the pandemic itself, declining mobility, economic slowdown, and school closures, which are widely adopted measures to control coronavirus transmission and prevent the collapse of the health system (Oliveira, Oliveira-Cardoso, Silva, & Santos, 2020). In addition, many adolescents experience conditions of high vulnerability, especially in large suburbs. These vulnerabilities increase according to living conditions, financial instability, and lack of access to essential services such as health, education, and social protection (Bruns, Kraguljac, & Bruns, 2020).

Based on the results of previous research in 2020 known stakeholders who have adolescent health programs. Programs from stakeholder (School) are socialization, campaigning, consulting and mentoring. Programs from stakeholders (family planning) are 'Bina Ketahanan Remaja' and 'GenRe'. Programs from NGOs are socialization, peer educator and volunteer formation. Programs from the Health Service are 'Posyandu Remaja' and 'Saka Bakti Husada'. But not all stakeholders who have adolescent health programs were synergized (Ira Nurmala, Muthmainnah, & Salim, 2020). All of these programs have almost the same activities as developing communication, information, education media, training adolescents to become peer educators. However, in the results of the study of 854 adolescents, it is known that only 52.7% ( $n =$

450) students know about peer educator programs even 76.2% are not aware of the existence of adolescent health programs from some stakeholders. The study also found there were many similar health programs in some schools (Muthmainnah, Nurmala, Siswantara, Diana, & Yeyen, 2019; I Nurmala, Rachmayanti, Muthmainnah, Pertiwi, & Harris, 2020).

The strategy set to implement the policy is one of which is the implementation of youth health coaching implemented integrated across programs and across sectors, government, and private sector, as well as NGOs, in accordance with the role and competence of each sector effectively and efficiently so as to achieve optimal results. Stakeholder engagement ranging from policy makers, policy implementers to policy goals, in adolescent health programs is very important. Multisector cooperation network becomes one of the keys to the success of adolescent health programs. However, based on previous research it is known that not all stakeholders who have adolescent programs synergize even should certain stakeholders have power, but feel they do not have power and involvement is still passive (Muthmainnah et al., 2020). This study aims to identify the health information needs of adolescents in the pandemic period.

## Design and Methods

This study was an observational quantitative study using a cross-sectional design. The population was adolescents aged 17-24 years and active student status. The sample was randomly selected through an online survey and obtained a sample of 251 respondents.

Recruitment over the Internet as an ideal way to find adolescents involved in searching for information over the internet as one of the options in the questionnaire. Quantitative data is obtained from online surveys designed to find out health topics that students want to know more about.

The data that had been obtained was analyzed descriptive statistical methods using IBM SPSS

version 21. Analysis was used to describe each of the variables studied. The results of the analysis were displayed in the form of frequency distributions with percentages.

## Results

### Characteristics of Respondents

The results of the study were conducted through an online survey. The survey was completed by 251 respondents. Table 1 shows that the median age of respondents was 19 (17-22) years, mostly female (72.9%), living with parents (47.8%), family socioeconomic status category 'Quite well-off' (73.3%).

### Reasons for accessing health information

Table 2 shows the majority of respondents strongly agree that the reason for accessing health information is to improve their health (49%). Table 2 displays participant responses regarding reasons why they access health information. Participants indicated that they 'strongly agreed' that they accessed health information because they wanted to improve their own health (49%), health interested them (41.4%), and they wanted to learn more about their own health (35.5%). The majority of respondents strongly agreed that the reason for accessing health information was to improve their health (49%).

### Interest in health information

Table 3 displays topics that most participants 'often' accessed health information on, including nutrition and healthy eating (45.4%) and physical activity (43%). As displayed in Table 9, many participants never accessed health information on Alcohol (25.5%) and Tobacco/vaping (23.1%). As shown in Table 4, the majority of participants 'strongly agreed' that they would like to know more about nutrition and healthy eating (41%) and mental health (37.1%). Most of participants 'strongly agreed' that they would like to know more about nutrition and healthy eating (62.5%). However, 43% participants 'often' accessed health information on physical activity, and the majority of participants

‘agreed’ that they would like to know more about it (Table 4).

Overall, participants perceive benefits in accessing health information. Most of participants ‘strongly agreed’ that accessing health information helped them to understand more about health issues (60.6%) (Table 5). Adolescent satisfaction with health information is shown in table 6, it was known that respondents strongly agree to receive more health information (41.8%,  $n = 105$ ).

## Discussion

The study aimed to identify adolescent health information needs in times of pandemics. The use of telemedicine can be an alternative media for accessing health information for adolescents during a pandemic (Evans, Golub, Sequeira, Eisenstein, & North, 2020). Previous study showed the higher level of income related to the stronger information seeking on continuance intention (Hsu, Tien, Lin, & Chang, 2015).

