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The Effect of Using Video Consultation Via the Whatsapp Platform on Patient Satisfaction at The Outpatient Specialist Polyclinic, Ahmad Dahlan University Hospital, Yogyakarta

Taufiq Praditama[1*)]; Nuryakin[2]

[1] Magister Administrasi Rumah Sakit, Universitas Muhammadiyah Yogyakarta
[2] Master of Management, University of Muhammadiyah Yogyakarta

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A B S T R A C T

This study aims to analyze the effect of using video consultation via the WhatsApp platform on patient satisfaction at the Outpatient Specialist Polyclinic, Ahmad Dahlan University Hospital, Yogyakarta. This research is a quasi-experimental study with a pre and post-test approach to a non-equivalent control group design. The primary data source is providing direct questionnaires to outpatient respondents with non-insulin-dependent diabetes mellitus: without complications or non-insulin-dependent diabetes mellitus: with renal complications that require intensive monitoring. to 36 respondents. Data analysis used Paired sample T-test and Independent T-test. Hypothesis testing with independent t-test calculations is known that the t-count value is 6.486 > t-table 2.032, with a significance level (Sig. (2-tailed) or p (value) = 0.000 <0.05. So it can be stated that there is a significant difference. There is a significant difference between the satisfaction of medical consultation in the control group that was not given treatment with the intervention group that was given video consulting services. Based on the post-test t-test, it is known that the average satisfaction of patients who use video consulting services is lower than patients who use face-to-face consultation services with a difference the difference between the two groups was 11,722. So, it can be concluded, there is an effect of using video consultation on the satisfaction of medical consultation through patients at the outpatient specialist polyclinic of UAD Hospital Yogyakarta.

Kata kunci:

Konsultasi Video
Platform Whatsapp
Kepuasan Pasien

**) corresponding author*

dr. Taufiq Praditama
Magister Administrasi Rumah Sakit, Universitas Muhammadiyah Yogyakarta
jl. Brawijaya, geblagan, tamantirto, Kec. Kasihan, kab. Bantul, Daerah Istimewa Yogyakarta 55183

Email: praditama87@gmail.com

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A B S T R A K

Penelitian ini memiliki tujuan menganalisis pengaruh penggunaan konsultasi video melalui *platform WhatsApp* terhadap kepuasan pasien di Poliklinik Spesialis Rawat Jalan RS Universitas Ahmad Dahlan Yogyakarta. Penelitan ini merupakan penelitian *Quasi experimental* dengan pendekatan *pre and post test nonequivalent control group design*. Sumber data primer yaitu memberikan kusioner langsung kepada responden pasien rawat jalan *dengan non-insulin dependent diabetes mellitus: without complications ataupun non-insulin dependent diabetes mellitus: with renal complication* yang membutuhkan pemantauan intensif. kepada 36 responden. Analisis data menggunakan *Paired sample T-test* dan *Independent T-test*. Uji hipotesis dengan perhitungan *independent t-test* diketahui nilai t hitung didapat sebesar 6,486 > t tabel 2,032, dengan taraf signifikansi (Sig. (2-tailed) atau p (value) = 0,000 < 0,05. Sehingga dapat dinyatakan terdapat perbedaan bermakna yang signifikan antar kepuasan konsultasi medis pada kelompok kontrol yang tidak diberikan perlakuan dengan kelompok intervensi yang diberikan layanan konsultasi video. Berdasarkan uji t post-test diketahui rata-rata kepuasan pasien yang menggunakan layanan konsultasi video lebih

rendah dibandingkan pasien yang menggunakan layanan konsultasi tatap muka dengan selisih perbedaan antara kedua kelompok adalah 11,722. Sehingga, dapat disimpulkan, ada pengaruh penggunaan konsultasi melalui video terhadap kepuasan konsultasi medis melalui pasien di Poliklinik spesiali rawat jalan RS UAD Yogyakarta.

