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The Differences Patient Satisfaction Indices Using Android application and Questionnaire Method in The Puskesmas

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Satisfaction assessment in a health centre is an important part of evaluating service quality. Nowadays, health centres are common to input and processing the satisfaction index data in conventional process (manual) from questionnaires. So that, the service reporting cannot be done quickly and quality evaluation. Thus, in this study aims to examine the differences over patient satisfaction using e-questionnaire on android and conventional questionnaire method at public health centre (Puskesmas). This research we descriptive a several questionnaires and compared with 162 samples using purposive sampling technique. Here, Mann Whitney method was performed to analyse the data observation. The test results show a sig value of 0.985 (P value > 0.05), which means that there are no significant differences between the index of patient satisfaction using the Android and the questionnaire method. These results indicate an android assessment that can be applied to the satisfaction index assessment for the effectiveness and efficiency of the satisfaction index assessor.

Keywords: Satisfaction index, Questionnaire method, Android method.

1. INTRODUCTION

Public health center (Puskesmas) is the spearhead of medical services in Indonesia. The several demands are needs to complete a service user. Here, the service user (patients) must be considered by the puskesmas as the spearhead of community service. The exist problems is currently related to patient satisfaction over information systems including calculating the patient satisfaction index. Even though using Microsoft Excel, it still takes a long time due to they must enter data one by one with patient satisfaction data (manual). Thus, it's not an administrative priority because they are more concerned with other tasks. The organization cannot perform service evaluations because information on patient satisfaction indexes is often given too late. The head of the Puskesmas cannot know the condition of service delivery in each unit due to the patient satisfaction index information received is the total value of patient satisfaction in all units in the Puskesmas and not in the form of a patient satisfaction index per unit as expected by the organization. Previous assessments at the Puskesmas were carried out during accreditation only. Here, the assessment uses a reference from the ministry -

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of health in the form of an assessment using the Importance-Performance Analysis (IPA) method or Service quality. In measuring satisfaction, this method uses a questionnaire in the form of a description of the satisfaction evaluation questions at the health center that is filled in by the patient. According to the head of the Puskesmas, the large number of questions made evaluating satisfaction takes a lot of time. Furthermore, the data input process and data processing manually make service satisfaction reporting tends to be late so that service quality evaluation cannot be done quickly.

Answering this problem, the health center must make renovations in the satisfaction assessment information system. The approach that is currently developing is an android-based satisfaction index assessment. The Android system some question items can be simplified and the process of input and data analysis can be done quickly. Currently, in our area study doesn't a research to obtain patient satisfaction assessment using the android or electronic method. However, a several studies have shown good results in the application of the electronic method approach in health services. Research conducted by [1, 2] which examined Patient satisfaction with the

implementation of electronic medical Records in the Western Region, Saudi Arabia, shows that patients show very good satisfaction in the application of electronic medical records. Another study conducted by [3] examined the impact of health information technologies on patient satisfaction showed that patients were very satisfied with the application of health information technologies at Christiana Hospital. The application of new methods, especially the assessment of satisfaction with the Android method, must be preceded by research. So far, survey researchers at health centers in Bali have implemented a satisfaction index rating system using the Android approach, but research has never been carried out. Research will determine whether a simplified satisfaction rating system has the same results as conventional assessment. For this reason, researchers are interested in examining Differences in the index of patient satisfaction using the Android method with the questionnaire method in the Public Puskesmas, Karangasem, Bali.

2. METHODOLOGY

Satisfaction is the level of consumer feelings after comparing with received and expected factor, respectively [4]. A customer who has satisfied with the value provided by the product or service are very likely to be customers for a long time [5]. Thus, the satisfaction is the level of a person's feelings after comparing the perceived performance - results with his expectations [6]. Satisfaction level is a function of the difference between perceived and expected appearance. Hospital or other health service organization customer satisfaction or patient satisfaction is influenced by many factors. From empirical and theoretical reviews, it shows that the satisfaction index assessment with a more effective and efficient technological approach can begin to be used as a solution to the problem of evaluating the quality of service at Puskesmas [8. 9]. Assessment of satisfaction index using technology in this case using android compared to the questionnaire method has the same satisfaction domain, namely reliability, assurance, tangibility, responsiveness, and empathy. From this theory there should not be a significant difference between the results of the papal index assessment and Android compared to assessments using a questionnaire.

