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Post-Covid-19 health promotion in universities: mental health and social media promotion

Promocja zdrowia po Covid-19 na uniwersytetach: zdrowie psychiczne i promocja przez media społecznościowe

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Abstract

The crisis due to the Covid-19 pandemic has impacted the way of life, work, and learning processes. The government has issued a policy of adopting a new custom order to suppress the transmission of Covid-19 and continue to move people's habits. Universities as educational centers have interdisciplinary, multidisciplinary, and transdisciplinary roles and contributions through health promotion research and outreach activities by taking a role in overcoming the Covid-19 pandemic. Universities have an innovative role in preparing for the Covid-19 endemic through their work in education, research, and counseling. With the pandemic and post-Covid-19 preparations, universities are intensifying support in terms of providing health services for the academic community, one of which is sustainable health promotion services. Health promotion on campus after the Covid-19 pandemic can be done by adopting general health promotion strategies, including 1) cross-sectoral coordination, 2) importance and sustainability, 3) empowerment and involvement of the academic community, and 4) equity. Mental health for students and teachers after online teaching is very important. Social media has great potential to promote health and other health interventions as it overcomes some of the limitations of traditional health communication by increasing accessibility, interaction, engagement, empowerment, and adaptation. Health promotion in universities by utilizing social media has several advantages, namely accessibility, convenience, low cost, interaction with end-users, flexibility, status, and visibility. With the good momentum of social media engagement coupled with the new need to focus on health promotion, offering digital media-based online health promotion services is one of the possible actions. Digital media has significant promise for health promotion and other health intervention activities.

Keywords

health promotion, college, Covid-19, social media

Streszczenie

Kryzys spowodowany pandemią Covid-19 wpłynął na sposób życia, pracy i procesy uczenia się. Rząd wprowadził politykę przyjęcia nowego porządku zwyczajowego w celu stłumienia transmisji Covid-19 i kontynuowania zmiany nawyków ludzi. Uniwersytety jako ośrodki edukacyjne mają interdyscyplinarne, multidyscyplinarne i transdyscyplinarne role i wkład poprzez badania promocji zdrowia i działania z zakresu outreachu, biorąc udział w przezwyciężaniu pandemii Covid-19. Uniwersytety odgrywają innowacyjną rolę w przygotowaniu się do endemiczności Covid-19 poprzez swoją pracę w dziedzinie edukacji, badań i doradztwa. Wraz z pandemią i przygotowaniami do okresu po Covid-19 uniwersytety intensyfikują wsparcie w zakresie świadczenia usług zdrowotnych dla społeczności akademickiej, w tym zrównoważone usługi promocji zdrowia. Promocja zdrowia na kampusie po pandemii Covid-19 może być realizowana poprzez przyjęcie ogólnych strategii promocji zdrowia, w tym 1) koordynację międzysektorową, 2) znaczenie i zrównoważenie, 3) upoważnienie i zaangażowanie społeczności akademickiej oraz 4) równość. Zdrowie psychiczne studentów i nauczycieli po nauczaniu online jest bardzo ważne. Media społecznościowe mają duży potencjał do promowania zdrowia i innych interwencji zdrowotnych, ponieważ przełamują niektóre ograniczenia tradycyjnej komunikacji zdrowotnej poprzez zwiększenie dostępności, interakcji, zaangażowania, upoważnienia i adaptacji. Promocja zdrowia na uniwersytetach przy wykorzystaniu mediów społecznościowych ma kilka zalet, a mianowicie dostępność, wygodę, niski koszt, interakcję z użytkownikami końcowymi, elastyczność, status i widoczność. Wraz z dobrym momentem zaangażowania w media społecznościowe, połączonym z nową potrzebą skupienia się na promocji zdrowia, oferowanie usług promocji zdrowia online opartych na mediach cyfrowych jest jedną z możliwych działań. Media cyfrowe mają znaczące obietnice dla promocji zdrowia i innych działań interwencyjnych.

