

Connection Digitalization System Online Queues and Accessibility with Satisfaction Patient Elderly at the Community Health Center Jatibening Bekasi City in 2026

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Abstract.

Improvement population carry on age (elderly) demands service quality , inclusive and responsive health care to need group age said . Digital transformation , including system online queue at the facility service health level First , it is expected increase efficiency and satisfaction patients . However , limitations digital literacy and conditions cognitive elderly potential hinder utilization . Research This aim analyze connection digitalization system online queues and accessibility service health with satisfaction patient elderly at the Community Health Center Jatibening Bekasi City in 2026. Study This use approach quantitative with cross-sectional design . Population study This is elderly in the work area Community Health Center Jatibening and population affordable is elderly people who come seek medical treatment to Community Health Center Jatibening with using visit data patient elderly January 2026. The sample study This amounting to 158 samples with use Slovin's formula . Collection technique sample done by accidental sampling. Data collected use questionnaire and analyzed in a way univariate , bivariate (Chi-Square test), and multivariate (regression logistics multiple). The results show majority respondents is elderly young (60.1%), educated high (88.6%), and not working (89.2%) with 78.5% stating No satisfied to system online queue . Analysis results show there is connection significant between digitalization system online queues ($p=0.042$; $OR=3.079$) and accessibility ($p=0.026$; $OR=3.705$) with satisfaction patient elderly . Accessibility elderly to system online queue is variables dominant influencing satisfaction patient elderly . In conclusion that digitalization system online queues and accessibility elderly relate with satisfaction patient elderly and accessibility become factor dominant , so that implementation digitalization need accompanied by improvement accessibility and approach friendly elderly .

Keywords : Accessibility , Service Digitalization , Satisfaction Patient Elderly and System Online Queue .

I. INTRODUCTION

The increasing number of elderly people is a significant challenge to health development in various countries, including Indonesia. World Health Organization The World Health Organization (WHO) states that increasing life expectancy and declining fertility rates have caused the proportion of the elderly population to continue to increase annually [1]. This condition has consequences for the increasing need for quality, sustainable, and easily accessible health services for the elderly. The elderly are a vulnerable group who tend to experience various health problems due to the aging process, such as chronic diseases, limited mobility, decreased sensory function , and

cognitive impairment. Therefore, the health care system needs to be designed in an inclusive and responsive manner to the needs of the elderly.

The Indonesian government, through Presidential Regulation No. 88 of 2021 concerning the National Strategy for Elderly Care, affirms that older adults have equal rights to access quality, safe, and accessible healthcare services. The National Strategy for Elderly Care also emphasizes the importance of improving the quality of life for older adults through elderly-friendly healthcare services that prioritize the rights of vulnerable groups. In this context, primary healthcare facilities, such as Community Health Centers (Puskesmas), play a strategic role as the spearhead of public healthcare services.

Primary health care services at community health centers (Puskesmas) serve not only as treatment facilities but also as promotional, preventive, curative, and rehabilitative services for the community, including the elderly. Along with advances in information and communication technology, primary health care services are undergoing a digital transformation as part of efforts to improve the quality of national health services. Digital health transformation is a priority for the Indonesian Ministry of Health, aimed at strengthening an effective, efficient, and integrated health system.

One form of digital transformation implementation in healthcare facilities is the implementation of an online queuing system. This system allows patients to register online and obtain a queue number before arriving at the healthcare facility. This system is expected to reduce physical queues, shorten patient waiting times, increase service efficiency, and reduce waiting room congestion. Waiting time is a key factor influencing patient satisfaction with healthcare services [2].

The digitalization of healthcare services is also considered capable of increasing transparency and certainty of care for patients. The use of digital technology in healthcare can improve the quality of care when implemented appropriately and inclusively. Furthermore, the COVID-19 pandemic has accelerated the adoption of digital technology in the healthcare sector, including the use of health apps, telemedicine, and online queuing systems in primary healthcare facilities [3].

Despite its numerous benefits, implementing digital systems in healthcare still faces challenges, particularly for the elderly. Elderly individuals often experience limitations in using digital technology due to low digital literacy, decreased vision and hearing, and limited ability to adapt to new technologies. The elderly are the most vulnerable group to the digital divide compared to other age groups [4].

In addition to individual factors, accessibility of healthcare services is also a crucial factor in the successful implementation of digital healthcare services. Accessibility of healthcare services for the elderly encompasses not only the availability of services but also ease of procedures, access to information, social support, and the ability of the elderly to utilize healthcare services independently. A healthcare system that is too complex and unfriendly to the elderly can reduce healthcare utilization and impact patient satisfaction in the elderly [1].

Jatibening Community Health Center in Bekasi City has implemented an online queuing system as part of its efforts to improve the quality of digital-based healthcare services. However, in practice, there is still variation in the ability of elderly patients to use the online queuing system. Some are able to use the system independently, while others still rely on assistance from family or healthcare workers. This condition indicates that the implementation of digital healthcare services is not yet fully accessible to all elderly patients. Differences in ability to access the online queuing system have the potential to affect the service experience and satisfaction levels of elderly patients. Patient satisfaction is an important indicator in assessing the quality of healthcare services because it is related to trust in healthcare facilities, adherence to treatment, and the sustainability of healthcare service utilization. In the elderly group, satisfaction with healthcare services is influenced not only by clinical outcomes, but also by the ease of service procedures, clarity of information, the attitude of healthcare workers, and comfort during the service process.

