

Campaign for healthy eating and physical activity as implementation of Health Promoting University

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Abstract

Purpose: To evaluate a healthy eating campaign and physical activity program at Faculty of Agricultural Technology UGM. **Methods:** The team coordinated with students, student Associations, faculty leaders, department managers, and administrators of FTP UGM to carry out health promotion programs. Program evaluation was carried out using a mixed method. **Results:** Program advocacy to faculty leaders resulted in program support. Programs that were mutually agreed upon included stair stickers, acrylic posters, social media and video for physical activity campaigns and roll banners, stickers, posters and social media for healthy eating campaigns. Quantitative evaluation results showed a significant increase in knowledge ($p < 0.05$), but there was no difference in the awareness and motivation of students before and after the intervention ($p > 0.05$). Descriptive analysis showed that stair stickers were the most widely seen and remembered media for health promotion by FTP students (93.3%). The results of the qualitative evaluation show differences in the perception of the effectiveness of the media. Students also suggested various recommendations to develop a more robust and sophisticated media in order to enhance its effectiveness. Related to program sustainability, the Faculty of Agricultural Technology manager is committed to supporting the implementation of the Health Promoting University. **Conclusion:** The campaign on healthy eating and physical activity carried out as HPU implementation in FTP, needs to develop more effective media.

Keywords: Health Promoting University; media; health promotion

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INTRODUCTION

Universities as a gathering place for students, lecturers and education personnel can potentially pose serious health threats such as asthma, overweight and obesity, diabetes mellitus, injury and violence, unexpected pregnancy and sexually transmitted

diseases (1). On the other hand, universities have valuable opportunities in efforts to improve the health and well-being of the academic community in them (2). The concept of Health Promoting University (HPU) has been developed in various countries with different contexts. Health topics raised in various HPU

interventions in the UK and Latin American countries are diverse, namely prevention of alcohol and drug abuse, mental health, healthy eating, sexual health and Sexually Transmitted Diseases (PMS) / AIDS prevention, road safety and transportation, activities physical, stopping smoking and smoke-free spaces and prevention of chronic diseases (2). In China, the HPU development strategy includes policy approaches that support health, create a healthy physical and social environment, develop personal health skills, reorient health services (3). The Health Promoting Faculty has also been developed in Thailand a few years ago (4).

In Indonesia, health promotion programs at universities have been developed at Gadjah Mada University (UGM), including through media campaign interventions (5) (6) and smoke-free policies (7). UGM Chancellor has launched the Health Promoting University program in 2019, UGM is expected to be able to promote healthy living behavior and make the campus a healthy environment (8). HPU implementation has not been carried out in all faculties at UGM.

A student health survey conducted by a research team in 2019 on 74 students of the UGM Faculty of Agricultural Technology showed that there were health problems in terms of eating patterns and physical activity of students. As many as 64% of FTP students do not always have breakfast every day, 49.3% of students claim to often consume fried foods or innards, 38.7% of students admit that in their food menu there are not always fruits and vegetables and 46.7% of students claim to drink water less than 8 glasses per day. The survey results also showed that 73% of students used private vehicles, 17.6% walked, 9.5% used motorcycle taxis. Students park in the campus environment, not in special parking pockets so in general students do not carry out physical activities on foot from the parking lot to the campus. As many as 54.1% of students did physical activities (walking, gymnastics, sports) at least 30 minutes every day, but 45.9% did not with the reason there was no time, have not had time, lack of awareness of physical activity, fatigue, not thinking and busy with activities. At the FTP 5 main building, lifts and stairs are available. There are 9.5% of students who choose to use the elevator to reach one floor above it. The two main problems of student health need joint efforts in a health promotion system at the faculty level so that a healthy diet and sufficient physical activity become a culture in the campus environment.

HPU has the concept of not only conducting education and health promotion for the academic

community but also integrating health into the culture, structure, processes / activities and policies that exist in the campus environment (9). Through this health promotion program that is designed according to the conditions of the academic community and the FTP environment, it is expected to be able to initiate health promotion programs, especially healthy eating patterns and physical activities so that healthy living becomes a culture and makes FTP a healthy campus, increasing the productivity of lecturers and education personnel and make the quality of students better.

This study aims to describe the process of implementing the HPU program in the form of a healthy eating campaign and physical activity along with its evaluation at FTP UGM.