Słowa kluczowe

promocja zdrowia, uczelnia, Covid-19, media społecznościowe

Introduction

Currently, humanity is facing a coronavirus pandemic that causes a disease called Corona Virus Disease 19 (Covid-19). Covid-19 is a contagious respiratory infectious disease caused by Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2) [1]. The virus is primarily transmitted between humans through droplets, which has facilitated its rapid spread throughout the world, leading the WHO to designate it as a pandemic. Covid-19 was first reported in Wuhan, China, on December 31, 2019. The first death from Covid-19 was reported on January 9, 2020, in Wuhan. After that, the disease spread rapidly almost all over the world. Indonesia cannot be separated from the impact of the spread of the Covid-19 disease. The first case in Indonesia was found on March 2, 2020. The spread of Covid-19 in Indonesia is currently expanding to every region to almost all provinces. Along with the increase in the coverage of Covid-19 vaccinations provided by the government, Covid-19 cases have decreased. Data on Covid-19 cases in Indonesia up to September 20, 2022, show that the average new case in the 2nd week of September 2022 is 2,298 cases. This is far from the peak of cases in 2022, which was 51,778 cases in the 2nd week of February [2]. The decline in the number of new cases was followed by a decrease in deaths caused by several factors, such as more equitable vaccination coverage, vigorous health promotion, and stricter health protocols [3, 4].

The crisis caused by the Covid-19 pandemic has affected lifestyles, teaching and learning activities, and office work activities. The government has issued a directive to create a new habit order (new normal) to curb the spread of Covid-19 and further change people's habits. In line with the government's policy of adapting to the new normal, the University's activities during the Covid-19 pandemic, transition period, and post-Covid-19 pandemic must be adapted to ensure the safety and health of students. The campus has an interdisciplinary, multidisciplinary, and transdisciplinary role as an educational hub and plays a role and contributes to overcoming the Covid-19 pandemic through health promotion research and outreach [5].

The University's social commitment is evident and reflected in the health of the community and the environment, a positive fact and an indicator of the University's potential as a health promoter. Health promotion is the process of educating people to actively participate in improving their quality of life and health. One of the ways to achieve health equity is through access to equitable resources, an enabling environment, and access to information, experience, and skills [6]. Through joint and interdisciplinary action, universities can become participatory spaces and improve the transformation of the living conditions and health of the university community. Each citizen has a role in controlling their own space to create conditions that support health.

The concept of a Health Promotion University (HPU) refers to a university that develops an organizational culture consistent with the values and principles of the global health promotion movement. This concept is supported by educational institution policies to promote health promotion measures in university settings and design them sustainably [7]. In the field of public health, the use of diverse knowledge to support health promotion initiatives is a promising tactic because it can produce answers to problems that impact the behavior and activities of all levels of society. Considering that resources in the health and education sectors are limited in dealing with Covid-19, it is necessary to develop comprehensive, solidarity-based health promotion methods, in addition to being oriented towards implementing the university's social commitments. With the previous background, this essay attempts to analyze in depth based on the literature regarding health promotion activities and methods in the campus environment after the Covid-19 pandemic.

Material and methods

The process of selecting articles used the 2020 Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) method with a snowballing approach. This method can minimize the occurrence of selection bias according to research variables and research protocols. The process of selecting articles that match the research objectives goes through the stages of the search process through the keywords "health promotion" AND "Covid-19" OR "student" OR "campus" OR "university" in PubMed, Science Direct, and ProQuest databases published in 2019-2022. The selection of articles was carried out by analysis and synthesis based on inclusion and exclusion criteria. The inclusion criteria for selecting articles used were case reports, systematic reviews, and literature reviews related to health promotion in universities. The exclusion criteria applied were not using English, and the type of publication was not full-text articles and not academic journals. The article search was conducted in September 2022. Based on the initial search from the database, 13,633 articles were obtained, then the articles that had been collected were re-selected and eliminated articles that did not match the title, abstract and duplicate articles to look for conformity so that 7 articles were obtained. The systematic search is presented in the following figure. Then the articles that have been collected are re-selected and eliminated articles that do not match the title to find compatibility and delete the same articles so that 7 articles are obtained.

The systematic search is presented in the following figure. Then the articles that have been collected are re-selected and eliminated articles that do not match the title to find compatibility and delete the same articles so that 7 articles are obtained. The systematic search is presented in the Figure 1.

Result

The results of article reviews from several research studies that meet the criteria are presented in the Table 1.

