

# Islamic Health Promoting University (I-HELP U): Case study of nutrition intervention program institutionalization at a university level



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## ABSTRACT

The Islamic Health Promoting University (I-HELP U) is an initiative program by Universitas Muhammadiyah Prof. DR. HAMKA as a health promotion program integrating both health and Islamic values. The pilot programs were implemented between September – November 2021. This study aimed to evaluate I-HELP U's pilot programs, which consist of need assessment, health literacy, advocacy, and healthy behavior practices. The needs assessment was conducted to assess the baseline data of nutritional status and unhealthy lifestyles. Health literacy was performed to improve nutrition knowledge among participants. Advocacy was implemented to assist the production of regulation documents to support the program. Healthy behavior practices were implemented to improve the health-promoting behavior among participants. The results show that there were improvements in targeted outcomes on the initiative (policy documents establishment), participation (1,904 respondents of needs assessment, 300 participants in webinars, and 1,700 YouTube views), and knowledge level ( $p < 0.05$ ). The university leaders show a strong commitment in the policy-making to support I-HELP U since UHAMKA holds a vision to be a prophetic teaching university. This basic value supports the effort of I-HELP U to institutionalize the programs since it integrates Islamic values in the content. Future dissemination of the programs and regulations should be provided massively to all university academic communities.

**Keywords:** Health promoting university; institutionalization; nutrition.

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## INTRODUCTION

The burden of adult obesity has been expanding worldwide. There are 39% or more than 1.9 billion overweight and obese adults older than 18 years old globally. In Indonesia, the prevalence of adult overweight and obesity has more than doubled in the past two decades (12.9% in 1996 and 28.3% in 2016)<sup>1</sup> and became even higher (40%) in 2018, according to the national survey.<sup>2</sup>

Adult obesity, particularly in academic communities in higher educational institutions, underscores the human capital issue because it affects daily productivity, consequently impacting the society's knowledge, skills, and health status. It was reported that obesity was correlated with poorer academic performance.<sup>3</sup> Meanwhile, another report demonstrated a negative correlation of body mass index (BMI) and academic performance among university students after moderated by grades.<sup>4</sup> This connection was also

explained by another study that showed obesity is more likely to affect academic attainment of university students than those at primary or secondary schools.<sup>5</sup> Obesity also increased absenteeism among adult workers, thus it affects their productivity.<sup>6</sup> Interestingly, obesity not only affects the current academic performance and attendance of students and staff in the university, but also affects quality of the future university graduates. For example, degree completion is less likely to be completed by students with obesity.<sup>5</sup>

Urban area-located universities have a disadvantage because their location does not support a proper physical activity routine. Moreover, the food environment also allows university members to access foods high in fat, sugar, and sodium from fast food restaurants and sugar-sweetened beverages from the convenient store merchants around the university buildings. The obesogenic environment which is

more likely to be found in the urban area affects nutrients intake and eventually the society's nutritional status. A preliminary study in UHAMKA found that 50% of students consume excess fat and have low physical activity levels. Regarding the nutritional status as the outcome, it was found that 20% of students are overweight or obese.<sup>7</sup>

A comprehensive institutional-based nutrition intervention is needed to address the problem. Accordingly, this paper focused on the intervention strategy in a higher education institution. UHAMKA is a higher education institution with a vision to be a prophetic teaching university that integrates Islamic values in teaching, research, and community empowerment activities. The values of a health-promoting university community have also been constructed as the work achievement indicators for all faculties and units. Thus, integrating the planned nutrition intervention program to the

university's principles is important to maintain the program's sustainability.

Initially, the Faculty of Health Sciences started health promotion programs in UHAMKA in 2018 via *Fikes Sehat Berkemajuan* (FSB) program. Based on the need to promote healthy outcomes for all university members, in 2021, UHAMKA declared the Islamic Health Promoting University (I-HELP U) program with the integration of both health and Islamic values. The university expanded the spirit of the FSB program not only for one faculty but also for the entire university community. This study aimed to evaluate the implementation of I-HELP U as an institutionalized nutrition intervention program at the university level.

