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## Health Response of Hajj Pilgrims on the Quality of Health Services in Subdistrict of Pademawu Pamekasan

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#### **ABSTRACT**

The number of pilgrims of various ages and levels of education experience many health problems such as hypertension, respiratory infections and heart problems. From these problems encourage researchers to determine the response of prospective pilgrims to of health services in Pademawu Pamekasan. The object of this study is the pilgrims in Pademawu Pamekasan Regency. The purpose of this study was to determine the response of the pilgrims in Pademawu District, Pamekasan Regency. This research uses a quantitative approach by using questionnaire instrument for data collection. The sampling technique uses a total sampling population count of 70 pilgrims. The study was conducted in the District of Pademawu Pamekasan to the Hajj pilgrims in 2018. The results of the study of the pilgrims' response to the quality of service include the response of the pilgrims, health services cognitive, affective, conative, age and education levels. Overall, the response of the haj pilgrims to the quality of service on the cognitive aspect was 29.5%. In the affective aspect of 4.69%. In the conative aspect 2.05%. At the age factor of 4.51% and at the aspect of Education level as much as 2.19%. The quality of health services affects the response of the pilgrims to the cognitive, affective and conative aspects but is not influenced by the age and level of education of the pilgrims.

Keywords: health response, hajj pilgrims, health services

#### 1. Introduction

Over the years, hajj has been the full attention of a number of government and non-government sectors. The Ministry of Health has a fundamental mission during the pilgrimage season, namely by providing the best health care for pilgrims, continuing expansion of health facilities, assigning qualified health workers and establishing "Emergency or disaster plans and coordination with other related sectors [1].

In 2004-2011, approximately 1.6 million Indonesians made pilgrimages during the Hajj. Pilgrims who join one of the government-sponsored pilgrimage services have 40 days of travel. All pilgrims are divided into 480-500 flight groups, the minimum number of pilgrims in each flight group is 355 pilgrims, and a maximum of 455 pilgrims. One doctor and two nurses accompany each flight group and conduct health services, except in 2005-2006, when there was only one doctor and one nurse in the flight group [2].

The death rate of pilgrims from Indonesia is between 2.1 and 3.2 per 1,000. Morbidity 87% in the elderly (> 65 years). This is a complex problem affecting Hajj health care in Indonesia [2].

The pilgrims suffer from a number of health problems such as cholera, meningitis, respiratory illness, food poisoning, traffic accidents and fires [4]. In addition, environmental health issues such as solar heat are a high case [5].

According to the 2012-2014 Ministry of Religion audit results on hajj management, many hajj pilgrims who do not follow isthitaah health still continue to perform hajj pilgrims and pilgrims who require hemodialysis are allowed to go Saudi Arabia even with a lack of professional health care resources [6].

In the medical examination system for pilgrims in Indonesia, it is necessary to coordinate between primary health care, hospital and embarkation stage. In primary health care the pilgrims undergo a medical examination to get a

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diagnosis of their health status, before going to the hospital to undergo a referral examination for their health status profile must be complete. In the Hajj pilgrimage embarkation only needs to undergo an examination to confirm that they are eligible to fly [7].

Research [2], In 2008, a total of 206,831 Indonesians performed the Hajj. There were 446 deaths, equivalent to 1,968 deaths per 100,000 hajj years. Most of the pilgrims died in Mecca (68%) and Medina (24%). There is no statistically significant difference in the risk of total death for the two pilgrimage routes (Mecca or Medina first), but the number of deaths peaked earlier for those who traveled to Mecca first (p = 0.002). Most deaths were caused by cardiovascular disease (66%) and breathing (28%). A greater proportion of deaths was associated with cardiovascular disease with high mortality compared with verbal autopsy methods (p < 0.001). Significantly more causes of death were not clear based on the verbal autopsy method (p < 0.001).

