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THE RELATIONSHIP BETWEEN WORKING HOURS AND EMPLOYMENT STATUS TO OUTPATIENT CARE IN EAST JAVA: DATA ANALYSIS OF THE 2024 NATIONAL SOCIO-ECONOMIC SURVEY

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Abstract

The use of outpatient health services is an important indicator to measure access to health services, but it is still influenced by socioeconomic factors, especially occupational characteristics. Employment status and working hours can be a structural barrier to the use of health services, especially for people who are of working age. This study aims to examine the relationship between working hours, employment status, and the use of outpatient health services in the province of East Java. This study uses an observational analytical design with a cross-sectional approach using data from the 2024 National Socio-Economic Survey (SUSENAS). The analysis was conducted on 10,895 participants using the chi-square test, the wilcoxon test and binary logistic regression. The results of the analysis revealed that education level ($p<0.001$), employment status ($p<0.001$) and main working hours ($p=0.039$) were significantly related to the use of outpatient services. Working individuals had a lower chance of utilizing outpatient services (OR=0.41; 95% CI: 0.28–0.62; $p<0.001$), as were individuals with longer working hours. Primary ($p=0.014$) and secondary ($p<0.001$) education were associated with lower opportunities for utilization of outpatient services, while residential areas showed no significant association ($p=0.562$). This study concludes that the use of outpatient services is influenced by work dynamics and time constraints, so that health service policies that are more adaptive to the working conditions of the community are needed.

Keywords: Outpatient Utilization, Employment Status, Working Hours, Health Services, SUSENAS

Introduction

The use of outpatient health services is an important indicator of health service provision and reflects people's attitudes towards treatment. Although the need for health services is a major factor, the use of outpatient services is also strongly influenced by socioeconomic circumstances, especially occupational characteristics [1]. Employment status and working hours affect the availability of time to access healthcare facilities, and this can create structural barriers to the use of outpatient health services, especially among working-age populations.[2].

Previous research has explained that employment status is an important determinant in the use of health services, but its influence is influenced by the health context of each country. Individuals who experience unemployment or job insecurity show changes in the pattern of utilization of health services, including outpatient care. Change occurs through several mechanisms such as declining income, anxiety about economic stability and changes in health insurance ownership so that in some contexts individuals actually postpone outpatient visits even though they have health needs [3].

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Similar research from the United States shows that job insecurity is related to the utilization of health services, including outpatient care. Individuals with unstable working conditions tend to delay visits to health facilities or change the type of services used which are affected by economic uncertainty and concerns about costs or lost working time. This confirms that the employment aspect not only affects economic status, but also the decision to access health services [4]. Other research from Europe confirms that changes in employment status, particularly the transition to unemployment, are followed by significant changes in the use of outpatient services. The decline in the use of outpatient services after unemployment is associated with a loss of access to work-based health services and limited substitution by public services. This study explains that employment status is a dynamic factor that can change the pattern of health service utilization over time [5].

Because of this, there are shortcomings in research related to the lack of tangible evidence examining the impact of working hours and types of work on the use of outpatient health services at the provincial level, using national survey data. This condition is important because East Java is one of the provinces with high economic activity and a large number of people of working age, which means that fluctuations in employment can have a significant effect on access to health services.

This study focuses on the relationship between working time, employment status, and the use of outpatient health services in the province of East Java using data from the National Economic Survey (SUSENAS). Specifically, this study aims to identify differences in the utilization of outpatient services based on variations in working hours and employment status, after controlling for other sociodemographic factors.

Method

The approach in this study uses cross-sectional and analytical observation design. This design was made to determine the relationship between sociodemographic factors and working time with the use of outpatient services in the same time period. The population of this study consists of all residents over 10 years old in East Java Province who are included in the 2024 National Economic Survey (SUSENAS). The sample in this study included all participants who met the inclusion requirements, namely those who had complete information about the variables of outpatient service use, sociodemographic characteristics, employment status, and working hours. The selection of samples was carried out based on the SUSENAS survey design determined by the Central Statistics Agency, by applying the multistage stratified sampling method, to ensure that the samples reflect the conditions at the provincial level.

The data source used is the SUSENAS 2024 secondary database collected by BPS. Data were collected through live interviews using the standard questionnaire VSEN24. K, which includes data on demographics, education, health, and employment. The dependent variable in this study was the use of outpatient services, which was assessed by asking whether respondents had used outpatient services for a certain period of time, with the categories 0 = no outpatient service use and 1 = outpatient service use. Independent variables include residential areas classified into urban and rural, education level grouped into non-school, elementary to junior high school, high school secondary education and higher education Diploma to S3 based on the highest level of education or being followed, employment status categorized as non-working, working and non-labor force based on respondents' main activities during the past week, working hours are measured as the number of working hours of the main job and of all work in the last week in hours as well as health complaints measured based on the presence of health complaints in the last month. The research instrument uses the SUSENAS questionnaire VSEN24K which has been standardized by BPS and has national validity.