METHOD

Strategy

The conceptual framework of the health promotion program for healthy eating campaigns and physical activity at FTP UGM refers to the PRECEDE / PROCEED model. There are 8 stages in this model, starting from social assessment, epidemiological assessment (including behavior and environment); assessment relating to education and ecology; assessment of policy administration and alignment of interventions; implementation; process evaluation; impact evaluation and outcome evaluation (1). In carrying out community analyzes, conducting target assessments, developing program plans (determining strategies, methods and media), implementing health promotion programs, and program evaluations, the team coordinates with students, student organizations, faculty leaders, department managers, and administrative administrators of FTP UGM. The health promotion media used can be seen in Table 1.

Evaluation

Knowledge, awareness and motivation of students related to healthy eating patterns and physical activity before and after the intervention

The method used is a quantitative method. The pre-test and post-test questionnaire instruments related to diet and physical activity were developed by the team and adjusted to the intervention material provided. Quantitative research sample selection technique is convenience sampling by selecting respondents based on ease and availability in data collection. Pretest data were collected using an online survey (google form) distributed via the WhatsApp and Line application in the period 26 April-5 May 2019

Table 1. Health promotion media healthy eating patterns and physical activity

Media	Message
Healthy Eating	
Roll banner	a. Traffic Light Food b. What my plate contains
Sticker	<i>Traffic Light Food</i>
Poster	a. What my plate contains b. Benefits of fruits c. General message on balanced nutrition d. Daily Health Checklist
Digital poster	a. Drink water b. Benefits of fruits c. General message on balanced nutrition d. What my plate contains e. Daily Health Checklist
Physical Activities	
Stairs stickers	a. Let's use the stairs b. Using the stairs makes your heart healthier c. Using the elevator is faster but using the stairs is healthier
Acrylic posters	The benefits of using stairs
Digital posters	a. Use the stairs b. Daily Health Checklist c. Myths and facts around physical activities
Video	Let's move

within a span of 10 days. The survey received participation support from 77 students. While the posttest data filled out by a total of 51 students was obtained by distributing hardcopy questionnaires to students of the TPHP Department on September 20, 2019. After the posttest data was obtained, the team conducted a data collection of students who also took part in the pretest in April 2019 so that only 23 students were obtained. Due to the small amount of data collected, the team then distributed posttest questionnaires via Google Form by contacting all students who filled out the pretest. There were 24

students who filled in the posttest data through Google Form, bringing the total to 75. From these 75 data, the number of respondents who took part in the pretest was only 27 people, 2 of whom died because they only filled out the first sheet. Finally, 25 pre and posttest data were obtained with the same respondent identity. Normality test is done before data analysis, using Saphiro Wilk. The statistical test used in the analysis is the paired t-test univariate test for knowledge and awareness variables, while for the motivational variable the Wilcoxon signed rank test is used.

Reach of Health Promotion Media

The method used is a quantitative method. A total of 75 posttest data were analyzed in terms of affordability analysis of health promotion media to evaluate how far the reach of health promotion media has been placed on campus and disseminated digitally through social media.

Student perceptions of health promotion media

The method used is a qualitative method by collecting observational data and interviews with informants. Observations were made by observing the presence of health promotion media, while interviews were used to determine student perceptions after reading the message, input and the effectiveness of the media. Qualitative research samples amounted to 38 undergraduate students of FTP UGM. Analysis of qualitative data with thematic content analysis.

Program Adoption and Implementation

The method used is a qualitative method by taking interview data and observing documents. The informants are the two students managing the Instagram accounts of the student organization as well as managing the administration of the faculty.

RESULTS

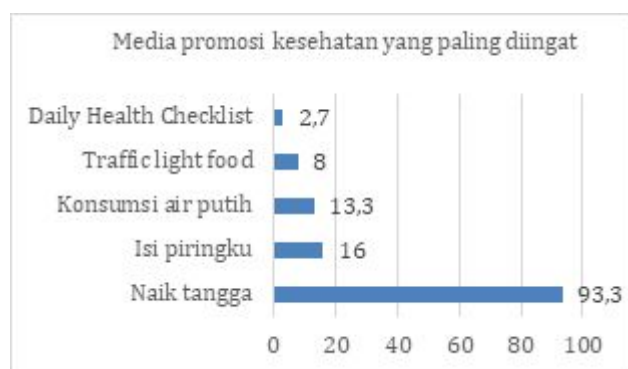
Knowledge, awareness and motivation of students related to healthy eating patterns and physical activity before and after the intervention

The results of quantitative evaluations using paired t-test univariate statistical tests (for knowledge and awareness variables) and Wilcoxon signed rank test (for motivational variables) on 25 students can be seen in Table 2. The table shows a significant increase in knowledge ($p < 0.05$), but there was no difference in the awareness and motivation of students before and after the intervention ($p > 0.05$).