Based on this description, research into the relationship between the digitalization of the online queuing system and accessibility and patient satisfaction among elderly patients at the Jatibening Community Health Center in Bekasi City is crucial. This research is expected to provide insight into the effectiveness of implementing digital health services for the elderly and serve as evaluation material for developing a more inclusive, elderly-friendly health care system that is oriented toward improving the quality of primary health care.

II. METHOD

This study uses a quantitative approach with a *cross-sectional design* to analyze the relationship between the digitalization of the online queue system and the accessibility of health services with the satisfaction of elderly patients at the Jatibening Community Health Center, Bekasi City in 2026. The *cross-sectional design* was chosen because the study was conducted at one observation time to see the relationship between the independent variables and the dependent variable.

The study was conducted at the Jatibening Community Health Center in Bekasi City from February to March 2026. The population in this study were all elderly people in the Jatibening Community Health Center working area and the limited population were elderly people who visited and received health services at the Jatibening Community Health Center during the January 2026 period. The determination of the number of samples was carried out using the Slovin formula with an error rate of 5%, resulting in a sample size of 158 respondents. The sampling technique used *accidental sampling*, namely respondents were selected based on elderly patients who were present at the time of the study and met the inclusion criteria.

Inclusion criteria for this study included elderly patients aged 60 years and above, able to communicate well, having previously used or received services through the online queuing system, and willing to participate as research respondents.

Exclusion criteria included elderly patients with serious illnesses or communication disorders that could hinder the interview and questionnaire completion process.

The independent variables in this study were the digitalization of the online queuing system and accessibility of healthcare services, while the dependent variable was elderly patient satisfaction. Data collection was conducted using a structured questionnaire based on the indicators of each research variable. Prior to use, the research instrument underwent validity and reliability testing to ensure its quality.

Data analysis was carried out in stages using the *Statistical program. Package for the Social Sciences (SPSS)*. Univariate analysis was used to describe the frequency distribution of respondent characteristics and research variables. Bivariate analysis using the Chi-Square test was conducted to determine the relationship between independent variables and elderly patient satisfaction. Furthermore, multivariate analysis using multiple logistic regression was conducted to determine the variables most dominantly influencing elderly patient satisfaction.

This research has paid attention to the ethical principles of health research, including *informed consent*, *consent*, confidentiality of respondent identity, the principles of *beneficence*, and *non-maleficence*. All respondents were given an explanation of the research objectives before the data collection process was carried out.

III. RESULTS AND DISCUSSION

1. Respondent Characteristics

The results showed that the majority of respondents were in the young elderly category aged 60–69 years (60.1%). Based on education level, the majority of respondents had a higher education (88.6%), while based on employment status, the majority of respondents were unemployed (89.2%). These characteristics indicate that the majority of respondents were elderly who were still in the advanced productive age group and had a relatively good level of education.

Education level can influence a person's ability to understand and use digital technology in healthcare. Elderly individuals with higher levels of education tend to have better technological adaptability than those with lower levels of education. However, the ability to use digital technology in older adults is still influenced by physical condition, experience with technology, and environmental support [5].

2. Digitalization of Online Queue Systems and Elderly Patient Satisfaction

(78.5%) expressed dissatisfaction with the online queuing system. Respondents complained about difficulties in understanding the procedures for using the online queuing application, limited service information, and the need for assistance from family or health workers during the registration process.

Analysis results bivariate using the Chi-Square test shows there is connection significant between digitalization system online queue with satisfaction patient elderly ($p=0.042$; $OR=3.079$). These results show that elderly people who experience obstacle

in use system online queues have risk more big experience dissatisfaction to service health .

System online queues basically aim increase efficiency service health with reduce time waiting and congestion queue patient . Waiting time service is one of the factor important things that influence satisfaction patient to service health . However , the implementation digital technology in groups elderly need approach special Because elderly often experience limitations in use technology [2].

Study This in line with Gell et al. 's research explains that group elderly Still experience digital divide due to limitations literacy technology and low ability use digital devices [6]. Elderly tend need help addition in access service health based technology , including system online queue at the facility service primary health .

In addition , digital transformation of services health that is not accompanied by approach friendly elderly potential cause obstacle new in access service health . Implementation digitalization service health must done in a way inclusive so as not to increase inequality access services to groups vulnerable [3].

3. Accessibility of Healthcare Services and Elderly Patient Satisfaction

Research result show that accessibility service health own connection significant with satisfaction patient elderly ($p=0.026$; $OR=3.705$). Elderly with accessibility service poor health Good own opportunity more big experience dissatisfaction to service health .

Accessibility service health in study This covering convenience procedure service , convenience get information , ability use digital systems , support family , and assistance officer health during the service process ongoing . Some respondents Still experience difficulty in understand system online queue so that need mentoring during the service process .