Data in 2015 showed two cases of death among pilgrims suspected of not having isthitaah health [shafi]. Isthitaah is a term used for the requirements of the hajj process for pilgrims such as faith, wealth, and physicality. Despite pre-departure medical examinations and other medical services, the mortality rate of Indonesian pilgrims is very high. The correct classification of causes of death is essential for the development of risk mitigation strategies. The problem of Hajj in health care needs extra effort to solve it. This study is to look at the health response of pilgrims as outlined in the title: Hajj Pilgrims Health Response to the quality of health services in Pademawu sub-district Pamekasan district.

#### 2. Materials and Methods

## 2.1 Research approach

This study uses a quantitative approach. Quantitative methods emphasize objective measurement and analysis of statistical, mathematical, or numerical data collected through polls, questionnaires, and surveys [8].

## 2.2 Research time

The study was conducted in 2018 in Tanjung Village, Pademawu District, Pamekasan Regency.

## 2.3 Population and sample

The population of this research is 70 pilgrims in Tanjung Village in 2018. The sampling method in this study uses a total population.

## 2.4 Research variable

The independent variable is the response of the haj pilgrims, health services. Dependent variables are cognitive, affective, conative, age and education.

## 2.5 Data collection technique

Data collection techniques in this study used a questionnaire documentation instrument.

## 2.6 Data processing techniques

The research technique uses a Likert scale. This scale is used to measure people's attitudes, opinions, perceptions about symptoms or problems in society [9].

#### 2.7 Data analysis

Analysis of data using SEM (Structural Equivalent Modeling).

#### 3. Results and discussion

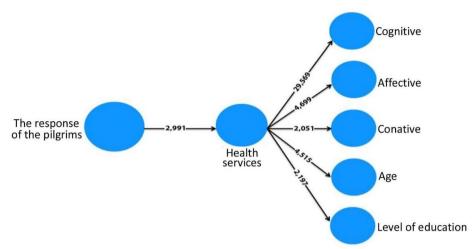
# 3.1 Structural model of the relationship between hajj pilgrims response to health services

This structural model is generated from statistical analysis using non-parametric structural eguation modeling (SEM) using smart partial least square (PLS). The study used a confidence value of p=0.05, which is said to be meaningful if the calculated T value  $\geq 1.96$ . The structural model of the relationship between the responses of pilgrims to health services is presented in Figure 1 & 2.

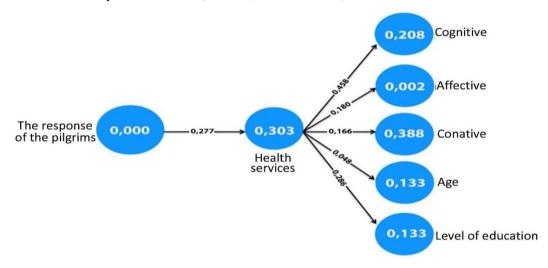
## 3.2 Response of hajj pilgrims to health services

Data from research results that have been analyzed with the help of non-parametric SEM calculations using PLS software using a confidence value of p=0.05, then the effect of the response of the pilgrims to health services has a value ( $t_{count}=2.991 \ge t_{table}=1.96$ ; path coefficients = 0.277 ). Value ( $R^2=0.303$ ) means that the response of pilgrims to health services is 3.03% explained in the model, while 396.97% is influenced by other factors not included in the model. The satisfaction of pilgrims to outpatient care has a significant value affecting consumer behavior in seeking health care, compliance with medication, and returning to the same care facility [10]. Health care providers must consider whether patient expectations for health services have been met [11].

Health service research is a multidisciplinary scientific effort that studies and produces knowledge to facilitate better translation of medical findings into practice to improve patient and community health. Health services research seeks to identify the most effective ways to manage, manage, finance and provide high-quality care [12].



**Figure 1**. Structural Equation Modeling Model (SEM) to determine the significance of the relationship between the response of Hajj services to health services. The response of pilgrims to health services ( $t_{count} = 2,991 \ge t_{table} = 1,96$ ), health service to pilgrims is influenced by cognitive ( $t_{count} = 4,699 \ge t_{table} = 1,96$ ), health services to pilgrims are influenced by effective ( $t_{count} = 2,051 \ge t_{table} = 1.96$ ), health services to the Hajj pilgrims are not affected by age ( $t_{count} = 4,515 \ge t_{table} = 1.96$ ), health services to hajj pilgrims are not affected by education level ( $t_{count} = 2,197 \ge t_{table} = 1.96$ ).



