

Healthy behavior and herbal drink consumption among educated youth during COVID-19 pandemic

Perilaku sehat dan konsumsi minuman herbal kalangan remaja terdidik selama pandemi COVID-19

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Abstract

The coronavirus (COVID-19) pandemic has affected social and economic sectors and has created new behavior and lifestyles. This article employs a quantitative methodological approach. Through interviews with 274 university students in East Java, Indonesia, the findings suggest that young people's awareness of health behavior shifted after the spread of COVID-19. Before the pandemic, parents are struggling to have their children consume herbs. Youngsters consider herbs as a traditional lifestyle for the elderly. However, after COVID-19, the results suggest that young people are more supportive of herbal medicine in order to protect themselves from COVID-19. Therefore, it can be argued that COVID-19 pandemic generates a growing awareness for young people to consume herbal medicine, which becomes a new lifestyle and preserves the nation's centuries-worth wisdom of the local culture.

Keywords: COVID-19 pandemic; clean living; herbal drink; healthy behaviour; Indonesian cultural wisdom

Abstrak

Pandemi virus corona (COVID-19) telah mempengaruhi sektor sosial dan ekonomi serta menciptakan perilaku dan gaya hidup baru. Artikel ini menggunakan pendekatan metodologis kuantitatif. Melalui wawancara dengan 274 mahasiswa di Jawa Timur, Indonesia, temuan menunjukkan bahwa kesadaran anak muda akan perilaku sehat bergeser setelah penyebaran COVID-19. Sebelum pandemi, para orang tua bersusah payah agar anaknya mengonsumsi jamu. Anak muda menganggap herbal sebagai gaya hidup tradisional untuk orang tua. Namun, setelah COVID-19, hasilnya menunjukkan bahwa anak muda lebih mendukung pengobatan herbal untuk melindungi diri dari COVID-19. Oleh karena itu, dapat dikatakan bahwa pandemic COVID-19 menumbuhkan kesadaran generasi muda untuk mengonsumsi jamu, yang menjadi gaya hidup baru dan melestarikan kearifan budaya lokal bangsa yang telah berusia berabad-abad.

Kata kunci: pandemi COVID-19; hidup bersih; minuman herbal; perilaku sehat; kearifan budaya Indonesia

Introduction

Healthy lifestyle has become a new trend in the last few decades. People have shown increasing awareness toward healthy behavior considering various disease outbreaks that occur throughout the world, with COVID-19 as the latest example. Healthy lifestyle begins with social support for physical activities and healthy food consumption (Thrasher et al. 2004, Ball et al. 2010). A number of studies suggest that a healthy diet including fruit and vegetable consumption to reduce fat and calorie intake is more common nowadays than before (Engbers et al. 2006, Nelson & Story 2009, Yun Silk 2011,

Mollen et al. 2013). In addition, supportive surroundings, such as a clean and healthy environment, are important for an individual to start and maintain a healthy lifestyle.

A healthy behavior is also shaped by health-related messages and information to increase the society's health awareness (White et al. 2005, Rothman et al. 2006, Gerber et al. 2009, Purpura et al. 2011). Professionals in the 20th century aimed at bringing community-wide-scale awareness in healthy lifestyle, instead of focusing on individual level as commonly found in the 1990s (Lumpkins et al. 2011). Health professionals promote and provide information on healthy lifestyles and awareness through various media. Recent studies have found that healthy behavior can be promoted in form of health modifications, such as maintaining body weight, increasing physical activities, and anger management (Boswell et al. 2006, Mann et al. 2006, Yang & Hall 2007, Nelson et al. 2008). Because of these health messages, people are now realizing the importance of maintaining ideal body weight, because obesity is one of the preeminent health problems generated by the unhealthy behavior of food diet and inactive physical activities (Van der Horst 2006, Huang et al. 2013, Sogari et al. 2018). People are also aware that it is essential to do physical activity by doing sports, like cycling, aerobics, and running. Various health facilities in public places are also increasing, which make it easier for people to keep being active.

However, this is not the case for a few uneducated people who live in an unhealthy environment and are vulnerable to have an unhealthy lifestyle. Some rural and poor urban communities and people living in slums find it challenging to engage in healthy behavior. Costs for medicine and healthcare are spiralling, while chronic illnesses are increasingly affecting the community (Loewenstein et al. 2007, Yang & Hall 2007, Blumenthal et al. 2013). The public began to acknowledge the risk of illnesses such as heart attacks, obesity, and diabetes, but it does not seem to be undoubtedly backed by the presence of sufficient health facilities, especially in rural and slum areas.