Accessibility service health for elderly covers aspect physical , administrative , informational , and support social enabling elderly get service health in a way safe and easy reachable [1]. Service health that is not friendly elderly can lower quality experience services and have an impact on low satisfaction patient .

Obstacle use digital technology in the elderly can cause limitations access to service health . Therefore that , success implementation service digital health no only determined by sophistication technology , but also by convenience access and support provided to users elderly [7].

Regression results logistics multiple show that accessibility is variables dominant influencing satisfaction patient elderly compared to digitalization system online queue . Findings This show that success implementation service digital health is greatly influenced by the ability facility health in create system easy service understood and accessed by the group elderly . Community Health Center as facility service health level First need develop service health more digital based inclusive and friendly elderly . Efforts that can be made done covering simplification appearance application online queue , provision officer companion special elderly , education use digital services , as

well as still provide alternative manual service for elderly people who experience difficulty use technology .

Digital transformation of services health in groups elderly must notice aspect equality access service health so as not to create gap new in utilization service health . With Thus , the implementation system online queue at the facility service primary health is expected can increase quality service at a time give experience better service Good for patient elderly .

Research result show that digitalization system online queue related significant with satisfaction patient elderly at the Community Health Center Jatibening, Bekasi City. Findings This show that implementation system online queues have influence to experience perceived service patient elderly . System online queues basically designed For increase efficiency service and reduce time Wait patients . However , in the group elderly , implementation digital system no always give experience positive if No accompanied by friendly approach elderly .

Majority respondents in study This state No satisfied to system online queue . Conditions the show that Still there is obstacle in implementation digitalization service health at the level primary care . Barriers the can in the form of difficulty understand application , limitations use digital devices , and the lack of mentoring during the service process . Findings This in line with research by Gell et al. (2021) which states that elderly is vulnerable groups experience digital divide due to limitations literacy technology .

Research result this also shows that accessibility own connection significant with satisfaction patient elderly and become variables dominant in analysis multivariate findings This show that success digitalization service health No only determined by the existence of technology , but also by capabilities system service in ensure that technology the easy accessed and understood by users elderly .

Accessibility service health for elderly covers various aspects , such as convenience procedure service , clarity information , support family , help officer health , as well as convenience use digital technology . WHO emphasized that service friendly health elderly must consider limitations physical , sensory , and cognitive in groups age continue [1].

Some elderly people in study This Still need help family or officer health For use system online queue . Conditions the show that support social own role important in increase accessibility service digital health for elderly . Support social and mentoring become factor important in reduce digital divide in groups vulnerable [3].

In addition , the factor education can also influence ability elderly in use service digital health . Elderly with level education more tall tend own ability greater digital literacy Good compared to elderly with education low . However however , although majority respondents own education high , level dissatisfaction to system fixed online queue Enough high . This is show that success implementation digitalization service

health No only influenced factor individual , but also influenced quality system service and convenience use technology .

Community Health Center as facility service health level First need develop approach better service inclusive and friendly elderly in implementation system online queue . Approach the can done through simplification appearance application , provision officer companion , education use digital systems , as well as still provide alternative manual service for elderly people who experience difficulty use technology

Research result This own implications important for development policy digital transformation of services health in Indonesia. Digitalization service health must implemented in a way inclusive so as not to create gap access service health for group vulnerable , especially elderly . Digital transformation of services health need balanced with strengthening digital literacy of society and improvement capacity power health in give service based friendly technology elderly .

IV CONCLUSION

Study This show that digitalization system online queues and accessibility service health own connection significant with satisfaction patient elderly at the Community Health Center Jatibening Bekasi City in 2026. Research results show that part big respondents Still feel No satisfied to implementation system online queues implemented at Community Health Centers . Dissatisfaction the influenced by various obstacles experienced elderly , especially limitations in understand use digital technology , difficulties access information services , as well as need help from family and officer health during the service process ongoing .

Analysis results show that digitalization system online queues have connection significant with satisfaction patient elderly . This is show that elderly people who experience difficulty in use system online queues have opportunity more big For feel No satisfied to service health . Findings This confirm that implementation digital technology in service health Not yet fully can answer need group elderly if No accompanied by friendly approach user .

In addition , research this also shows that accessibility service health own connection significant with satisfaction patient elderly . Variable accessibility even become factor dominant in analysis multivariate . Condition the show that success implementation service digital health no only influenced by the existence of technology , but also influenced by convenience access service , clarity information , support social , as well as ability elderly in utilise service digital health .

Majority respondents in study This is elderly aged 60–69 years , educated high , and not work . Although part big respondents own level adequate education well , in fact Still Lots elderly people who experience difficulty in use system online queue . This is show that factor age , experience use technology , conditions physical , and support environment participate influence ability elderly in adapt with digital transformation of services health .

Based on results research , implementation system online queue at the facility service primary health care is necessary accompanied by effort improvement accessibility and approach better service friendly elderly . Community Health Center need provide mentoring special , education use digital services , simplification procedure services , as well as alternative manual service for elderly people who experience difficulty use technology . With Thus , digital transformation of services health expected capable increase quality service health at a time create inclusive , easy service accessible , and needs - oriented patient elderly .

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