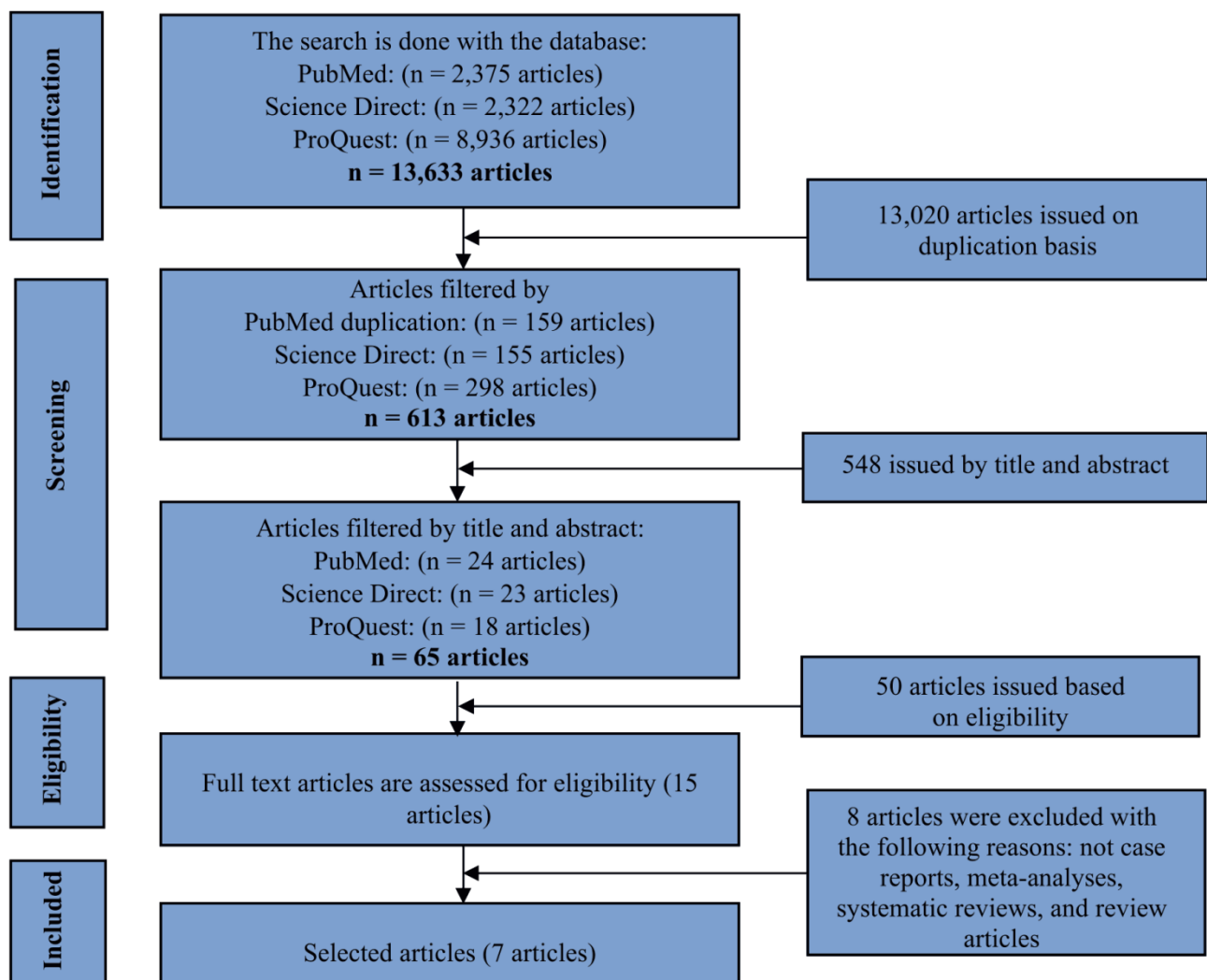


Fig. 1 Flowchart (PRISMA)

Table 1. Characteristics of articles

Author	Title	Study design	Study design
MH et al., 2020	A universitywide preparedness effort in the alert phase of COVID-19 incorporating community mental health and task-shifting strategies: experience from a Bornean institute of higher learning	Literature review	The adoption of traditional public health strategies to prevent COVID-19 epidemics at the University of Sabah, paying close attention to task shifting and widespread public mental health interventions. To oversee the university's mitigation efforts, the Center for Preparedness and Response was created. Among the actions adopted is staff empowerment, tightening of regulations, bolstering of university health facilities, thorough contact tracking, widespread health education, upholding cultural sensitivity, and the creation of early SOPs and university sustainability plans.
Reeves JJ, Longhurst CA, San Miguel SJ, Juarez R, Behymer J, 2020	Bringing student health and Well-Being onto a health system EHR: the benefits of integration in the COVID-19 era	Case report	Interoperable EHR integration between linked academic medical institutions and nearby campus-based healthcare can improve quality and safety, facilitate case administration, and expand access to crucial healthcare resources when needed. Related instances during the COVID-19 pandemic include the delivery of continuous and secure clinical services via access to current telehealth platforms and expanded testing capability.