The use of RStudio version 4.4.3 (R Foundation for Statistical Computing, Vienna, Austria) is required for all data processing operations. Data were analyzed sequentially using descriptive, bivariate and multivariate methods. Descriptive analysis serves to identify the frequency distribution and proportion of each variable. For bivariate analysis, a Chi-square test was performed to evaluate the relationship between categorical variables and outpatient service use, while the Wilcoxon test was used to evaluate numerical variables that indicated working hours because the distribution of data was non-standard with many zero values. Then, a multivariate analysis using binary logistic regression was performed to find factors related to the use of outpatient services. The results of the analysis are displayed in the form of odds ratio (OR) with a 95% confidence interval and a significance level of $\alpha = 0.05$.

Results

Table 1. Characteristics of Respondent Distribution

Characteristics	n	%
Outpatient Utilization		
Not outpatient	9.683	88.87
Outpatient	1.212	11.12
Region of Residence		
Urban	3.663	33.62
Rural	7.232	66.37
Education Level		
No school	2.984	27.62
Elementary (Elementary-Junior High)	5.299	49.05
Senior High (SMA)	1.906	17.64
Higher (Diploma-S3)	614	5.68
Employment Status		
Not working	266	3.31
Work	6.148	76.58
Non-labor force (taking care of household, school/college, unable to work)	1.614	20.10
Total	10.895	100.00

Table 1 shows that most of the respondents did not use outpatient services as many as 9,683 respondents (88.87%) while respondents who used outpatient services were 1,212 respondents (11.12%). The majority of respondents were in rural areas, namely 7,232 respondents (66.37%). The education level of the respondents was dominated by elementary and junior high school basic education as many as 5,299 respondents (49.05%) and some respondents with working status as many as 6,148 respondents (76.58%).

Table 2. Relationship of Categorical Variables with Outpatient Service Utilization (Chi-Square Test)

Variabel	p-value	Keterangan
Region of residence	0.562	Insignificant
Education level	< 0.001	Significant
Employment status	< 0.001	Significant

*$p \leq 0.05$ was considered to be statistically significant

Table 2 shows that outpatient service use and employment status are positively related to education level, as produced by chi-square analysis with a significant p-value of < 0.001. On the other hand, the residential area did not show a significant relationship with the utilization of outpatient services, with a value of p = 0.562.

Table 3. Difference in Number of Working Hours Based on Outpatient Utilization (Wilcoxon Test)

Working Hours Variable	Median (Q1-Q3) Outpatient	Median (Q1-Q3) Outpatient	p-value
Main Working Hours	20 (40)	0 (28)	< 0.001
Total Working Hours	24 (48)	0 (35)	< 0.001

*p≤0.05 was considered to be statistically significant

Table 3 shows that the results of the Wilcoxon test show that there was a significant difference in the number of hours worked between respondents who used outpatient services and those who did not. The median of primary working hours in respondents who did not use outpatient services was 20 hours per week with a range between quartiles of 0-40 hours, while in respondents who used outpatient services the median working hours were 0 hours per week with a range between quartiles of 0-28 hours. In addition, the median total working hours for respondents who do not use outpatient services is 24 hours per week with a range between quartiles of 0-48 hours, while for respondents who use outpatient services, the median total working hours is 0 hours per week with a range between quartiles of 0-35 hours, with a p-value of < 0.001

Table 4. Results of Multivariate Logistics Regression Analysis of Factors Related to the Utilization of Outpatient Services

Variable	OR	95% Cl	p-value
Elementary Education (SD-SMP)	0.76	0.61 – 0.95	0.014
Secondary Education (SMA)	0.55	0.41 – 0.74	< 0.001
Higher Education (Diploma – S3)	0.73	0.49 – 1.09	0.132
Employment Status	0.41	0.28 – 0.62	< 0.001
Non-labor force (taking care of household, school/college, unable to work)	0.40	0.28 – 0.59	< 0.001
Main Working Hours	0.99	0.99 – 1.00	0.039
Rural Areas	0.87	0.71 – 1.07	0.192

*p≤0.05 was considered to be statistically significant

Table 4 shows the results of multivariate logistic regression analysis that the level of elementary and junior high school and high school secondary education has a significant relationship with the utilization of outpatient services with OR values of 0.76 (95% CI: 0.61–0.95) and 0.55 (95% CI: 0.41–0.74), respectively. Employment status and non-labor force categories also showed a significant association with outpatient service utilization, with OR values of 0.41 (95% CI: 0.28–0.62) and 0.40 (95% CI: 0.28–0.59), respectively. In addition, primary working hours showed a significant association with the utilization of outpatient services with an OR value of 0.99 (95%CI: 0.99–1.00). Meanwhile, Diploma–S3 higher education and rural areas did not show a significant relationship with the use of outpatient services.