## METHODS

This cross-sectional study was conducted using survey methods and involved the university's academic community. The pilot project of I-HELP U was implemented between September – November 2021 in 7 campuses of UHAMKA located in the South, East, and West of Jakarta. I-HELP U was developed to engage university members in the programs by modifying the supply and demand approach. The supply approach started with advocacy followed by a needs assessment. The demand approach was conducted in parallel, during which nutrition education and healthy behavior were implemented alongside each other.

### Subjects

This study assessed the university academic community, which consists of students, lecturers, and staffs, during I-HELP U pilot project programs. The needs assessment survey involved 1,904 respondents, while the health literacy program engaged 300 participants on Zoom and 1,700 views on YouTube.

### Modification of supply

The modification of the supply aspect was targeted to the university leaders by advocacy and the needs assessment. In this approach, the initiating team started to advocate the formation of the I-HELP U team, which was legalized in the university document and then continued by advocacy to build a healthy food and

work environment. The needs assessment was conducted using a Google Form questionnaire and investigated the main nutritional aspects needed to support the advocacy and program planning. The main aspects investigated are self-measured BMI, waist circumference, breakfast habits, sugar-sweetened beverage consumption, fruit and vegetable consumption, and preference.

### Modification of demand

Secondly, there was the modification of the demand aspect. In this approach, the I-HELP U team developed two main strategies, health literacy and healthy practice behavior, to improve health knowledge and behavior as shown in [Figure 1](#). Nutrition knowledge was modified through health literacy with the flow of topics as explained in the [Figure 1](#) below. A webinar in the health literacy

program was integrated with the routine Al-Quran and Hadist studies.

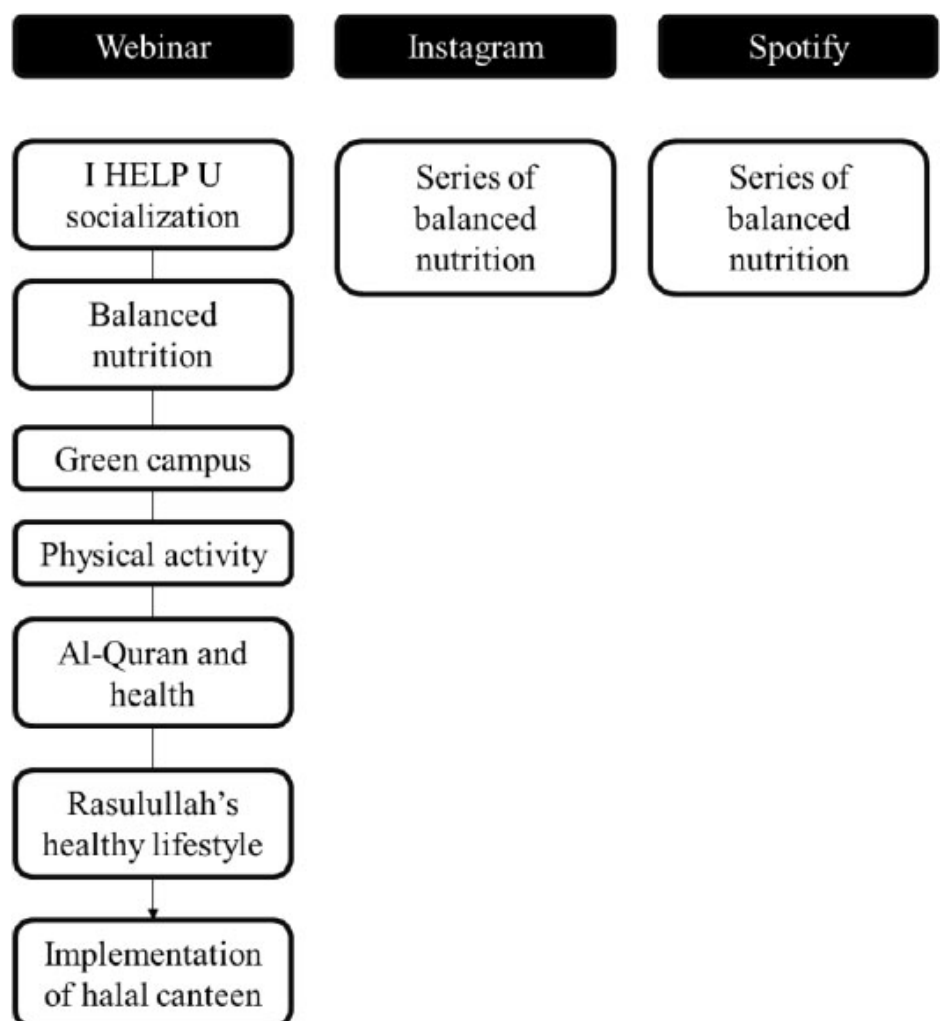
Healthy behavior practices implemented in the pilot project of I-HELP U include a balanced-nutrition lunch program and campaign to eliminate food waste.