Research on the use of android in measuring patient satisfaction in hospitals is still relatively limited. Therefore, this research is considered important to be carried out to fill the gaps in the research. For this reason, the hypothesis propose in this study is that there is no difference in the index of patient satisfaction using the Android and the questionnaire method. Patient satisfaction can be influenced by various factors. Therefore, it is important to analyze patient satisfaction so

that management knows what indicators make them dissatisfied with service. Satisfaction with service can be explained by several things such as tangible, reliability, assurance, and empathy [6, 7].

Quantitative research methods in this research were used descriptive comparative research (descriptive comparative) namely research that compares two or more symptoms. Here, this method research can find similarities and differences about objects, about people, work procedures, ideas, criticism of people, groups, of an idea or work procedure. Can also compare views and changes in views of people, groups or countries, on people, events or ideas [10]. In this study, the researcher tried to compare the satisfaction using the Android method with the satisfaction variable using the questionnaire method. The instrument used is the measurement of measurement in units of measurement and satisfaction index measurement with the service quality measuring instrument in the form of a questionnaire with a Likert scale ranging from 1- 4: namely expectations (expected service), while 1= very not agree, 2= not agree, 3= simply agree, and 4= very agree. Reality (perceived service), while 1= not important, 2= less important, 3= simply important, and 4= very important. The satisfaction value is obtained by the formula Q (gap score): mean P-mean E. E. The subsequent calculations are categorized as unsatisfactory, satisfying and very satisfying. The data obtained were then analyzed using the Mann Whitney test in order to obtain or not find the satisfaction index from Android with the satisfaction index assessed by a questionnaire.

The profile of respondent showed that most respondents were aged 48 years (29.6%) and a total female 85 (52.5%) respondents. Based on the education of the respondents with high school education as many as 124 respondents (76.5%) and from jobs the most were still working as many as 125 respondents (77.2%). The age of the respondents in this study used the age above 20 years with the aim that the respondent could provide an assessment of satisfaction from an adult's point of view. The education of the respondents, in this case the patients who visited the Puskesmas, mostly had high school education and had a working status. Data from the Ministry of Education shows that currently 63% of Indonesia's population has a minimum high school education. The age of the respondent who is still of the productive age gives a correlation with the work status of which most of the respondents are working status.

3. RESULTS AND DISCUSSION

The results showed the patient satisfaction index assessed by a questionnaire had the most respondents giving a very satisfied assessment of the health center services, namely 128 respondents (79%), 24 respondents (14.8%) were

satisfied enough are 4 respondents (9%), and only 2 respondents (1.2%) who gave an assessment that did not include the service. In addition, the satisfaction assessment with Android values given minor value (not much different) compared by conventional sampling method. Here, the most respondents gave a very satisfactory assessment, 128 respondents (79%) of which 23 respondents (14.2%) stated satisfactory, 10 respondents (6,2%) stated that it was quite satisfying and only 1 respondent (0.6%) stated that the service at the Puskesmas was not provided. Thus, to see whether there is a difference in the satisfaction index with these two methods, a different test is carried out. The results of different tests with the Mann Whitney test showed a sig value of 0.985 (P value > 0.05), which means that there was no significant difference between the patient satisfaction index using the Android and questionnaire. The results of the frequency distribution test and the Mann Whithney test is showed in Table I.