The majority of respondents strongly agreed that the reason for accessing health information was to improve their health (49%). Previous studies have suggested that people access health information as a form of self-awareness and the presence of technology online helps them access health information conveniently (Chu et al., 2017). Older adult get useful health information by internet to understand the conditions that might occur before seeing a doctor, to spend as much time as possible asking questions and to better understand what doctors will later discuss to improve their health (Luger, Houston, & Suls, 2014).

Topics that most participants ‘often’ accessed health information on nutrition and healthy eating. As shown in Table 4, the majority of participants ‘strongly agreed’ that they would like to know more about nutrition and healthy eating. Although adolescents know about healthy eating and the problem of bad eating habits that can affect health, most adolescent show a lack of time to eat healthy, they mostly eat in restaurants because most of the activities

are spent outside the home. In many cases, it was also indicated by the availability of healthy food in their school (Silva, Teixeira, & Ferreira, 2014). Adolescents agree that they should eat more healthy nutritious food but some of them are more concerned with taste. Many outdoors provide varied foods such as fast food restaurants, roadside traders. The majority prefer foods that contain lots of fat, salt, and sugar, as well as carbonated soft drinks that are more refreshing. Some adolescents say they cannot buy healthy food because of limited pocket money. Even though they know that fast food is bad in nutritional value, they consume it because it was convenient and easy to obtain (Jefrydin, Nor, & Talib, 2019).

Results show 43% participants ‘often’ accessed health information on physical activity, and the majority of participants ‘agreed’ that they would like to know more about it (Table 4). Previous study said about three-quarters (73.8%) of adolescents reported lack of physical activity, less than 15.5% reported mild physical activity, and the rest reported heavy physical activity (Shennar-Golan & Walter, 2018). Adolescent boys and girls were involved in different types of physical activities for different reasons, boys are busy with social comparisons with their peer groups while young girls are busy with the appearance and influence of the media, this may influence women choosing light and moderate physical activities (Walter & Shenaar-Golan, 2017). There was a positive correlation between levels of physical activity in adolescents where parks and open spaces are available close to homes and schools, and recreational infrastructure is improved. Walking to school can increase physical activity in daily routines, and can develop moderate to severe levels of physical activity by cycling, swimming and exercising (Kumar, Robinson, & Till, 2015).

Results show that most of participants ‘strongly agreed’ that accessing health information helped them to understand more about health issues. The benefits of understanding health issues are that it makes it easier to know where to go, what to do and how to find what is needed to improve health, help in making better

decisions about health and health services, and help to contribute more effectively in decision-making and action on health care information (Whittaker et al., 2012).

Adolescent satisfaction with health information is shown in table 6, it is known that respondents strongly agree to receive more health information (41.8%, n =105). Most (>70%) health information seekers were satisfied with the information found, and most often (>70%) feel more comfortable with information received from health care providers than the results of information found online (Ybarra & Suman, 2008). Previous studies have examined that health campaigns can increase the acceptance of health information (Manika, Dickert, & Golden, 2021).

## Conclusions

The health information needs of adolescents in this pandemic era are more varied and related to media sources that favor today's adolescents. The needs of adolescent health information topics are tailored to the needs of adolescents in each region. The media used by adolescents also needs to be analyzed first, so that adolescent health information can be conveyed properly. Analysis of adolescent needs is the first stage in developing appropriate adolescent health information. Early adolescent involvement is key to the success of adolescent health information design. This is because adolescent from the beginning have known the purpose of education and they can invite their peers. Adolescent needs analysis can also identify reasons that motivate them to access information, their expectations about the benefits of information and their satisfaction with the information.

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## Conflict of interests

The authors declare that there is no conflict of interest.

## Availability of data and materials

The data used to support the findings of this study are available from the corresponding author upon request.

## Ethics approval and consent to participate:

This study was approved by the Health Research Ethics Commission, Faculty of Nursing Universitas Airlangga (No: 2052-KEPK). The entire online survey was explained to the adolescents to be filled in themselves by first filling out the informed consent. While the respondents' identities were removed from the dataset. This research is voluntary and the information is collected anonymously.

## Patient consent for publication

Not applicable.

## Significance for public health

Adolescence is a time of vulnerability with self-discovery and self-determination. This period is a transition period in which a person will have many problems both in themselves and their environment. The existence of a pandemic is also a challenge for adolescents in protecting themselves from various adolescent health problems. This study found that teenagers were interested and want to know more about physical activity. This was in accordance with the habit of staying at home during a pandemic which limits people's movement. The existence of information about the needs of adolescents in accessing health information both topics and media is expected to be a recommendation for stakeholders or

public health activists to develop media in an effort to improve public health, especially for adolescents.

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