**Figure 2**. Hypothesis model of relationship between pilgrim's response to health services is illustrated by the value of Path Coefficients and  $R^2$ . (Hajj Congregation response to health services path coefficients = 0.303), (health services to cognitive path coefficients = 0.208), Health services to effective path coefficients = 0.002), Health services to conative path coefficients = 0.388), Health services to age path coefficients = 0.133) health services to education level path coefficients = 0.133).

### 3.3 Effects of health services on cognitive

Data from research results that have been analyzed with the help of non-parametric SEM calculations using PLS software using a confidence value of p=0.05, then the health service provider is declared to influence the congregation of pilgrims with a value ( $t_{count}=29.569 \ge t_{table}=1.96$ ; path coefficients = 0.458). Value ( $R^2=0.208$ ) means that health services affect the cognitive of the pilgrims by 2.08% explained in the model, while 97.92% is influenced by other factors not included in the model. Research conducted by Wilkin *et al.* [13] in 1992, stated the problem in measuring user satisfaction in health services consisted of views in terms of defining the term 'satisfaction' in terms of content, aspects and context; second, the relationship between satisfaction and expectations. Therefore health services closer to the community in meeting

their health needs and interests are very important for health practitioners; for example, how they plan, who they plan to be and how much leeway they have in making decisions and then adjusting available resources to address public health

Research conducted by Peckham *et al.* [14], states that making autonomous services is free from central control, and community involvement is very important to develop effective services. Likewise, research by Regmi *et al.* [15] states that responsiveness in the appropriate service development and management elements will be considered an important step.

The theory of cognitive dissonance was first carried out by [16], showing that we have an inner urge to maintain all attitudes and our behavior in harmony and avoid disharmony (or dissonance). This is known as the principle of cognitive consistency. When there is an inconsistency between attitude or behavior (dissonance), something must change to eliminate

dissonance. Note that the theory of dissonance does not state that these modes of reducing dissonance will actually function, only that individuals who are in a state of cognitive dissonance will take steps to reduce their level of dissonance. Cognitive dissonance theory has been extensively studied in a number of situations to develop basic ideas in more detail, and various factors have been identified that may be important in attitude change [17].

Indonesia is a country with a very large number of pilgrims. This condition causes the queue to perform the pilgrimage for a long time because of the limited quota of pilgrims set by the government of Saudi Arabia. As a result, the number of prospective pilgrims who are at high risk of health problems is increasing. Meanwhile in carrying out the Hajj, most of it is needed physical health. For this reason, pilgrims who depart must meet istihaah requirements from the aspect of health including physical and mental health that is measured by an examination that can be accounted for. Thus the Pilgrims can carry out worship according to the Guidance of Islam [18].

## 3.4 Effects of health services on effectiveness

Data from research results that have been analyzed with the help of non-parametric SEM calculations using PLS software using a confidence value of p=0.05, then the service of health workers affect the effective pilgrims have a value ( $t_{count}=4,699 \ge ttable=1.96$ ; path coefficients = 0.180). Value ( $R^2=0.002$ ) means that health services affect cognitive pilgrims by 2% explained in the model, while 98% is influenced by other factors not included in the model.

Improving the quality of services by KBIH is one way to increase the satisfaction of pilgrims and attract other pilgrims to use these KBIH services. Congregation satisfaction depends on whether or not the quality of KBIH services in meeting the expectations of the congregation. Quality is closely related to customer satisfaction [19].