Author	Title	Study design	Study design
Khan et al., 2020	The impact of the COVID-19 pandemic on mental health & well-being among home-quarantined Bangladeshi students: A cross-sectional pilot study	Cross-sectional study	According to the DASS21 and the IES, 28.5% of respondents reported experiencing stress, 33.3% reported anxiety, 46.92% reported depression ranging from light to very severe, and 69.31% reported experiencing an event-specific disorder ranging from mild to severe. Most persons who are affected by the COVID-19 outbreak experience psychological effects, thus dealing with this problem mentally requires the attention of the appropriate authorities. The psychological effects of an outbreak can also be greatly influenced by how it is perceived.
Jiang, 2020	Knowledge, attitudes, and mental health of university students during the COVID-19 pandemic in China	Cross-sectional study	University students perceive high risk and lack adequate awareness of COVID-19. Students' mental health has been impacted by the COVID-19 pandemic. During the outbreak, social support and specialized interventions for students should be offered, and university administrations should step up their efforts to instill mental resilience in students by adopting standardized teaching methods.
Obuaku Igwe, 2020	"A person is a person because of other people": reflections on student's experiences of social isolation and the impact of a peer-to-peer mental health support group during the covid-19 lockdown in South Africa	Cross-sectional study	Peer social support promotes a sense of community where young people may exchange perspectives and offer emotional, informational, and practical assistance to peers. This is why it is important to use peer social support as a coping mechanism throughout COVID-19. Research constraints and implications Smartphones, computers, and poor internet connectivity and data availability, as well as a tiny sample size. To investigate the effects of peer support groups on mental health management and to make advocacy suggestions, social networks and support frameworks were employed as analytical tools.
Vedel et al., 2020	Social media strategies for health promotion by nonprofit organizations: multiple case study design	Case report	Implementing a social media strategy can aid NGOs in achieving their objectives for health promotion. Understanding the justification, possibilities, difficulties, and potential complementary roles of current ICT methods will help in the process of implementing a social media strategy.
Tangcharoensathien V, Calleja N, Nguyen T, Purnat T, D'Agostino M, 2020	Framework for managing the COVID-19 infodemic: methods and results of an online, crowdsourced WHO technical consultation	Literature review	This framework's initial iteration suggests five areas of action where the WHO Member States and other social actors might carry out, within the bounds of their authority, an infodemic management strategy tailored to local conditions and customs. Action from many spheres of society and the government must be swift, regular, methodical, and coordinated to combat the COVID-19 pandemic and linked infodemic. We must continue to battle against false information while promoting accurate information to save lives.

Discussion

Preparation for the pandemic to become endemic
The SARS-CoV-2 infection has developed into a pandemic of world-class proportions since it was first identified in 2019, controlling every aspect of the global system. The World Health Organization (WHO) reported 619 million confirmed cases and 6.5 million fatalities worldwide as of October 12, 2022 [1]. Indonesia recorded 6.45 million confirmed cases with a 2.45% fatality rate during that time [1]. With a 3% drop in new weekly cases and an 11% drop in new weekly deaths

compared to the prior week, the weekly number of new cases and new weekly deaths continues to reflect the declining trend seen since the high in January 2022 [2]. Countries, including Indonesia, have loosened several Covid-19-related rules in response to the current situation of rising epidemiology to get ready for the shift from pandemic to endemic. Two factors must be taken into account to attain endemic conditions: controlling uncertainty and long-term Covid-19 management. The risk of further viral mutation and variations is this uncertainty. Risk management based on developments is necessary because

this could make the virus weaker or more virulent and alter how well the vaccination works.

Handling Covid-19 in the long term needs to be done because during the transition it is necessary to maintain and balance between preventing transmission and a looser way of life [15]. According to the International Monetary Fund (IMF), there need to be 4 policies towards the transition from pandemic to endemic, namely efforts to expand vaccine coverage and access, health services, and fair and equitable health promotion (monitoring of virus development and updating equipment dynamically, transitioning from acute to acute response) sustainable strategy, and adopting an integrated approach to reduce the global risk posed by infectious diseases [15].

