

# Education On Disease Risk Factors In Adapting New Habits To Prospective Hajj Pilgrims At KBHI Bisri-Pusri Palembang City

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## **Abstract.**

*Health istitha'ah is the health ability of the pilgrims physically and mentally with a measurable health assesment. It is essential for every citizen who will perform the hajj pilgrimage. The Indonesian Ministry of Health through the Non-Infectious Disease Integrated Service Post (Posbindu PTM) implements an early detection and prevention program for non-infectious diseases in sub-districts, schools or colleges, institutions or workplaces, and Hajj guidance groups (KBHI) especially for pilgrims. The department of public health and community medicine (IKM-IKK) of the Faculty of Medicine, Sriwijaya University perform an education on the detection of risk factors for non-infectious diseases and physical fitness assesment of prospective pilgrims in the context of community service activities at KBHI Bisri Palembang. Examinations were done on 40 prospective pilgrims using the Rockport test method. The results of the examination showed that the 24 pilgrims had moderate fitness level (60%). The blood pressure test results showed that 9 pilgrims had hypertension (22%) and the nutritional status test showed that 20 pilgrims were overweight and obese (38.5%). In addition, there is an assesment for prospective hajj pilgrims in order to understanding risk factors for non-infectious diseases. The result shows that there is a significant increase in understanding about non-infectious diseases in the adaptation of new habits.*

**Keywords:** Hajj, risk factors, stitha'ah

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## **I. INTRODUCTION**

The Indonesian Ministry of Health has implemented an early detection and prevention program for non-communicable diseases for individuals and community groups through integrated service posts for non-communicable diseases (Posbindu PTM) in urban villages, schools/colleges, institutions/workplaces, KBHI for hajj pilgrims. Public awareness is needed towards early detection and prevention of non-communicable diseases through community empowerment with health workers, especially in carrying out promotive efforts in carrying out healthy living [1]. Currently the health problem for pilgrims is still increasing cases of non-communicable diseases,

including heart disease, diabetes mellitus (DM), hypertension, chronic obstructive pulmonary disease (COPD), and the increasing age of the congregation (elderly) will increase non-communicable diseases. This is for pilgrims [2]. One strategy to improve health status is to empower and increase the role of the community, including the business world, in early detection of risk factors for non-communicable diseases and improving the fitness of prospective pilgrims in the Hajj Guidance Group (KBIH).

To prepare prospective pilgrims to leave for the holy land, the Government through the Palembang City Health Office together with the Puskesmas carries out guidance, services, health through efforts to improve health before departure. Guidance during the waiting period is an important concern, because it involves the Puskesmas as well as in the community or at the KBIH. Pilgrimage health development which is an effort or activity in order to establish and improve the health status of the congregation. The department of public health and community medicine (IKM-IKK) of the Faculty of Medicine, Sriwijaya University participates in community service, conducts education on the detection of non-communicable disease risk factors and checks the physical fitness of KBIH Bisri pilgrims.

## **II. METHODS**

The research was carried out on Sunday, November 29, 2020 at the Al Aqobah Mosque, Pusri Palembang Complex. The participants of the fitness examination were attended by 40 people consisting of 19 men and 21 women. The objectives of this community service activity are:

1. Known risk factors for non-communicable diseases in adapting new habits
2. Provide education on risk factors for non-communicable diseases in adapting new habits.
3. Assessed the fitness of the hajj pilgrims in adapting new habits

### **Implementation of Community Service Activities**

1. Registration of prospective Hajj pilgrims by continuing to apply health protocols using masks, maintaining distance, providing hand sanitizer.
2. Measurement of height, weight and blood pressure of prospective pilgrims of KBIH Bisri.
3. PAR-Q and You Fitness Examination Contraindications Screening.
4. Assessment of the fitness of prospective pilgrims from the KBIH Bisri Hajj.
5. Before and after the delivery of the material, prospective pilgrims fill out the pre-test and post-test.
6. Submission of Materials:
  - a. Message from the KBIH Management Bisri Pusri
  - b. Hajj Health Istithoah by H. Fazuddin SKM from the Health Service
  - c. Education on risk factors for non-communicable diseases in adapting new habits by dr. Emma Novita, M.Kes



**Fig 1.** Blood Tension of Prospective Hajj Pilgrims KBIH Bisri



**Fig 2.** KBIH Bisri's KBIH Pilgrim Candidate Warm-up Gymnastics

### **III. RESULT AND DISCUSSION**

Community service activities were carried out at the Al Aqobah Pusri Mosque in Palembang, with 40 prospective hajj pilgrims, starting with the congregation filling in attendance and measuring weight, height and checking blood pressure of the prospective hajj pilgrims. Body Mass Index (BMI) was obtained from body weight divided by the square of height ( $BB/TB^2$ ). Before taking the physical fitness test, all participants answered the PAR-Q and You Fitness Examination Contraindication Screening, which is a questionnaire containing 7 questions with “yes” or “no” answers with/without reason for the question. If the congregation answered "no" to all questions, the congregation was allowed to take a fitness measurement. However, if there is one or more “yes” answers, you must first consult a doctor. Before the fitness test, warm-up exercises were carried out which were guided by officers from the Health Service. Fitness test with the Rockport Walking Test Method is one method to assess the ability

of a person's heart-lung function while doing physical activity. Participants who took the fitness test 40 people were asked to walk constantly and according to their ability as far as 1.6 km, the travel time was converted according to age and gender, VO<sub>2</sub> was obtained and the aerobic capacity was classified as lacking, adequate, good fitness and excellent fitness [3].