Table 2. Statistical analysis of students' knowledge, awareness and motivation about healthy eating patterns and physical activity before and after the intervention

Variables	N	Mean	SD	p value
Knowledge				
Pre test	25	4,88	1,54	0,01*
Post test		5,92	1,35	
Awareness				
Pre test	25	40,32	4,58	0,56
Post test		41	4,65	
Motivation				
Pre test	25	9,68	0,63	0,12
Post test		9,28	1,21	

*) Significant difference

**Figure 1. The most remembered health promotion media**

Reach of Health Promotion Media

Descriptive analysis (Figure 1) shows that climbing stickers is the most widely seen and remembered health promotion medium by FTP students (93.3%). The health promotion media going up the stairs is very dominant compared to other health promotion media, namely the contents of my plate (16%), water consumption (13.3%), traffic light food (8%) and daily health checklist (2.7 %).

Student perceptions of health promotion media

The results of the qualitative evaluation indicate differences in the perception of the effectiveness of the media and various inputs so that the resulting media becomes more effective.

Program Adoption and Implementation

Program advocacy for faculty leaders, namely the Dean, Vice Dean of Finance, Assets, Human Resources and Information Systems of UGM UGM and coordination with the Head of the TPHP Department, Head of Administration Office, Head of Administration, Finance and General Section and student organizations of Food Technology Student Families and Outcomes Agriculture (KMTPHP) and Sport Agriculture Technology (SAT) produce support for health promotion programs. But student participation in the program was quite hampered by student busyness.

Regarding the implementation of health promotion programs in the campus environment, the FTP leadership is committed to supporting the implementation of the HPU. Social media (Instagram account) FTP UGM is known to have raised several topics about HPU. In addition, two student organizations involved in the implementation of the HPU program indicated that the program would be continued.

DISCUSSION

Knowledge, awareness and motivation of students related to healthy eating patterns and physical activity before and after the intervention

Interventions to reduce the risk of non-communicable diseases are now widely practiced.

Lifestyle interventions can be carried out by modifying unhealthy habits through increased knowledge, awareness, and motivation (10). The type of intervention implemented at FTP UGM was adjusted to the results of community analysis obtained and the collaboration between the team and various parties at FTP.

The intervention carried out at FTP UGM was in the form of a dietary campaign and physical activity using various health promotion media both placed in the campus environment and through digital media. The types of health promotion media that were mutually agreed between the team and the faculty were ladder stickers, acrylic posters, social media and ILM videos for physical activity campaigns and roll banners, stickers, posters and social media for healthy eating campaigns. These health promotion media are expected to increase students' knowledge, awareness and motivation in order to be able to implement a healthy eating pattern and carry out sufficient physical activity.

In the PRECEDE / PROCEED health intervention model, knowledge, awareness and motivation are predisposing factors that function to encourage individuals or groups to behave. Thus, these three factors are pursued in the intervention of the dietary campaign and physical activity in the campus environment through sharing health promotion media.

The results showed that there were significant differences related to student knowledge before and after the intervention. Knowledge is the result of knowing after a person senses (sees, hears, smells, feels, and touches) an object. Knowledge is an important domain that can shape a person's actions (11).

Health promotion media placed in the campus environment or through social media seen by students proved to be able to increase student knowledge after the intervention.

The results also showed that there were no significant differences in the awareness and motivation of students towards diet and physical activity before and after the intervention. This could be due to the relatively short intervention time. Health awareness involves all healthy behavioral and cognitive needs. This includes personal health and the way humans maintain their health, environmental health, psychological health related to personal health (12).

Motivation can be influenced by factors such as self-efficacy, mood, and social support that can

influence adherence to a healthy lifestyle (10). Self-efficacy is a person's belief in the ability to change his behavior to be healthier even when there are challenges (10).

Reach of Health Promotion Media

The results showed that most of the students claimed to have seen / heard of health promotion media for healthy lifestyles and physical activities in the UGM FTP environment. The topic most widely seen and remembered is the education of climbing stairs with information resources in the form of a campus environment. This is because the sticker placed on the stairs that connects the first floor and the second floor of the FTP main building looks striking.

Some health promotion media posted in the UGM UGM area provide information about the benefits of living a healthy lifestyle and having sufficient physical activity. According to the Health Belief Model theory, one of the beliefs that can encourage someone to behave is the perceived benefit or the belief in getting benefits, so that the information through the promotional media is expected to increase student awareness and motivation.

Student perceptions of health promotion media

Some informants expressed different responses related to the effectiveness of the promotional media used, others conveyed both effective and less effective.