Endemic doesn't mean Covid-19 isn't dangerous anymore. Determination of endemic status in infectious diseases such as malaria, HIV, and tuberculosis means that the infection rate is static. This means that the infection rate does not rise or fall within the standard of transmission. Determination of endemic is not a sign that a disease will end its transmission [16]. Therefore, the transition from the pandemic to the Covid-19 endemic does not mean the end of this problem in general and health, on the contrary, it adds a new perspective to health research and promotion. One of them is a health promotion strategy on campus after the Covid-19 pandemic to continue to prevent and control Covid-19 infections and improve the health status of the academic community. To achieve this goal during the pandemic the endemic transition period, it is necessary to have health promotion efforts in a more innovative campus environment to adapt to this transitional condition, armed with the experience of implementing teaching during the Covid-19 pandemic. Because health promotion is very important to overcome the pandemic and change health behavior [17].

Health promotion

An essential component of public health, health promotion enables individuals to exert more control over their medical conditions. According to the Ottawa Charter, health promotion is the process of teaching people to be active participants in improving their quality of life and health, which is one of the routes to equality in health, along with uniform resources, a favorable environment, and access to knowledge, experience, and skills [6]. To enable people and communities to reach the highest level of well-being possible is the aim of health promotion. Adhering to healthy behaviors including eating low-fat and low-cholesterol foods, getting regular exercise, quitting smoking, and drinking alcohol are common health promotion activities [18]. Beginning with a participatory health promotion model that emphasizes a healthy lifestyle and a healthy community, the medical health service model has begun to give way to this new paradigm. The focus of health promotion based on medical interventions is on the factors that contribute to disease; however, in order for this health promotion to be ingrained in the community, it is currently necessary to develop health promotion that focuses not only on the causes of disease but also on environmental participation. Compared to the preventative and therapeutic approaches, this viewpoint is broader. Participatory health promotion aims to give a community or population more control over their surro-

undings and the factors influencing their behavior, and these groups will act as change agents within the population [19]. For the population's health to improve, there needs to be an expansion of networks and alliances with other health and educational groups that engage in health promotion activities. This is because health promotion is interdisciplinary and takes a people-centered but community-based approach. In comparison to the older, more expansive, and closely connected area of public health, the discipline of health promotion is relatively new. But from the time of Hippocrates, numerous health promotion principles and methods have been an essential component of medicine in its larger sense [19].

Health promotion strategy

The Ottawa Charter states that the health promotion approach sees health as a resource for daily life with fundamental needs. These necessities include safe housing, access to education and food, a stable environment with abundant resources, social justice, and equality [20]. The five principles of the WHO's (1984) key concept of health promotion are: actively involving people in daily life; action on the causes (determinants) of ill health; use of the five strategies; community participation and empowerment; and the crucial role of health workers, especially in primary health care [21]. Health promotion can run well and sustainably by applying the basic principles of health promotion which consist of:

1. Rather than concentrating on those who are at risk for particular diseases, health promotion involves the entire population in daily life.
2. Health promotion focuses on the factors or causes that affect health. This necessitates extensive coordination with industries outside of the medical field, reflecting the range of health-related issues.
3. A variety of complementary strategies or approaches are combined in health promotion, including communication, education, law, organizations or agencies, and society.
4. Public participation in health promotion should be meaningful and practical. This calls for additional activity in defining the issue and coming to individual and collective life-skills decisions using successful community-based participatory health promotion systems.
5. In addition to health or medical services, promotion is a type of social effort.

There are three key strategies in promoting optimal health as defined by WHO, namely:

• *Community empowerment*

The goal of the community empowerment strategy is to promote the community's active participation in the management of variables that affect public health. In this situation, the community's responsibility is proactive. The transition towards a more comprehensive socio-ecological model of health is being driven by community empowerment, reflecting a focus on salutogenesis or health maintenance. This focus is distinct from more conventional approaches to public health and community medicine, which place more of an emphasis on disease, prevention, or treatment, which frequently drives initiatives.

This empowerment can be effectively carried out by way of

assistance from experts and involving the community from planning, organizing, implementing, and monitoring, to evaluation so that the program can be carried out optimally. In addition, empowerment can be successful with the implementation of partnerships and the right techniques. Partnerships can be made with non-governmental organizations (NGOs) and student organizations.

- ***Build the atmosphere***

To improve the empowerment process, especially at the individual level, it is necessary to develop an atmosphere. The atmosphere is an effort to create a social environment at the individual level to perform the desired health behavior. Someone will do or be encouraged to adapt wherever the environment is and will approve or support the behavior of building the atmosphere.