To cope with the limited health support and the rising costs of medication, people make their own efforts toward a healthier lifestyle. They include reducing cigarette consumption, cutting sugar intake, refraining from drinking alcohol, limiting caffeine consumption, and starting to consume herbs (Domar et al. 2012, Ussher et al. 2014). People in Indonesia, along with those in other Asian countries like China and South Korea, realize that herbal drink could serve as natural medicine. Previous studies mentioned that herbal drinks are the most agile marketed drinks due to the bioactive ingredients capable of boosting the energy and strengthening the immune system (Miller 2008, Rath 2012, Spierer et al. 2013). It turns out to be a pearl of local wisdom that exist from generation to generation as traditional medicines.

What is considered healthy drinks may vary from country to country. In the U.S., for example, healthy drink incorporates vitamins, minerals, and herbal drink as well as supplements (Gardiner et al. 2007). American herbal drinks are energy drinks that contain caffeine, taurine, vitamins, herbs supplements, and sugar to boost stamina, energy, weight loss, and athletic performance (Iyadurai & Chung 2007, Heckman et al. 2010, Seifert et al. 2011). However, concerns started to emerge as about 50% of teens and young adults consume herbs that contain a high level of caffeine, which is claimed to improve mood and increase mental and physical energy (O'Brien et al. 2008, Thombs et al. 2010, Spierer et al. 2013, Azagba et al. 2014). In an additional note, 'herbal drinks' in the U.S. were actually energy drinks favored by teens and young adults.

In Indonesia, a tropical agricultural country where various plants thrive, *jamu* serves as traditional herbal drinks passed from generations to generations. It is estimated that at least 3,000 species of plants can be used as herbal drink ingredients in Indonesia, including medicinal plants that are suitable for disease-preventive medicine (Widyowati & Agil 2018). It becomes part of Indonesian culture, considering 50% of the people consume it actively (Antons & Antons-Sutanto 2009, Purwaningsih 2013). Moreover, Indonesia's medicinal plant diversity is sustained with high soil fertility that makes rhizomes easy to cultivate. *Jamu* or herbal drinks become increasingly prevalent, and it is even sold as health products (Torri 2012a). It is produced traditionally and has been believed to have various health and disease-prevention benefits since thousands of years ago. Recent studies even stated that herbal drinks are also beneficial for beauty care (Sangat & Larashati 2002, Mangestuti et al. 2007, Torri 2012b).

While *jamu* has been well-researched for its health benefits, its consumption by youngsters as a healthy lifestyle is not yet thoroughly examined, especially in relation to the COVID-19 pandemic. The existing literature has mentioned the use of herbal drink or medicine during COVID-19 pandemic (Demeke et al. 2021, Sutakwa & Wiratara 2022). There is also a research on the impact of COVID-19 pandemic on people's behavior and herbal drink processing business in Indonesia (Lesmayati et al. 2021). In relation to youth consumption, there is a study conducted by Septiadi et al. (2020) which highlights literacy and interests by millennials. To fill the gap in the existing literature, this research emphasizes on how COVID-19 pandemic impacts educated youth's lifestyle and consumption of herbal drinks as health behavior and part of Indonesia's local wisdom.

Research Method

This research applied a quantitative method with descriptive data from 247 sample of educated youths, or those who studied in various universities in East Java, Indonesia. The informants were asked to answer questions on how educated youths carried out their lifestyle and healthy behavior. Thus, in order to identify comprehensive and profound answers as much as possible, this research conducted an in-depth interview. This interview set is expected to create a more direct way for the researcher to conduct data analysis. It is also expected that in-depth interview would uncover educated youth's healthy behavior in a clear, detailed, and thorough manner.

The interview was conducted by using a structured questionnaire by Google Form. At the same time, additional qualitative data were collected from 27 youths who never consumed herbal drink but started to drink the herbs after COVID-19 outbreaks. Qualitative data were collected by conducting an in-depth interview with guidelines, either face to face or by phone. Once the samples were extracted, it was necessary to categorize the data and serve it in description type. The data were also analyzed and interpreted within the framework of relevant theories and previous studies.