### Statistical Analysis

Data concerning the needs assessment and evaluation of the webinar responses were analyzed using Microsoft Excel. The difference between pre- and post-test scores of the webinar was analyzed by using Wilcoxon's signed rank test with 95% confidence interval (CI), and logistic regression analysis was conducted with  $p < 0.05$  considered significant.

### Ethical Clearance

The ethical clearance of this research was obtained from Ethical Committee



**Figure 1.** Media and topics of the health literacy program.

for Health Research, Universitas Muhammadiyah Prof. DR. HAMKA with number 03/22.2/01501.

## RESULTS

### Advocacy

Advocacy was proposed to the university leaders to support the implementation of I-HELP U. During the two-months implementation of the pilot project, the university issued four policy documents of I-HELP U (provided as supplementary) (Figure 2).

The university also listed the details of healthy practices that should be implemented, such as eating halal and *thayyib* foods, using stairs, doing daily physical activity for 30 minutes, and bringing own water bottle to minimize using disposable plastic bottle.

### Needs assessment

The characteristics of the respondent are shown in Table 1. Of the 1,904 respondents who participated in the survey, 434 (23.2%) are male and 1,437 (76.8%) are female. Based on their occupation status, 1,631 (87.17%) respondents are students, 151 (8.07%) respondents are lecturers, and 89 (4.76) respondents are staff.

The results show that obesity measured by BMI mostly occurred in males (24.7%) and lecturers (37.7%). A similar pattern was found in obesity measured by waist circumference (to indicate abdominal obesity). It shows that overweight was mostly found in males (18.8%) and lecturers (31%). Vegetable and fruit consumption ranged from 1 – 2 portions per day. Female respondents tended to skip breakfast more than males, and only 48.7% of females sometimes eat breakfast. Almost half (50%) of respondents with all characteristics indicated they often consume sugar-sweetened beverages. Regarding the vegetable and fruit preference in Table 2, it was found that respondents tend to dislike fruits more than vegetables.

Breakfast habit was statistically significantly associated with exposure to sex and occupation. Males had a protective effect of having bad breakfast habits (sometimes and never). According to occupation, the lecturer had a protective



Figure 2. Scope of the I-HELP U program.

Table 1. Characteristics of respondents.

Characteristic	n	%
<i>Sex</i>		
Male	434	23.2
Female	1437	76.8
<i>Occupation</i>		
Student	1631	87.2
Lecturer	151	8.1
Staff	89	4.7

effect on having a bad breakfast habit. The results also showed that the lecturer had a protective effect of having frequent sugar-sweetened beverage consumption.