- ***Advocacy***

Advocacy is an approach to decision-makers or policymakers to make decisions that support the improvement of public health. The purpose of advocacy is to encourage, strengthen policies and support health programs that are needed by the community. In addition, advocacy can also be done to promote a program or health problem to regional leaders or groups. Advocacy may improve community action, develop personal skills, and refocus health care in addition to constructing effective public policies and fostering a supportive atmosphere. The advocacy process must place a high priority on the values of fairness, transparency, and mutual benefit.

Health promotion strategies in universities

With the pandemic and post-Covid-19 preparations, universities are intensifying support in terms of providing health services for the academic community. This has been done by the University of Malaysia Sabah by strengthening the University Health Center to screen cases in close contact, health promotion, and crisis planning. This strategy helps control transmission from outside the campus to campus [8]. To respond to and address this situation, the Federal University of Sao Paulo developed a strategy that included distance learning, the use of digital media for information dissemination, online courses on self-care, and faculty involvement in the development of personal protective equipment [22]. Whilst at the University of California, the university health system established an electronic medical record system that aids in case tracking and enhancing the quality of care, boosting community health access and aiding in the mapping of the targets of health promotion programs [9].

An example of a Covid-19 handling strategy in universities is carried out by the University of Austin, the United States, where they prepare a public safety management plan consisting of representatives from students, teachers, and the entire academic community together and participative contribute to these activities [23]. To combat COVID-19, the university's outreach program produced instructional materials based on Florence Nightingale's environmental theory ideas. Students and instructors from the Federal University of Rio de Janeiro's undergraduate nursing study program participated in the acti-

vity [24]. The National Academy of Sciences, Engineering, and Medicine in Washington has published a paper on suggestions for mental health, well-being, and preventing student use of psychoactive substances as a way to assist students [25].

Health promotion on campus after the Covid-19 pandemic can be done by adopting general health promotion strategies, including [26]:

- ***Cross-sectoral coordination***

Coordinated action across sectors is very important to address health problems in the community. This stage involves mobilizing collaborative action from the perspective of all levels on campus in response to health threats. Therefore, it is necessary to have a multidisciplinary task force team based on the student community, strengthening the actions of the academic community to participate in health promotion. This task force manages the program implementation process by coordinating with health professionals, campus authorities, lecturers, and student organizations. Although multidisciplinary collaboration does not mean that health principles are ignored, they are integrated into cross-sectoral community action.

- ***Important and sustainable***

The COVID-19 pandemic condition is a crisis condition that requires urgent action to strengthen community health resilience, so several programs have been carried out by the government, such as strict health protocols and restrictions on community activities, including the education process at universities. Along with the decline in COVID-19 cases, the health resilience program for the community should not end here because there is a possibility of an increase in cases through mutations of the COVID-19 virus. These health programs need to continue to be implemented sustainably with modifications and quick responses to changes in the development of COVID-19 cases. There is a decrease in cases; at this time, learning activities on campus have begun to be carried out face-to-face. Likewise, in the community and the learning environment, the implementation of health protocols has begun to decline, so it is necessary to promote sustainable health promotion activities to maintain the health of the community and students. In addition, sustainable programs are not only programs that focus on the health of the community or campus residents but also on the balance of environmental health. The COVID-19 crisis is a vivid reminder that environmental sustainability and health are two sides of the same coin; the SARS-CoV-2 virus originated in animals and spreads in the human environment very quickly. This is associated with high mobility and little concern for the environment. Health promotion programs have a very important role in sustainable health programs in the "one health" principle, namely the collaboration of environment, health.

- ***Empowerment and involvement of the academic community***

For a COVID-19 reaction to be effective on campus, it is crucial to advocate for and empower the entire academic community. Effective communication is necessary to address the risk of transmission by teaching students how to protect themselves and separate themselves, among other self-care techniques. This communication must take into account the reality that so-

me students do not care about the environment; therefore, health promotion advice must be consistent, based on solid scientific data, and written in a way that is simple for students to understand and implement. In addition to stressing the need to enhance personal and societal resilience through exercise, nutrition, and long-term good eating habits, sun exposure, and self-confidence to support mental health, health promotion should also focus on how to defend yourself from viruses. As an alternate source of knowledge on the pandemic for the academic community, the university must prioritize spreading this message of health promotion. An effective response to the actions required to stop the virus's spread and to adapt to the post-pandemic learning process depends on the academic community's ability to become more resilient, both individually and as a whole. However, students' critical thinking and their assessment of the pros and cons of the COVID-19 pandemic present challenges. It is essential to overcome this impact.