Result and Discussion

Educated youths' herbal drink consumption before COVID-19 pandemic

The Coronavirus or commonly known as the COVID-19 outbreak impacts the society at a worldwide scale. People are currently concerned with the importance of a clean and healthy lifestyle. However, necessary clean behavior such as washing hands has not been intensively done in developing countries, though efforts to increase sanitation and vaccination do exist (Lopez-Quintero 2009, Song et al. 2012, Adnani et al. 2018). A series of research proved that washing hands brings significant output to reduce pathogen infection, an infectious agent that carries those diseases (Whitby et al. 2006, Fournier 2012, Garg et al. 2020). Reyes Fernandez et al. (2016) explicates that medical workers are needed to raise handwashing awareness. They should bring awareness to people that "if I wash my hand often, I will be healthy." Some vital and public spots in Indonesia already provided handwashing facilities to avoid Coronavirus. Moreover, people also have their handwashing facilities in front of their houses.

Maron et al. (2018) research pointed out that health behavior determines a human's long-term survival rate. Thus, one's immunity to evade diseases and viruses is also determined by how healthy the lifestyle is. The Coronavirus spreads invisibly, yet it brings vast transmission among people. Recent studies have found that compliance with washing hands has an impact on the decreasing number of *Staphylococcus aureus* infections and transmission, which is resistant to methicillin (McBryde et al. 2004, O'Flaherty et al. 2005, Whitby et al. 2006).

Aside from washing hands and using masks in handling coronavirus in Indonesia as the prevention efforts, there is also herbal drink (*jamu*) consumption as part of local wisdom. *Jamu* serves as a natural medicine for a long time that has various benefits to boost immunity and energy. When the pandemic spread, these herbal drinks' presence has improved. People realized that *jamu's* nutritions possess

immense benefits. As illustrated in Table 1, some people have started to consume herbal drinks before the outbreak. This table confirmed that Indonesians have been consuming herbal drinks for generations. This remains an important thing to be taken by people even now.

Table 1.
Consumption of herbal drinks before COVID-19 among educated youths (N=274)

Herbal drinks types consumed before COVID-19	Consumed		Never consumed		Percentage	
	F	%	F	%	F	%
Curcuma	100	36.50	174	63.50	274	100
Ginger	172	62.77	102	37.23	274	100
Turmeric	161	58.76	113	41.24	274	100
Kaempferia galangal	118	43.07	156	56.93	274	100
Lemongrass, betel, cardamom	45	16.42	229	83.58	274	100

Source: Primary data

Table 1 reveals that respondents have consumed several types of herbal drinks, while others have not. These self-made herbal drinks consist of various readily available ingredients such as Curcuma, ginger, turmeric, and Kaempferia galangal. Furthermore, these herbal drinks are mass-produced, showing a promising prospect due to people's high interest.

Aside from its benefits for skin beauty, herbal drinks are also beneficial to protect feminine organs. Javanese women consumed herbal drinks to maintain vagina health (Hardon et al. 2013). On the other side, men are also consuming ginseng and cholecome to improve vitality (Hardon & Ilmi Idrus 2015, Martin Hilber et al. 2015). A study on herbal drinks found that products of herbal drinks are produced and sold independently without a label by an individual or small-medium enterprises and often used as medicines (Susanti et al. 2019). Some types of Curcuma, ginger, turmeric Kaempferia galangal, and other herbal plants have various benefits for health. Indonesians consume ginger to warm the body, and they consume turmeric as an antioxidant and skincare.

Indonesians have been consuming *jamu* or herbal drinks since from the royal Medang Kamulan and Mataram era, despite the existence of modern medicine (Torri 2012b). These herbal drinks are often consumed by adults and elders, while kids only consume Curcuma herbal drinks to boost their appetite.

Youth's increasing awareness in consuming herbs during the COVID-19 pandemic

This study found increasing popularity of herbal drink consumption in Indonesia during the coronavirus outbreak, including by educated youths. It was previously often associated with the elders' traditional lifestyle. However, the current news and information regarding herbal drinks have increased its popularity for its benefit as disease prevention and immunity booster. Although the research on herbal drinks as Coronavirus remedy is not yet available, youngsters prefer to consume herbal drinks as alternative protection against Coronavirus. The long-standing herbal drink consumption in Indonesia proves that people have a high level of health awareness. Herbal drinks are competent to boost stamina and freshen up the body. Nevertheless, people still have little knowledge of immunity.

Margolis (2013) discusses that healthy behavior has a significant impact on chronic disease management, especially for educated, middle, and high-status individuals. Some people exhibit healthy behavior based on their knowledge as an effort to obtain a healthier lifestyle, in which these current trends can be found in the upper-middle class. Besides, health facilities are most likely accessible since this healthy lifestyle is endorsed with sports facilities and stress-management as well.