- a. Stairs education (acrylic poster media and stair stickers)

"... actually it's not enough ... the problem isn't that obvious either. Can placement too. If it's in the middle (in the middle between two lifts) it's better, then the writing is too big ... if it's being held up, there's already a lot of people who read too much, not too many who pass because it's too rare to go to the second floor. If there's a class on the floor 3, for example, if already rushed sometimes through the stairs "(A1)

"Yes, it is pretty good ... what is it ... it's even cooler in the bottom of the stairs right ... so it's like wow, I'll start from the beginning already up the stairs ..." (G16)

"Hmmm ... I think they are but need a few changes to be more effective" (D2)

Previous research on motivation to climb stairs shows that the impact of climbing stairs can be sustained for 9 months and is a long-term strategy for increasing the level of routine physical activity (13).

b. Roll banners and posters

"I often don't eat so well lately. Then yesterday, when I read it (roll banner), I think about it, I have to eat vegetables .. hahaha .. "(B1)

"... But unfortunately, in my opinion what it is ... sometimes the attention of the person does not really go to the poster, sis. Indeed, from his children, rarely do you read the posters there ... "(C3)

The effectiveness of the roll banner health promotion media related to traffic light food and the contents of my plate are considered quite effective and motivating by some students. Previous research suggests that the use of banners is more effective than posters, one of the reasons is because banners are more visible (14).

Social media

Some informants said that health posters distributed through social media Instagram are useful and serve as reminders. This is in line with previous research which states that social media can provide benefits for public health interventions (15).

Some input was given by respondents so that health promotion media became more effective, namely the colors were made brighter, using pictures were not only writing, short solicitation sentences were made aware, media placements were placed in strategic places, sizes were made larger and information made more detailed because the majority target is students from the TPHP Department who already know the health promotion information from lectures.

Program Adoption and Implementation

Student organizations involved in implementing the program are the TPHP Student Family (KMTPHP) and Sport Agriculture Technology (SAT). Instagram accounts used are @kmtphpugm and @sportagritech.

"... from the media, it is also fine so that the media is also active ..." (E1)

"So a SOP will be written if shares are made from outside. If this program is okay, there is already cooperation, from the Chairperson has been accredited, from the lecturer also can be supported ... "

Regarding the implementation of the Health Promoting University health promotion program on diet and physical activity, the FTP Dean conveyed his commitment at the Senate Open Meeting in the context

of the 56th Anniversary of FTP UGM on September 19, 2019 at the Kamarijani-Soenjoto Auditorium, FTP UGM.

"... The Faculty is committed to making efforts to improve health literacy for academicians through steps including promoting healthy lifestyle habits, by increasing physical activity, eating patterns and eating healthy and hygienic eating, encouraging climbing stairs instead of using lifts, eliminating bottled water supply. plastic, intensifying gymnastics, cycling, badminton, walking ... "

The commitment of the UGM UGM Dean regarding HPU was not solely the team's success in conducting advocacy but was also influenced by the direction of the UGM Chancellor's policy regarding HPU which was launched at the Opening of Lustrum XIV on 7/19/19.

HPU research results related to diet and physical activity in China showed that there was a significant increase in intake of high-fat foods (from 44.81% to 49.50%) ($p < 0.01$) which caused the need for further study. In addition, there was a significant decrease in physical exercise participation (from 29.41% to 23.5%) ($p < 0.01$), the cause of which was likely to be related to seasonal changes, namely the collection of final questionnaire data in winter while the initial questionnaire data was performed in the fall. All university administration departments also make commitments for health promotion (3).

CONCLUSION

The health promotion program intervention implemented at FTP UGM was adjusted to the results of community analysis obtained and the collaboration between the team and students, student organizations, faculty leaders, department managers, and administrative administrators of FTP UGM. The types of health promotion media that were mutually agreed between the team and the faculty were ladder stickers, acrylic posters, social media and ILM videos for physical activity campaigns and roll banners, stickers, posters and social media for healthy eating campaigns.

There is a significant difference in students' knowledge regarding healthy eating patterns and physical activity before and after the intervention. But this is not the case with student awareness and motivation. Evaluation results show there are no significant differences in student awareness before and after the intervention and there is no difference in the average value of student motivation regarding eating patterns and physical activity before and after the intervention.

Most of UGM students admit that they have seen / heard of health promotion media on healthy lifestyles and physical activity. The most viewed and most remembered topic is the education of climbing stairs compared to the elevator with information sources in the form of the campus environment.

The UGM Faculty of Agricultural Technology is committed to supporting the Health Promoting University, including healthy eating and adequate physical activity.

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