• *Equity*

In restarting the learning process on campus, do not let anyone be left behind. This can be seen in the reality that there are still students and teaching staff who cannot adapt to the hybrid learning process between offline and online. There should be a program or public policy issued to focus on these groups and promote equality. In addition to adjusting the mechanisms of teaching and health promotion, we must pay attention to the current state of development in the environment. Health promotion activities also need to pay attention to targeting vulnerable groups such as elderly teachers and campus residents who have congenital diseases. Paying attention to and investing resources in the special needs of vulnerable groups, such as up-to-date health promotion, health services, and mentoring in the teaching process, can improve immunity and mental health. This support is targeted at reducing psychological stress and preventing physical and mental health problems for these vulnerable groups. To support these vulnerable populations throughout the crisis and to reduce the potential negative effects of general measures, additional measures are required.

Mental health promotion post-COVID-19 pandemic

According to an earlier study conducted during the epidemic, the WHO understands that enforcing measures like social isolation or physical seclusion can make people feel more stressed, anxious, and angry [27]. For instance, during the outbreak in Jeddah, Saudi Arabia, many behaviors, including foreign travel and going places where people congregate, were linked to noticeably higher levels of anxiety [28]. COVID-19's effects on mental health and the caliber of student sleep have been researched to date in several nations, including Bangladesh, China, the United States, Australia, and Canada. According to one study, the pandemic had a mild to severe psychological impact on 69.31% of Bangladeshi students [10]. Home quarantine, a lack of exercise, doubts about when the pandemic would end, ignorance, and concern over catching COVID-19 were discovered to be a danger factor for Bangladeshi students' mental health [10]. Additionally, it was

found that Chinese students' mental health was impacted by their perception of a high risk of infection as well as their dread of potential infection [11]. Previous studies have indicated that Chinese students in their last year of university are more likely to have Post-Traumatic Stress Disorder (PTSD) and depressive symptoms when their sleep/rest duration is short (6 hours per night) [29]. In France, anxiety levels have increased among students since the start of the quarantine [30]. According to research by Goodman, Wang, Guadarrama, and Santana, 60% of students in the United States reported that the pandemic had a detrimental effect on their mental health, while 90% of students reported having increased financial anxiety. Up to 60% of American college students satisfy the diagnostic criteria for depression, while 47% of students match the criteria for generalized anxiety disorder [31]. In addition, students with confirmed and suspected COVID-19 infection had three times increased chance of developing depressive symptoms [32]. Australian students say the pandemic has negatively impacted their general well-being by 66.3% [33].

Mental health for students and teachers after online teaching is very important. One of the actions that can be taken is the provision of free and online psychological support services using digital media. This mental health assistance is important because the possibility of experiencing post-traumatic trauma in adolescents and young adults can increase threefold, so psychological interventions need to be provided [34]. Psychological support for students can also be done with peer support [12]. In this way, an attempt is made to reorganize the services provided and to establish the means to provide integrated health services. The provision of mental health and self-care services for students is prepared by the campus in this regard [35]. The provision of mental and psychological health services in universities is guided by some recommendations, including guaranteed access to such services, actively spotting instances of socially vulnerable students, and offering cognitive behavioral therapy, peer support, and community building. Higher education institutions need to prioritize this service and implement it by global standards for handling pandemics that they have acquired [36]. This requires collaboration between academia and the government to improve service quality. The implementation of telemedicine services has proven to be effective as a mechanism for expanding the service network and consulting mental and psychological health information for the academic community [37].

Digital health promotion

Since social media increases accessibility, contact, engagement, empowerment, and adjustability, it overcomes some of the drawbacks of traditional health communication and has significant promise for health promotion and other intervention efforts. The use of social media for health promotion in universities has various benefits, including [13, 38]:

• *Accessibility*

Social media is the best way to contact students, according to evidence about its usability. Without face-to-face contact, a person can still feel connected and supported. Information is incredibly accessible since it is accessible every day of the

week, 24 hours a day. Due to the speed at which busy people can exchange information, this kind of communication is ideal. The internet's extensive reach and accessibility make it the ideal resource for educating students and the academic community about healthy lifestyle choices and inspiring them to adopt them.

- **Convenience**

As indicated by the continuously expanding number of fans, followers, posts, and blogs, social media is thought to be simple to use and offers a chance to readily reach a significant portion of the academic community.

- **Low cost**

In comparison to more traditional marketing methods, social media is considered a low-cost strategy. Social media offers new options to connect and exchange information for small businesses with tight finances. It is also a low-cost promotional tool solution.