## 3.5 The influences of health services on conative

Data from research results that have been analyzed with the help of non-parametric SEM calculations using PLS software using a confidence value of p=0.05, then the health service provider affects the conative of the pilgrims with a value ( $t_{count}=2.051 \ge t_{table}=1.96$ ; path coefficients = 0.166). Value ( $R^2=0.388$ ) means that health services affect the conative of pilgrims by 3.88% explained in the model, while 96.12% is influenced by other factors not included in the model.

A number of health measures are maintained at national and international levels to ensure the safety of pilgrims and people living in Saudi Arabia. The main areas for this action are prevention, healing and promotion of health care. For example, preventive measures require vaccination against cerebrospinal meningitis for all pilgrims and vaccination against yellow fever as recommended by WHO for those coming from endemic countries. Also, prophylactic therapy is

given to pilgrims who come from areas with certain endemic diseases. For example, injections of benzathine penicillin (or erythromycin tablets or capsules for those who are allergic) are given to pilgrims from the Soviet Union as prophylaxis against diphtheria; and immunization services are provided at Saudi Arabia's sea, air and land ports [20].

## 3.6 Effect of health services on age of pilgrims

Data from research results that have been analyzed with the help of non-parametric SEM calculations using PLS software using a confidence value of p = 0.05, then the service of health workers does not affect the age of the pilgrims have a value  $(t_{count} = 1.051 \ge t_{table} = 1.96$ ; path coefficients = 0.048). Value (R2 = 0.133) means that health services are not influenced by the age of the haj pilgrims by 0.48% explained in the model, while 99.52% is influenced by other factors not included in the model. The mortality rate from 2004 to 2011 ranged from 149 to 337 per 100,000 pilgrims, equivalent to the actual number of deaths ranging between 501 and 531 cases. The two highest causes of death are caused by diseases of the circulatory and respiratory systems. Older pilgrims or pilgrims with comorbidities should be encouraged to take the less physically demanding route in the Hajj. All pilgrims must be educated about health risks and seek initial health advice from the mobile medical team provided [2]. During the haji season the Ministry recommends the use of masks during haji especially at old age in order to reduce airborne disease transmission [22].

# 3.7 Influence of health services on education level of pilarims

Data from research results that have been analyzed with the help of non-parametric SEM calculations

using PLS software using a confidence value of p = 0.05, then the service of health workers is not affected to the education level of the pilgrims has a value ( $t_{count} = 1.197 \ge t_{table}$ = 1.96; path coefficients = 0.286). Value ( $R^2 = 0.133$ ). Every year, from 2004 to 2011, around 200,000 Indonesians join the Hajj. All pilgrims are aged ≥18 years and the majority (53.0-59.0%) are aged between 40 and 60 years. Most of the pilgrims were women (55.0%). One fifth of the pilgrims have higher education and the majority of them are business employees and housewives. According to pre-embarkation medical assessments, 27.0-43.4% of pilgrims are classified as high risk due to underlying health conditions such as diabetes, hypertension, other chronic diseases, or if they are 60 years or older. The two main causes of death are diseases of the circulatory system (cardiovascular disease) and diseases of the respiratory system. Both contributed 44.9-66.0% and 24.9-33.4% respectively from 2004 to 2011 [2].

## 4. Conclusion

The quality of health services influences the response of pilgrims to the cognitive, affective and conative aspects and is not influenced by the age and level of education of the pilgrims.