### Health Literacy

The Islamic Health Promoting University (I-HELP U) health literacy program was implemented through online activities, which included webinars, podcasts, and Instagram posts. Webinars were integrated with the routine Al-Quran and *Hadist* studies. According to the results shown in Table 3 and Figure 3 from the pre- and post-tests, nutrition knowledge was significantly increased among participants after the health literacy program. The webinars were attended by 300 participants in Zoom and 1,700 views on YouTube. The health literacy program also published a series of Spotify podcasts and posts in Instagram. There was a significant difference in pre- and post-test scores tested by Wilcoxon signed rank test ( $p < 0.05$ ).

### Healthy Behavior Practices

During the two months of the pilot project of I-HELP U, the implemented healthy behavior practices included balanced-diet lunch, Monday and Thursday fasting, and a campaign to eliminate food waste. The balanced-diet lunch was provided to teachers and staff every day (except for Monday and Thursday). Along with this program, the campaign to eliminate food waste was also publicized via educational media near the lunch spots by providing related verses of the Al-Quran.

## DISCUSSION

This work reports implementing the health-promoting university program at the University of Muhammadiyah Prof. DR. Hamka (UHAMKA), which integrated health messages with Islamic values. The program was then branded as the Islamic Health Promoting University (I-HELP U) to make it easier to be internalized in the participants' minds. Integration with Islamic values was also

**Table 2.** Distribution of nutritional status, breakfast habit, sugar-sweetened beverage consumption, vegetable and fruit consumption, and vegetable and fruit preference by sex and occupation.

Variable	Sex				Occupation					
	Male		Female		Student		Lecturer		Staff	
	n	%	n	%	n	%	n	%	n	%
<i>BMI</i>										
Severely underweight	32	7.4	92	6.4	122	7.5	0	0	2	2.2
Underweight	37	8.5	213	14.8	236	14.5	6	4	8	9
Normal	205	47.2	860	59.8	963	59	58	38.4	44	49.4
Overweight	53	12.2	102	7.1	114	7	30	19.9	11	12.6
Obesity	107	24.7	170	11.8	196	12	57	37.7	24	27
<i>Waist circumference</i>										
Underweight	101	27	269	21.6	346	24.9	10	6.9	14	16.1
Normal	174	46.6	691	55.5	733	52.8	82	56.6	50	57.5
Overweight	70	18.8	212	17	215	15.5	45	31	22	25.3
Obesity	28	7.5	74	5.9	93	6.7	8	5.5	1	1.3
<i>Breakfast habit</i>										
Everyday	278	64.1	692	48.2	797	48.9	124	82.1	49	55.1
Sometimes	139	32	700	48.7	777	47.6	27	17.9	35	39.3
Never	17	3.9	45	3.1	57	3.5	0	0	5	5.6
<i>Sugar-sweetened beverages consumption</i>										
Often	201	46.3	692	48.2	688	42.2	66	43.7	41	46.1
Sometimes	229	52.8	700	48.7	921	56.5	80	53	46	51.7
Never	4	0.9	45	3.1	22	1.3	5	3.3	2	2.2
<i>Vegetable consumption portion/day (mean±SEM)</i>										
	2.00 ± 0.03		1.91 ± 0.03		1.89 ± 1.15		2.23 ± 0.03		2.07 ± 0.11	
<i>Fruit consumption portion/day (mean±SEM)</i>										
	1.70 ± 0.03		1.82 ± 0.03		1.80 ± 1.01		1.83 ± 1.21		1.57 ± 0.10	
<i>Vegetable preference</i>										
Strongly dislike	6	1.4	19	1.3	21	1.3	1	0.7	3	3.4
Dislike	6	1.4	28	1.9	32	2	2	1.3	0	0
Slightly dislike	69	15.9	317	22.1	364	22.3	8	5.2	14	15.7
Like	253	58.3	771	53.7	889	54.5	86	57	49	55.1
Strongly like	100	23	302	21	325	20.2	54	35.8	23	25.8
<i>Fruit preference</i>										
Strongly dislike	4	0.9	10	0.7	12	0.7	0	0	2	3.4
Dislike	9	2.1	25	1.7	30	1.8	2	1.3	2	3.4
Slightly dislike	49	11.3	163	11.3	199	12.2	3	2	10	11
Like	275	63.3	855	59.6	970	59.4	103	68.2	57	64
Strongly like	97	22.4	384	26.7	420	25.8	43	28.5	18	20.2

BMI, body mass index; SEM, standard error of the mean.