Table I. The results of the Mann Whithney test (N:162)

Parameters	Satisfaction Index
Mann-Whitney U	13111.000
Wilcoxon W	26314.000
Z	-.018
Asymp. Sig. (2-tailed)	0.985

The results of the Mann Whitney test showed a sig value of 0.985 (P value > 0.05), which means that there was no significant difference between the patient satisfaction index using the Android method and the questionnaire method at the Puskesmas. The results showed that the patient satisfaction index was assessed by a questionnaire with the most respondents giving a very satisfied assessment of the health center services, namely 128 respondents (79%), the number of respondents gave a satisfactory rating of 24 respondents (14.8%), quite satisfying as many as 8 respondents (4, 9%) and only 2 respondents (1.2%) who gave an assessment that did not include the service of the Puskesmas. The results of the satisfaction assessment with Android showed a value that was not much different, namely most respondents gave a very satisfactory assessment of the Public Polyclinic service of Puskesmas, as much as 128 respondents (79%) of which 23 respondents (14.2%) stated satisfactory, 10 respondents (6,2%) stated that it was quite satisfying and only 1 respondent (0.6%) stated that the service at the Puskesmas was not provided. To see whether there is a difference in the satisfaction index with these two methods, a different test is carried out. The results of different tests with the Mann Whitney test showed a sig value of 0.985 (P value > 0.05), which means that H_0 was accepted or there was no significant difference between the patient satisfaction index using the Android and the questionnaire method.

These results indicate a simple assessment using Android shows that there is no significant difference using the questionnaire assessment, namely Servqual Satisfaction Index assessment. These results are in line with the theory that the assessment of customer satisfaction can be simplified but still paying attention to the satisfaction domain. In this case, the satisfaction index assessment with Android has the same satisfaction domain as the satisfaction assessment using a questionnaire. The various advantages of assessing satisfaction using android are applied for PDAM Tirta Khatulistiwa Company. Here, the Customer Satisfaction of the Service Quality at PDAM Tirta Khatulistiwa Company, Pontianak, Borneo, Indonesia used Android-based cut off point method. The cut-off point method is a intention of ascertaining the degree of requirement criteria. Questionnaires containing existing criteria were distributed to a number of respondents (Android users) who had experience and expertise in related fields to provide an assessment. The test results on the selection of answers consisting of 48 questions are then compared with a cut-off value of 2.5 to produce a Customer Satisfaction Index. The results of the compatibility test show that the application can run on the android v4.1 (Jelly Bean) to android v5.1 (Lollipop) operating system. The app also doesn't drain memory as the memory usage test results indicate that only 25-30MB is used. With this application, it can reduce the use of various written media, one of which is paper which tends to accumulate after an assessment is carried out. The assessment uses a reference from the ministry of health in the form of an assessment using the Importance-Performance Analysis (IPA) method or service quality (servqual). In measuring satisfaction, this method uses a questionnaire in the form of a description of the satisfaction evaluation questions at the health center that is filled in by the patient. With the number of questionnaire items, making satisfaction assessments takes a lot of time. Not only that, the data input process and data processing manually make service satisfaction reporting tends to be late so that service quality evaluation cannot be done quickly.

The needs and demands of service users and in this case, patients must be considered by the puskesmas as the spearhead of community service. The problems that exist, specifically in the Puskesmas at this time are related to patient satisfaction information systems, including calculating the patient satisfaction index, even though using Microsoft Excel, it still takes a long time because they have to enter data one by one and the activity of entering patient satisfaction data is not a priority for officers because they are more concerned with other tasks. The organization cannot perform service evaluations due to information on patient satisfaction indexes is often given too late. The organization cannot know the condition of service delivery in each unit

because the patient satisfaction index information received is the total value of patient satisfaction in all units and not in the form of a patient satisfaction index per unit as expected by the head. With the results of this study, the assessment of satisfaction with Android which is accommodated by the data tabulation system will greatly simplify and accelerate the satisfaction index assessment and the management will be able to quickly fix the service system if there is poor service quality.

4. CONCLUSION

The patient satisfaction index assessed by a questionnaire shows that the majority of respondents gave a very satisfied assessment of Puskesmas services, as much as 128 respondents (79%). Moreover, the satisfaction assessment with Android showed a value that was not much different, where the majority of respondents gave a very satisfactory assessment, as much as 128 respondents (79%). Furthermore, the results of the Mann Whitney test showed a sig value of 0.985 (P value > 0.05), which means that there was no significant difference between the index of patient satisfaction using the Android method and the questionnaire method at the Public Polyclinic. Therefore, management uses the android method to assess the satisfaction index more effectively and efficiently. To educational institutions to use the results of this study as a reference in the topic of learning satisfaction assessment of the services provided.

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