#### References

- [1] Aldossari M, Aljoudi A, Celentono D.2019. Health Issues in the Hajj Pilgrimeage. A literature Review. EMHJ. Vol. 25. No 10-2019
- [2] Masdalina P, Sholah I, Qomariah, Kandun I N, Cook AR, Samaan G. 2013. Causes of Mortality for Indonesian Hajj Pilgrims: Comparison between Routine Death Certificate and Verbal Autopsy Findings. Plos one. https://doi.org/10.1371/journal.pone.0073243.
- [3] Hamouda M.2000 The state of health of the Hejaz, particularly from the point of view of pilgrimage. Bulletin Menssuel de l'Office International d'Hygiene Publique. 28:887–95.
- [4] Oman W. 1999. The Makkah pilgrimage. Its epidemiological significance and control. Postgraduate Medical Journal. 55:269–74
- [5] Shafi S. Booy R.Haworth E. Rashid H Ziad A.Memish ZA. 2008. Hajj: Health lessons for mass gatherings. Journal of Infection and Public Health. Volume 1, Issue 1, 2008, Pages 27-32.
- [6] Rustika R, Oemiati R, Al Asyary, Rachmawati T. 2020 An Evaluation of Health Policy Implementation for Hajj Pilgrims in Indonesia. Journal of Epidemiology and Global Health Vol. 0(0); Month (2019), pp. 0–0 DOI: https://doi.org/10.2991/jegh.k.200411.001; ISSN 2210-6006; eISSN 2210-6014
- [7] Center of Health Hajj. Laporan Penyelenggaraan layanan kesehatan jamaah Haji Tahun 2017 [Internet]. Jakarta: Center of Health Hajj, Indonesian Ministry of Health; 2017. vailable from: Http://www.puskeshaji.depkes.go.id/news/364/Laporan-Penyelenggaraan-layanan-kesehatan-jamaah-Haji-Tahun-2017 [cited December 21, 2018].
- [8] Sugiyono, 2013. Statistika Untuk Penelitian. Penerbit Alfabeta Bandung.
- [9] Hidayat AA. 2007. Metode Penelitian Kebidanan Teknik Analisis Data
- [10] Garman AN, Garcia J, Hargreaves M. 2004. Patient Satisfaction as a Predictor of Return-to-Provider Behavior: Analysis and Assessment of Nancial Implications. Qual Manag Health Care 2004;13:75-80.
- [11] Ibrahim A. Al-Hoqail, Abdelshakour M. Abdalla1, Abdalla A, Saeed,, Nasir A. Al-Hamdan1, Ahmed A. Bahnassy1. 2008. Pilgrims satisfaction with ambulatory health services in Makkah. Journal of Family and Community Medicine. December 2010. Vol 17. Issue 3. 135-140
- [12] Schwartz JS. 2017. in Clinical and Translational Science (Second Edition)
- [13] Wilkin D, Hallam L, Doggett MA.1992. Measures of Need and Outcome for Primary Health Care. Oxford University Press, Oxford, New York.

- [14] Peckham S, Exworthy M, Powell M. 2005. Decentralisation as an Organisational Modelfor Health Care in England. SDO, London.
- [15] Regmi K, Naidoo J, Pilkington PA, Greer A. 2009. Decentralization and district health services in Nepal: understanding the views of service users and service providers. J Public Health (Oxf) 32: 406-417.
- [16] Fegtnger L. 1950. Cognitive Consequences of Forced Compliance.
- [17] George MA. 2003. The cognitive revolution:a historical perspective Department of Psychology, Princeton University, 1-S-5 Green Hall, Princeton, NJ 08544, USA. TRENDS in Cognitive Sciences Vol.7 No.3 March.
- [18] RustikaR, OemiatiR, Al Asyary, Rachmawati T. 2004 An Evaluation of Health Policy Implementation for Hajj Pilgrims in Indonesia. Journal of Epidemiology and Global Health. DOI. https://doi.org/10.2991/jegh.k.200411.001
- [19] Wahjudi P, Maya Fahmi Putriana M F. 2014. Karakteristik dan Status Kesehatan Jamaah Haji Kabupaten Banyuwangi Tahun 2014. Jurnal IKESMA Volume 10 Nomor 1 Maret 2014
- [20] Eltahir AHH. 2000. Development of Health Services in Hajj Seasons. J Family Community Med. Jan-Apr; 7(1): 13–14.
- [21] Ahmed AA, Arabi YM, and Memish ZA. 2006. Health risks at the Hajj. Lancet. 2006 25-31 March; 367(9515): 1008–1015.
- [22] Wilder-Smith A, Earnest A, Ravindran S, Paton N.I. 2003. High incidence of pertussis among Hajj pilgrims. Clin Infect Dis. 2003;**37**:1270–1272.