**Table 3.** Regression analysis of the relationship between sex and occupation with dietary habits (breakfast, sugar-sweetened beverages, fruit and vegetable consumption).

	Breakfast habit		SSB		Fruit		Vegetable	
	OR	95% CI	OR	95% CI	B	SE (B)	B	SE (B)
Sex	0.585**	0.460 – 0.744	1.900	0.678 – 5.324	0.112	0.065	-0.189	0.128
Occupation	0.266**	0.172 – 0.411	0.325*	0.115 – 0.916	-0.017	0.048	-0.081	0.094

\* $p < 0.05$ , \*\* $p < 0.001$ ; CI, confidence interval; OR, odds ratio; SSB, sugar-sweetened beverage; SE, standard error.

in line with the university's vision to be a prophetic teaching university which also means elaborating Rasulullah's prophetic value in the teaching activities.

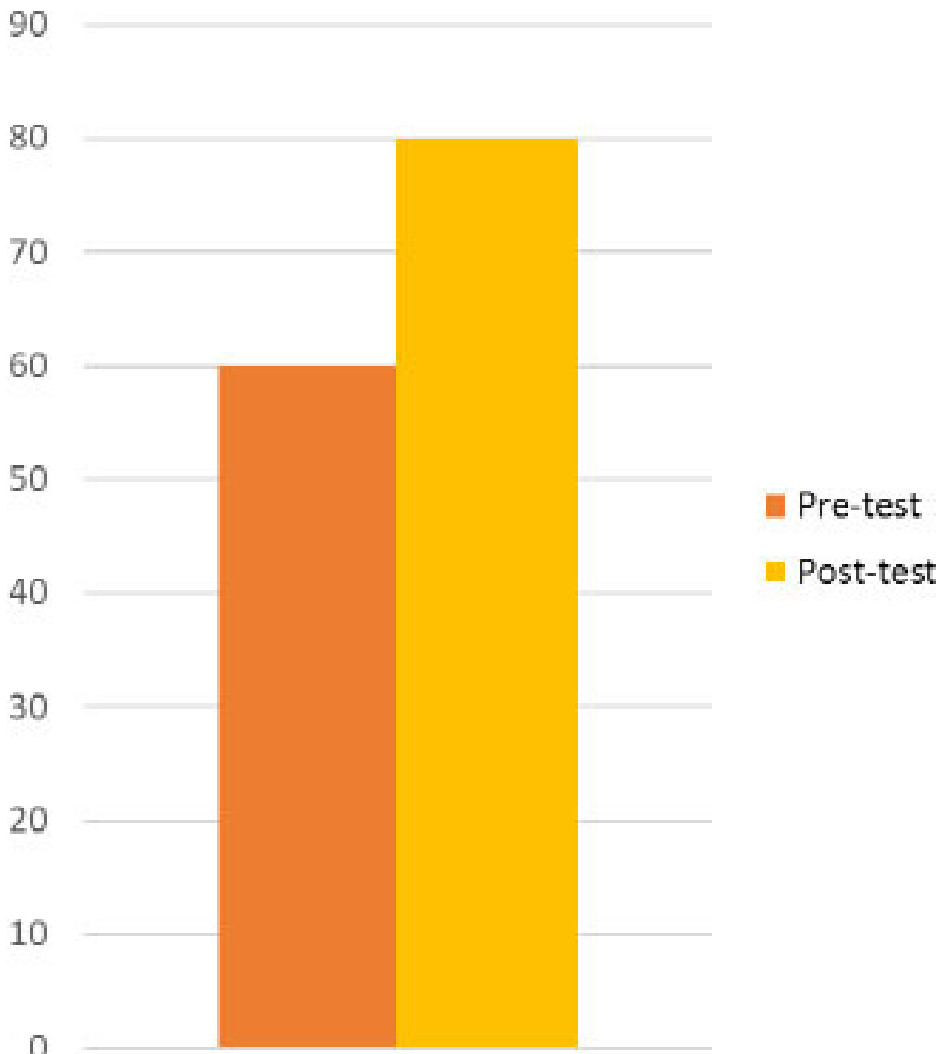
The pilot project of I-HELP U was evaluated after two months of