INTRODUCTION

Coronavirus disease 19 (COVID-19) is a respiratory infection caused by the Novel Coronavirus (SARS-CoV-2). It has been more than a year that COVID-19 has become a health problem in almost all countries in the world. As of September 13, 2021, in Indonesia there were 4,170,088 confirmed positive COVID-19 cases and there were 139,165 reported deaths (CFR: 3.3%) related to COVID-19 (Emerging Infections Ministry of Health Republic of Indonesia, 2021).

Along with the increasing number of COVID-19 cases, several issues have emerged, including restrictions on the number of outpatients and doctor's practice schedules as well as the efficiency of all resources in hospitals (Harahap and Ikanandia, 2021). In addition, in Indonesia the number of patient visits in hospitals decreased by 46.3% and a 48% decrease in visits was mostly seen in outpatient rooms (Rhatomy and Prasetyo, 2020). This situation has an impact on the decline in the quality of health services for patients with essential chronic diseases and has a major impact on the performance of a hospital.

To avoid excessive backlogs in healthcare now and in the future, the challenge is how to provide high-quality and sustainable healthcare in outpatient clinics during the pandemic, while limiting the potential spread of the virus (Hollander & Carr, 2020 in Barsom et al., 2021). There is a need for a new treatment model that can avoid face-to-face contact between doctors and patients during the current COVID pandemic (Greenhalgh., Wherton., Saw., & Morrison, 2020).

Technological advances offer doctors and patients the opportunity to use technology in an adaptive and differentiated manner, which could lead to the development of new consulting models (Greenhalgh et al, 2018). In a variety of service contexts and clinical specialties, such as diabetes care specialists, pediatric acute care specialists, palliative care specialists, primary care, oncology clinics, and mental health care settings, video is used to conduct consultations in routine health care delivery (Thiyagarajan et al., 2020). This research will focus on the outpatient specialist polyclinic at the Ahmad Dahlan University Hospital, Yogyakarta, especially in the internal medicine specialist polyclinic. The number of patient visits at the internal medicine specialist polyclinic in 2020 was the second highest after obstetrics and gynecology polyclinics, which recorded 1539 visits (BPJS) and 220 visits (general). Currently, UAD Hospital will introduce a telemedicine program as a service innovation product in the form of online consulting services.

When compared to face-to-face consultations, clinical consultations conducted via video visits were associated with higher patient satisfaction and lower costs with no difference in clinical outcomes (Ramaswamy et al., 2020). Patient satisfaction with professional consultations carried out by doctors via video is an important factor and requires further research. If patient satisfaction can be determined, policy makers can be directed to carry out sustainable implementation (Kruse et al., 2017). In addition, patient satisfaction with health services is still an interesting thing to study, because patient satisfaction can affect patient loyalty to health services (including hospitals) and the hospital's need to build long-term relationships with customers (Susanto & Nuryakin., 2018)

The focus of previous research has been related to the use of closed platforms such as Facebook or Microsoft Teams (Greenhalgh., Wherton., Saw., & Morrison, 2020), Skype or Face time (Greenhalgh et al., 2018), and Zoom (Vandekerckhove et al., 2020). WhatsApp is a communication tool that attracts the attention of people around the world and is most widely used, including by doctors and patients. It is undeniable that over the last 10 years, the growth of the internet in Indonesia has increased significantly. This can be seen from the number of users, penetration, and also in terms of connection quality. This fact is also supported by the widespread use of various mobile devices by various levels of society in Indonesia (Nuryakin & Farida, 2016). Hootsuite survey data (We are Social) Indonesian Digital Report (2020) in Indonesia recorded that 84% of Whatsapp users were in the age range of 16 to 64 years and ranked 2nd most after Youtube. In fact, despite the many perceived benefits, little research is available on the level of evidence for recommendations regarding the use of whatsapp in clinical settings and patient care (De Benedictis et al., 2019).