However, chronic disease management for lower-class differs from the upper-middle-class due to several factors, such as education, occupations, social and economic status. The upper-middle-class has its privilege to access decent healthcare. On the other hand, lower classes have limited access to healthcare.

Medical workers attempted to promote a massive campaign on healthy behavior. Healthy campaigns are not only involving healthier lifestyle promotions but the government and education institutions are also expected to provide health facilities in order to raise healthy awareness (White et al. 2005, Anderson et al. 2008). Health professionals play a pivotal role in spreading information on healthy behavior. Recent studies on this topic found that strategic communication to promote healthy behavior is through a norms-based approach in order to persuade individuals by giving information on health topic (Campo et al. 2004, Paek et al. 2006, Yun & Silk 2011).

As happened in Indonesia, the Health Office holds a vital role in maintaining healthy public behavior during coronavirus outbreak. The Health Office is the primary agent to raise awareness of a healthy lifestyle through various media. These awareness campaigns include a healthy diet agenda to consume herbal food and drink, which was welcomed well by the public. Before the coronavirus outbreak, people considered *jamu* as an ordinary herbal drink. However, due to the intense social media-based promotion, awareness has shifted to the point that people acknowledge *jamu*'s benefits to boost stamina and prevent diseases. The Table 2 illustrates the public's knowledge of herbal drink efficacy.

Table 2.
Educated youth's driving factors on consuming herbal drinks before COVID-19 pandemic (N=274)

Reason on consuming herbal drinks before COVID-19	Frequency	Percentage
Maintain stamina	129	47.08
Maintain beauty	43	15.69
Body slimming	21	7.66
Never consumed any herbal drinks	81	29.56
Total	274	100

Source: Primary data

Jamu herbal drinks are known for its countless benefits to possessing beauty—a wisdom which has been passed down from generations. Javanese princesses in ancient royal kingdoms are known to used herbal drinks to maintain their beauty. Thus, the Health Office needs to promote these herbal drinks consistently. A study done by Thrasher et al. (2004) emphasized that social supports are necessary to promote healthy behavior in public. Therefore, the public's healthy behavior cannot be done individually as it needs support from the other social surroundings to give the people more access to a healthy lifestyle. Keller's (2004) study on the following topic proves that access to health facilities such as healthy food, parks, and other facilities determines individual motivation to have a healthier lifestyle.

Table 3.
Educated youth's driving factor on consuming herbal drinks during COVID-19 pandemic (N=247)

Reasons for consuming herbal drinks after COVID-19	Frequency	Percentage
Prevent virus infection	9	3.28
Maintain health	100	36.50
Boost immunity	165	60.22
Total	274	100

Source: Primary data

There was a significant difference in people's awareness of healthy behavior. It was suggested that people's interest in herbal drinks have shifted. Before the Coronavirus, people tended to recognize herbal drinks solely as stamina booster and beauty supplements. However, today people are starting to acknowledge the various benefits of herbal drinks that could boost body immunity and maintaining their health.

As can be seen from Table 3, people consumed herbal drinks to protect themselves from Coronavirus. Herbal drinks that are usually known as a stamina booster is now approved as an immunity booster to protect the people from the virus spread. It can be argued that people nowadays, including educated youths, are aware of herbal drink's benefit in maintaining their health. Herbal drink consumption is no longer be seen as the elderly lifestyle, but it becomes part of the educated youth's lifestyle after the coronavirus outbreaks in Indonesia. They drink *jamu* for daily intake, thrice a day, or even drink it on every occasion. Therefore, drinking *jamu* has become a new lifestyle to maintain a healthier lifestyle and conserve Indonesia's local wisdom.

Conclusion

COVID-19 pandemic brings a significant shift in people's habits. Indonesians are using a mask, washing hands, using hand sanitizer, and not conducting any gathering to protect themselves from Coronavirus. These protocols impacted people's views on health behavior.

This study has shown that the COVID-19 pandemic can raise awareness among youths to preserve their local wisdom on consuming herbal drinks, which became part of their culture passed from generations. Most youths are reluctant to consume herbal drinks as it is often associated with elderly lifestyles, which challenge the parents to make them drink the herbs. However, after COVID-19 outbreak parents are no longer struggling to make the youths drink herbs, as there is an increasing interest among youth to consume herbal drinks.

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