implementation. It was reported that in two months, the program was emphasizing two approaches: the modification of supply and demand. Therefore, the discussion is focused on the results of evaluating those approaches. The results

show improvements on targeted outcomes on the initiative, participation, and knowledge level.

The institution should provide modification on the supply aspect in the need to build a healthy environment since





**Figure 3.** Health literacy pre- and post-test result.

the food environment plays an important role in the development of obesity. Growing evidences showed that easier access to the convenient and ready-to-eat foods has significantly contributed to the increased intake of calories, thus it implies that the food environment is one of main drivers of obesity epidemic.<sup>8-10</sup> This study provides information that the leaders of UHAMKA have been strongly supportive in conditioning the environment by publishing several policies. In two months of implementation, the university leaders have shown a strong commitment starting by signing the documents to structure the I-HELP U team. This effort could be considered as a good start of the program to appoint a task force team.

UHAMKA then published documents to be used as a base to start healthy behaviors in the campus by utilizing the university's resources. For example, all

cafeterias in UHAMKA are halal certified. The leaders then used this potential resource to promote eating halal and *thayyib* food as halal and *thayyib* food items are considered safe and nutritious. Eventually, when UHAMKA declared the I-HELP U program operational, the program actually was not a completely new effort, but is seen as an empowerment of resources that UHAMKA already has which the university can further try to develop sustainably as a way to reach healthy outcomes. Using existing resources is an effective way to make a health promotion program sustainable.<sup>11-13</sup> The UHAMKA leaders not only developed the regulations to urge people to practice healthy lifestyles daily, but also added it as a budget component for the following year. The health promotion programs to promote wellness should be embraced and sustained by sufficient financial support.

Funding in a health promotion program should support facility, media, training,<sup>14</sup> and other capacity developments.<sup>15</sup>

The nutrition intervention should be given based on the needs analysis of the situational problem. This program started with a needs assessment, which is an ideal way to work the health promotion program effectively. For the secondary school level, for example, it is also important to conduct intervention programs based on needs analysis.<sup>16,17</sup> This approach was also part of the start-up and was implemented in I-HELP U. The needs assessment can not only help to analyze the nutrition problem in the society, but also to make the university community aware of I-HELP U programs.

The nutrition knowledge is important in shaping the society's behavior.<sup>18</sup> The precede-proceed model by Green et al. put knowledge as a predisposing factor of behavioral determinants.<sup>19</sup> Interventions to improve the health knowledge should be supported by health education media that are suitable for the specific population.<sup>20,21</sup> Regarding the behavioral domain, we started the programs with small steps in order to continue with bigger steps. During the two months of the pilot project, I-HELP U started with a manageable routine practice, which monitored the healthy lunch programs and campaigns concerning eliminating food waste.

## CONCLUSIONS

We found that the healthy values internalized in the health promotion programs that align with the institution's values affected the outcome and institution leader's support. In two months' implementation of the pilot programs, we found an improvement in the targeted outcomes (from the level of initiative, participation, to the knowledge) from all elements of university members. The university leaders show a strong commitment in the policy making to support I-HELP U since UHAMKA holds a vision to be a prophetic teaching university. This basic value supports the effort of I-HELP U to institutionalize the programs because it integrates Islamic values in the content. Future dissemination of the programs and regulations should

be provided massively to all university members.

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## CONFLICT OF INTERESTS

Authors declare there is no conflict of interests.

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