Based on the description of the background above, this phenomenon attracts researchers to raise a research topic entitled "The Effect of Using Video Consultation Via the WhatsApp Platform on Patient Satisfaction at the Outpatient Specialist Polyclinic, Ahmad Dahlan University Hospital, Yogyakarta"

METHOD

Characteristics of Respondents and Research Design

This type of research is a quasi-experimental studies with a non-equivalent control group design pre and post-test approach. The respondents in this study were outpatients at the Internal Medicine Specialist Polyclinic at UAD Yogyakarta Hospital with non-insulin dependent diabetes mellitus: without complications or non -insulin dependent diabetes mellitus: with renal complications requiring intensive monitoring. The primary data source used a direct questionnaire to the respondents, namely the Consultation Satisfaction Questionnaire. The data analysis of this research used Paired sample T-test and Independent T-test.

Sampling Procedure

The sampling technique used is non-probability sampling with the technique taken is purposive sampling. Inclusion

Criteria: Patients who visited had their health checked > 2 times. Patients who have been registered at the outpatient specialist polyclinic, Ahmad Dahlan University Hospital, Yogyakarta. The patient is domiciled in Yogyakarta. Patients with diabetes mellitus, either uncomplicated or with renal complications, who require regular monitoring and follow-up visits (appointments) with an internal medicine specialist. Adult patients aged 20-60 years. Patients with male and female gender. The patient or the patient's family member or the closest person caring for the patient has a cellphone/smartphone with adequate internet network facilities and is able to operate internet-based video services properly. Patients can communicate well. Patients have the ability to give informed consent as research respondents. Exclusion Criteria: Patients who refused to participate. Patients with visual and hearing impairments. During the research process, the patient suddenly lost contact or did not respond. Patients with diabetes mellitus drop out/not willing or unable to participate in the survey after the consultation via video. Video call consultations are carried out with the family according to the patient's wishes (the patient is not present/participated in the consultation). The patient is considered confused/cannot understand. Chronic disease patients with severe mental disorders. The patient or the patient's family is an employee at the Ahmad Dahlan University Hospital, Yogyakarta

Sample size, power and precision

The sample size was 36 outpatients with non-insulin dependent diabetes mellitus: without complications or non-insulin dependent diabetes mellitus: with renal complications requiring intensive monitoring. The sample was divided into 2 groups, namely the control group with 18 respondents and the intervention group with 18 respondents.

Data Collection Steps

After getting a letter of approval from the Outpatient Specialist Polyclinic, Ahmad Dahlan University Hospital, Yogyakarta, the researchers collected research data from January 1, 2022 to February 26, 2022. Respondents in this study were taken by capturing patients who were included in the inclusion criteria when the respondent conducted a face-to-face visit at the internal medicine specialist polyclinic at the Ahmad Dahlan University Hospital, Yogyakarta. Furthermore, the researchers conducted a pretest to the intervention and control groups by using a questionnaire to measure the level of satisfaction when respondents made face-to-face visits and received services at the outpatient specialist polyclinic at UAD Hospital Yogyakarta. Furthermore, the researchers conducted a pretest to the intervention and control groups by using a questionnaire to measure the level of satisfaction when respondents made face-to-face visits and received services at the outpatient specialist polyclinic at UAD Hospital Yogyakarta. Determination of the routine consultation schedule for the control and intervention groups was determined by the researcher and the two specialist doctors based on a number of control and intervention group patients who came together in one face-to-face visit to each specialist doctor at the outpatient polyclinic. So, for the next control, the schedule of regular visits between the intervention group and the control group that did not receive treatment could be arranged on the same day even with a different specialist according to the group that had been divided. The treatment in the form of video consultation in the intervention group was carried out by an internal medicine specialist who previously had a face-to-face and telemedicine practice schedule at the hospital. So, for the next control, the schedule of regular visits between the intervention group and the control group that did not receive treatment could be arranged on the same day even with a different specialist according to the group that had been divided. The treatment in the form of video consultation in the intervention group was carried out by an internal medicine specialist who previously had a face-to-face and telemedicine practice schedule at the hospital. Meanwhile, the control group patients were taken from specialist doctors who were not willing to provide telemedicine services at the Internal Medicine Specialist Polyclinic at UAD Hospital. Because he is a senior doctor and prefers to do face-to-face consultations. 1 day before the promised consultation schedule took place, the research coordinator gave a reminder to patients and specialist doctors about the routine control schedule that must be carried out both in the treatment group and the control group. The video consultation service is carried out in the polyclinic room for internal medicine in the outpatient unit of the Ahmad Dahlan University Hospital, Yogyakarta, according to the schedule of the internal medicine specialist. Internal medicine specialists conducted long-distance consultations with a duration of (20 -30 minutes), while the control group carried out face-to-face consultation activities on the same day as usual, without any special intervention. After that, specialist doctors provide consulting services via video and enter the patient's SOAP data with section O (Objective) filled with "No physical examination was carried out. Patients conduct consultations via video at the Outpatient Specialist Polyclinic. Posttest was carried out after completion of treatment by filling out a questionnaire given to the intervention and control groups to assess the level of client satisfaction.