- **Interaction with end users**

Social media gives people a platform to interact and have more tailored conversations whenever, whenever.

- **Flexibility**

The way people connect, acquire information, and combine social media with other forms of media is all up to them. Social media does not impose a rigid structure on these activities.

- **Status**

The need to distinguish status and views of popularity, trends, reputation, and effectiveness is linked to the usage of social media technologies, especially among students.

- **Visibility**

Social media make it easier to spread information than more established forms of communication. This is demonstrated by the capability of sharing content on Facebook and Twitter, occasionally through mobile devices.

The sources of information have an impact on how social media works to promote healthy habits. Teachers, experts, and student organizations can all be reliable sources of information in a university setting [39]. Positive and effective health promotion comes from student or peer organizations. Kreps & Neuhauser contend that altering common social practices is necessary to change health behaviors. People's views, values, and attitudes toward health are directly influenced by their social relationships [39]. Users can connect on social media, which is helpful for healthily changing their behavior. For instance, someone may become curious after seeing a friend post about new health information they are interested in. This person might post the facts on their profile when they learn new health information, which could start a chain reaction.

The expected advantages of posting information on social media for health promotion include broad dissemination of information, information that can be tailored and accessible to a variety of audiences due to easy social support connections,

more intense and personal engagement, and user participation due to the social media's interactive nature. The cost and benefits aspect of the advantage is still the most important one; social media can reach increasing numbers of people without incurring significant marketing expenses [39]. Health advocates should think about utilizing websites and social media rather than investing a lot of money in creating new websites or using other conventional forms of communication [40]. Combining public health promotion on social media with other forms of communication can be quite advantageous. Numerous research studies have revealed that participant interaction and multidimensional interventions are the most effective ways to reach a wide range of people [41]. It's best to get in touch with them several times, in various contexts, and from various sources. Compared to conventional forms of communication, social media can empower people by giving them greater control [39].

Future challenges

In the case of the Covid-19 crisis, it is necessary to recognize how the epidemic dimension has evolved along with the infodemic dimension, namely the excess of information that is not necessarily reliable [14]. The dynamics of social behavior infection and the dynamics of media content creation, distribution, and news consumption are intricately intertwined by this dimension. Exposure to a lot of information frequently contradicts pandemic information, has a significant impact on nearly every element of human existence, and has a notably negative impact on societal and individual behavior, including university instruction. Global travel limitations force enterprises and science to switch from physical to digital gatherings, while travel restrictions force labor and education to be reorganized and decentralized through digital media. This circumstance has caused communication strategies, organizational structures, and possibly even the learning model itself to be reexamined [42].

Social media's use is also constrained by the population's digital divide. When the server is down or the internet connection is unavailable, groups of students have issues with their internet connections [43]. Readers must be cautious of the information they read because the user in control does not have a filter to exclude what information is uploaded. Another limiting element has to do with the veracity of information posted on social media. Several studies have shown the veracity of general health information, even on websites deemed to be trustworthy sources [39]. Better evaluation techniques need to be developed to guarantee the information's correctness, credibility, and quality. Teams from tertiary institutions at all levels, including instructors, student groups, and students, have been given the authority to filter the information that will be circulated and assess its reliability. This team should have a significant impact on the review process because it also creates standards, rules, and other tools to enable credibility and protect the privacy of online media. Because social media is a relatively new phenomenon and evaluation methods are still in the early stages of development, health experts and professionals must be strategic about their online presence. Aside from that, it is too early to predict whether these sites will continue to grow as their

success depends on how cautious users are with them. It is necessary to conduct more research in the area of social media and health promotion, particularly to ascertain its long-term efficacy and prospective influence on enhancing health following the Covid-19 pandemic.

Conclusion

Through health promotion research and outreach initiatives, universities as educational institutions play interdisciplinary, multidisciplinary, and transdisciplinary roles and contribute to the fight against the Covid-19 epidemic. Universities have an innovative role in preparing for the Covid-19 endemic through their work in education, research, and counseling. Universities are stepping up their assistance for the academic community's access to health services as a result of the pandemic and post-Covid-19

pandemic preparations. Offering digital media-based online health promotion services is one of the possible actions. With the positive momentum of digital media engagement and the renewed need to focus on health promotion, now is a good time to reconsider health promotion and the role of data and technology. Digital media has significant promise for health promotion and other health intervention activities. More research is required in the area of social media and health promotion, especially to ascertain its long-term efficacy and prospective impact on health.

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