**Fig 3.** The Atmosphere of the Candidate for Hajj Pilgrims Tests KBIH Bisri.

There are 40 prospective pilgrims, 19(48%), 21(52%) women >60 years old 10 (25%) 60 years old (75%). The results of the blood pressure examination for hypertension were 9 (22%) normotensive people, 31 (78%) people, based on nutritional status, BMI was less than 1 person (2.5%), good BMI 19 people (47.5%), BMI over 15 people ( 37.5%), obese 5 people (1.25%), while the results of the fitness test obtained less fitness 1 (2.5%), moderate fitness 24 (60%), good fitness 12 (30%), poor fitness 4 (2.5%). The results of the fitness test are influenced by age, gender, BMI, physical activity carried out by the congregation in daily activities. Factors that can affect a person's level of physical fitness, one of which is excessive fat deposits or an increase in body mass index (BMI) which can increase the workload and affect the work of the heart and lungs which is the most important component of physical fitness, the higher the BMI, the lower [4]. The higher the degree of physical fitness, the greater the physical ability and work productivity [5].

Based on Novita's research [6], it was found that there was a significant relationship between hypertension and the level of physical fitness of the pilgrims in the city of Palembang in 2019. In measuring blood pressure there were 9 hypertensive pilgrims and 31 normotensive pilgrims, so to improve the physical fitness of the pilgrims, they had to lower their blood pressure by medication, a balanced diet and regular, structured and measurable physical exercise. Physical exercise activities for prospective pilgrims can be carried out together at the KBIH for each Hajj ritual. So that it is expected that with regular and measurable physical activity can lose weight, improve fitness and diseases such as hypertension and diabetes mellitus can be controlled. Furthermore, prospective hajj pilgrims receive counseling about Hajj health

isthithoah, namely the ability of hajj pilgrims from the health aspect which includes measurable physical and mental health by examination and guidance that can be accounted for and continued with education on risk factors for non-communicable diseases in adapting new habits [7].

By identifying the risk factors for non-communicable diseases in prospective pilgrims, health coaching can be carried out. To assess the results of the education of prospective pilgrims, an assessment of the knowledge of prospective pilgrims was carried out using a questionnaire before and after education containing questions about the types and symptoms of non-communicable diseases, knowledge about physical exercise to maintain physical fitness according to health protocols. To assess the results of the understanding of prospective pilgrims, pre-test and post-test were carried out which were followed by 30 participants. The average pre-test value was 3.93 after counseling, while the post-test score averaged 5.77. The results of the pre-test and post-test analysis of knowledge of prospective pilgrims with  $p\text{-value} = 0.000$  which means that there is a significant difference between the assessment of knowledge before education and after education.



**Fig 4.** The Educational Atmosphere of Prospective Hajj Pilgrims KBIH Bisri

Knowledge is the result of knowing and this occurs after people have sensed a certain object. Health knowledge will affect behavior, then health behavior will affect individual health as the output of health education [8]. From the results of the knowledge of prospective pilgrims before counseling which was attended by 30 prospective pilgrims, it was obtained that the sociodemographic characteristics of prospective pilgrims who took the pre-test were 30 people consisting of 2 people (6.7%). 60% and age >60 years 10 people (33.3%) who are high risk congregants, while there are 13 men (43.3%) and 17 women (56.7%), based on education level, respondents most of them have a high level of education, namely universities with 17 people (56.7%), SMA/MA 12 people (40%), and 1 junior high school (3.3%). One of the factors that influence knowledge is the level of education, where a higher level of education affects a person's perception of making decisions and acting [9]. Prospective

pilgrims with higher education are easier to receive and absorb information. This will affect their attitudes and behavior in maintaining the health of themselves and their families.

Counseling through educating prospective pilgrims, giving questionnaires, and checking fitness involved 5 students of the department of public health and community medicine (IKM-IKK) of the Faculty of Medicine, Sriwijaya University together with the Palembang city health office that involve 10 people and 5 people from the South Sumatra Provincial Health Office.



Fig 5. Photo with Prospective Hajj Pilgrims KBIH Bisri

#### IV. CONCLUSION

To foster the health of the pilgrims of the Hajj Guidance Group (KBIH), Bisri carried out early detection of risk factors for non-communicable diseases in pilgrims and carried out education on infectious diseases and examination of fitness tests. There are 40 prospective hajj pilgrims, of which 19 men (48%), 21 women (52%), 10 people >60 years old (25%), and 30 people 60 years old (75%). On the results of blood pressure checks, it was found that 9 people with hypertension (22%) and normotensive 31 people (78%). Based on nutritional status, BMI less than 1 person (2.5%), normal BMI 19 people (47.5%), BMI over 15 people (37.5%), and BMI obese 5 people (1.25%). Based on the results of the fitness test, it was found that there was less fitness for 1 person (2.5%), adequate fitness for 24 people (60%), good fitness for 12 people (30%), and less fitness for 4 people (2.5%).

So it is necessary to develop health and fitness of prospective pilgrims on a regular, structured and measurable basis. From the results of education on risk factors for non-communicable diseases, an assessment was carried out before the test with a value of 3.93 and after education the value of prospective pilgrims increased to 5.77 and there was a significant relationship ( $p = 0.000$ ) the value of education before and after education for early detection of non-communicable diseases in adaptation of new habits. To foster the health of prospective pilgrims for the Palembang city who departs 2700 pilgrims every year, it is necessary to participate in the community, especially

through KBIH, Universities (Faculty of Medicine), Cross Sector with the Palembang City Health Office. With the participation of the community in carrying out health coaching for Hajj pilgrims at KBIH independently with universities so that it can be carried out at 30 KBIH in the city of Palembang so that the physical fitness and health of prospective pilgrims will be optimal.

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