Data analysis

Univariate analysis was conducted to describe the level of patient satisfaction before being given video consulting services and after being given video consulting services in the intervention and control groups. Test the hypothesis to test the difference in the level of patient satisfaction in video consulting services before and after treatment in the treatment and control groups using the Paired Sample T test statistical test. Analysis to assess differences in satisfaction with medical consultation in intervention and control group patients, using the Independent T test.

RESULTS AND DISCUSSIONS

The level of satisfaction of medical consultations before and after being provided with video consultation services via the WhatsApp platform for patients

The average patient satisfaction before being given video consulting services was 66.33 and the average satisfaction after being given video consulting services was 60.27. Then the scores are grouped into two with the mean value as the cut off point. In table 1 below, the distribution of the medical consultation satisfaction variable before and after being provided with video consulting services via the WhatsApp platform can be explained after the data is grouped.

The results of statistical calculations in table 2. show the number of respondents who experienced changes in the level of satisfaction in the intervention group before and after being

given treatment in the form of medical consultation via video. Respondents who were satisfied with the face-to-face consultation before being given treatment were 10 respondents (55.6%). Meanwhile, after the intervention by providing medical consultation via video using the Whatsapp platform, the satisfaction of medical consultation decreased to 44.4%.

Table 1.
Distribution of Patient Medical Consultation Satisfaction Before and After being given video consultation services via the WhatsApp

Group	Mean	Median	Std.Deviasi	Range	Minimum	Maximum
Pre-test	66,33	67,00	5,30	20	58,00	78,00
Post-test	60,27	59,00	5,64	21	50,00	71,00

Source: Primary Data, 2022

Table 2.
Distribution of Patient Satisfaction Levels Before and After Providing Video Consultation Services Through the WhatsApp Platform for the Intervention Group

Group	Category	Pretest		Posttest	
		N	%	N	%
Intervention (Video Consulting)	Satisfied	10	55,6%	8	44,4%
	Not Satisfied	8	44,4%	10	55,6%

Source: Primary Data, 2022

The level of satisfaction of medical consultation before and after being given face-to-face consultation services to patients

The average patient satisfaction before being given a face-to-face consultation is 71.27 and the average satisfaction after being given a consultation as usual with a face-to-face consultation is 72.00. Then the scores are grouped into two with the mean value as the cut off point. Table 3 below describes the distribution of the satisfaction variable for medical consultation before and after being given consultation as usual through face-to-face, after the data is grouped:

The results of statistical calculations in table 4. Show that in the control group, both the pretest and post-test consultations through face-to-face consultations did not change, where the majority of respondents showed 55.6% dissatisfaction with the medical consultations given face-to-face.

Table 3.
Distribution of Patient Medical Consultation Satisfaction Before and After Face-to-Face Consultation

Group	Mean	Median	Std.Deviasi	Range	Minimum	Maximum
Pre-test	71,27	71,00	5,02	15	65,00	80,00
Post-test	72,00	72,00	5,19	15	65,00	80,00

Source: Primary Data, 2022

Table 4
Distribution of Patient Satisfaction Levels Before and After Face-to-Face Consultation for the Control Group

Group	Category	Pretest		Posttest	
		N	%	N	%
Control (Face-to-Face Consultation)	Satisfied	8	44,4%	8	44,4%
	Not Satisfied	10	55,6%	10	55,6%

Source: Primary Data, 2022

Differences in Patient Satisfaction Levels of Medical Consultation Before and After Providing Video Consultation Services Via the WhatsApp Platform in the Intervention Group

Based on table 5, the average medical consultation satisfaction value in the pretest and posttest in the intervention group is 66.33 > 60.27, so that means descriptively there is a significant difference in the average satisfaction results between pretest and posttest with a difference of 6, 06. In addition, the known value of Sig. (2-tailed) for the intervention group that was given video consultation treatment was 0.000 <0.05 and the t-count value with t-table was found that the t-count value was positive, namely 4.402. For the value of t table, with a value of df (degree of freedom) and a significance value (0.05/2) = 0.025, it is 2.110. This means that the value of t count is 4.402 > t table 2.110. As the basis for decision making, it can be concluded that there is a significant difference from the average between pretest and posttest medical consultation satisfaction in the intervention group. Analysis using Paired Sample T-test showed that in the control group descriptively there was no significant difference in the average satisfaction between pretest and posttest with a difference of 0.73.

Researchers analyzed that there was no change in the average results of pretest and posttest satisfaction in this control group, because in that group respondents only received medical consultation services as usual, namely through direct face-to-face with a specialist for routine control of diabetes experienced. Meanwhile, in the intervention group, there was a significant difference from the average between pretest and posttest medical consultation satisfaction in the intervention group with a difference of 6.06.

The factors that influence the level of satisfaction of respondents' medical consultation in this study after being given treatment in the form of video consultation in the intervention group are closely related to the characteristics of the respondents. Where, the majority of respondents are in the category of old adult age. The assumption of this researcher is supported by the opinion of Sesilia (2020, in Cimperman, Brencic & Trikman., 2016) which revealed that parents generally have chronic diseases such as heart, lung, kidney and other chronic diseases that have the potential to become users of digital health applications. But on the other hand, parents are also conservative users who cannot use advanced technology well. Technological anxiety has a negative effect on the intensity of Tele-Health use compared to younger patients who appear more enthusiastic.

Table 5. Differences in Patient Satisfaction Levels of Medical Consultation Before and After Providing Video Consultation Services via the WhatsApp Platform in the Intervention Group

Medical Consultation satisfaction level	N	Descriptive statistics	Paired t-test		
		Mean (St. Deviation)	T	df	Sig (2-tailed)
Intervention Group Pretest	18	66,33 (5,30)	4,402	17	0,000
Intervention Group Posttest	18	60,27 (5,64)			

Source: Primary Data, 2022

Table 6.
Results of Analysis of Differences in Satisfaction of Medical Consultation on Patients in the Video Consultation Group and Face-to-Face Group

Medical Consultation Satisfaction Level	N	Mean	Std.Deviation	T count	Df	Mean Difference	Sig. (2-tailed)
Intervention Group (Consultation via video)	18	60,28	5,644	6,486	34	11,722	0,000
Control Group (Face to face)	18	72,00	5,190				

Source: Primary Data, 2022

Differences in patient satisfaction in the video consultation group and the face-to-face group

The hypothesis test to test the difference in the level of satisfaction of medical consultation between the two groups of patients, both the intervention and control groups, used the Independent T-test statistical test because the results of the normality test obtained data that were normally distributed. The calculation process uses SPSS 23.0 software for windows. The conclusion of the study is declared significant if the value of Sig. (2-tailed) < 0.05 or P (value) < 0.05. The results of the Independent T-test analysis of patients using video consultation services and patients using face-to-face consultation services can be shown in table 6.

Based on table 6 it can be explained that it is known that the average level of satisfaction of medical consultations in patients who use consulting services via video is 60.28 with a standard deviation of 5.644 and the level of satisfaction of medical consultations in patients who use face-to-face services is 72.00 with a standard deviation 5,190. Thus, it can be concluded that the average satisfaction of patients who use video consulting services is lower than patients who use face-to-face consultation services with the difference between the two groups being 11,722. Based on the table, it is also known that the calculated t value is 6.486 > t table 2.032, with a significance level (Sig. (2-tailed) or p (value) = 0.000 < 0.05. The t table value refers to the formula (α/ 2) with = 0.05 and (df) = 34. (0.05/2) = 0.025, then the value of t table = 2.032. As the basis for decision making, it can be concluded that H0 is rejected and Ha is accepted. So it can also be concluded that the satisfaction of medical consultation between the two groups showed a significant difference between the control group that was not given treatment and the intervention group that was given video consultation services. In other words, this significant difference shows that there is an effect of using video consultations on the satisfaction of patients' medical consultations at the outpatient specialist polyclinic of UAD Hospital Yogyakarta.

Researchers analyzed that the factors that influenced the lower satisfaction of medical consultations in patients who consulted via video were more because medical consultation via video was a new service for patients, so that most patients were not familiar with the use of medical consultation services via video as an alternative face-to-face consultation. face at UAD Hospital. The use of video consulting services at the outpatient specialist polyclinic in this study was not based on the patient's choice, but on the advice given by the doctor so that the patient would accept the consultation service. Considering the promotion of telemedicine services which was carried out for almost 6 months, there were no results for an increase in the number of consultation visits through the video. In addition, another cause is that patients with diabetes mellitus who come for routine control to the polyclinic specialist in internal medicine are elderly. Most of them are conservative users who cannot use advanced technology well. Technological anxiety can arise and have a negative influence so that it affects patient satisfaction. Thus, the initial assumption which states that there is an effect of using medical consultation via video using the WhatsApp platform on patient satisfaction at the Polyclinic has been proven.

LIMITATIONS OF THE RESEARCH

The number of patients who carry out routine check-ups to the outpatient polyclinic specialist in internal medicine at UAD Hospital has decreased. The process of finding patients who matched the inclusion criteria in both the control and treatment groups took a long time. This is because there are not many patients who meet the inclusion criteria in one day. In addition, internal medicine specialists must self-isolate, resulting in no patients visiting the internal medicine polyclinic. It is difficult to find respondents for the intervention group compared to the control group. Because they are not familiar with video consulting and not many are willing to receive consulting services through the video, even though it is a trial. The sample in this study was small so the results of this study cannot be generalized to the same conditions.

CONCLUSION AND RECOMMENDATION

Based on the results of the analysis described in this study, the results are as follows:

1. There was a significant difference in the mean between pretest and posttest medical consultation satisfaction in the intervention group with a difference of 6.06. Meanwhile, in the control group, there was no significant difference in the average satisfaction between the pretest and posttest with a difference of 0.73.
2. There was a significant difference between the satisfaction of medical consultation in the control group that was not given treatment and the intervention group that was given video consulting services. The average satisfaction of patients who are given medical consultation via video is lower than that of a face-to-face consultation.
3. There is an effect of using video consultation on the satisfaction of the patient's medical consultation at the outpatient specialist polyclinic of UAD Yogyakarta General Hospital.

Suggestion

The results of this study can be a recommendation for UAD Hospital to increase the promotion of telemedicine services so that it is better known by the wider community the number of visits through video consultations can increase. It is also necessary to provide training to specialist doctors on how to conduct medical consultations via video in accordance with standards, be accountable and pay attention to medical ethical values related to patient confidentiality.

This study only looks at the effect of using video consultations on the satisfaction of patients' medical consultations at the Internal Medicine Outpatient Specialist Polyclinic, so it is hoped that future researchers can conduct research at other outpatient polyclinics such as the Surgery Polyclinic and compare it with patients in the Internal Medicine Polyclinic. associated with routine treatment. In addition, further research will further develop the use of different research methods to increase the satisfaction of medical consultations for diabetes mellitus patients at the Outpatient Specialist Polyclinic with True Experiment research. The results of this study cannot be generalized due to the small number of samples, so that in the future it is necessary to increase the number of samples and the sampling technique used may be more towards random sampling.

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Conflic of Interest

Threre is no conflic of interest for this manuscrip.

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