Discussion

Based on the results of SUSENAS data analysis, the use of outpatient services in East Java shows a relatively low proportion, this shows that most people do not view outpatient services as part of preventive health maintenance behaviors that are carried out regularly, but as accessible services, especially when health complaints have been felt. Furthermore, the results of the study show that sociodemographic characteristics and working conditions are related to the use of outpatient services. Individuals with lower levels of education, individuals with employment status and those with longer working hours tend to use outpatient services less frequently. In the context of Indonesia, where the health system still faces the challenge of equitable distribution of services [6].

This low utilization reflects various phenomena in the public health system, including the relatively good level of public health so that there is not much need for health services, barriers to access to health facilities both geographically, financially and socially, lack of awareness or the need for regular health check-ups, and the tendency to address health problems independently or traditionally [7]. The low utilization of outpatient services in this study is due to a combination of information, perception, and socio-economic conditions of the community. Limited information about service schedules and procedures, perception of service quality, as well as time constraints and transportation costs are factors that hinder people from accessing outpatient services, even though the availability of health facilities is considered relatively adequate [8].

Based on the results of the analysis, clear and communicative health service information from health workers is an important component that affects the perception of service quality. When healthcare workers explain the diagnosis condition, examination procedures, and treatment plan in detail, patients feel more informed and confident in the services provided. The perception of service quality is also greatly influenced by the waiting time experienced by patients. Studies show that patients who wait more than an hour tend to rate the quality of service lower compared to patients who are served faster [9]. This is reinforced by research in Kenya that found that long wait times were significantly associated with decreased patient satisfaction and reluctance to recommend the service to others. In addition, trust in health workers is formed through a polite attitude, effective communication, and respect for patient privacy during the consultation process. When privacy is maintained and patients feel heard, the level of trust and positive assessment of service quality increases significantly [10]. In addition, some people choose other alternatives such as self-medication or non-community health facilities, which reflect certain preferences and habits in seeking health services. Sociopsychological factors also play an important role, especially negative perceptions about waiting times and trust levels of health workers, which can reduce public interest in utilizing formal outpatient services [8].

These findings are in line with research in Ethiopia that shows that the low utilization of primary health services is influenced by geographical barriers, economic limitations, and suboptimal diagnostic capacity in primary care facilities [11]. Thus, increasing the utilization of outpatient services requires interventions that focus not only on the availability of facilities, but also on improving the quality of information, increasing accessibility, and taking into account social, economic, and psychological factors of the community.

Based on the theory *of Andersen's Behavioral Model of Health Service Use*, the utilization of outpatient services in this study is influenced by a combination of predisposing *characteristics, enabling resources* and *need factors.* In terms of predisposing factors, where education level shows an important role in shaping health service seeking behavior, where the proportion of utilization is actually higher in the non-school group than in the higher educated group and the results of the advanced analysis show that individuals with primary to secondary education have a lower chance of utilizing outpatient services compared to the outpatient group [12] Conceptually, higher educated individuals tend to have better health literacy, self-management skills for minor complaints and access

to alternative non-conventional services such as private services and digital consultations, resulting in lower dependence on general outpatient services [6]. In contrast, the poorly educated group may have a higher perception of health needs due to limitations in assessing the severity of symptoms, making it more likely to seek formal health services [13].

These findings are in line with several previous studies in Indonesia and middle-income countries that showed that the low-educated group is more likely to use public health services, while the higher-educated group tends to use alternative services outside of the public outpatient system [14]. This difference is also influenced by the characteristics of Indonesia's health system that provides low-cost public outpatient care as well as employment factors and time constraints in the higher educated group. In this context, these results confirm the need for different promotive and preventive approaches between educational groups, including strengthening early detection in low-educated groups as well as the use of digital channels and the integration of workplace-based health services for secondary and tertiary education groups [15].

In enabling resources, employment status and working hours play a role as barriers to access to health services. Individuals who work longer working hours tend to use outpatient services less often due to time constraints and rigidity of work patterns, especially in the informal sector. Long working hours not only represent time constraints, but also correlate with physical and mental exhaustion, the risk of lost income, as well as economic pressures that influence an individual's decision to seek health care [16]. The results of the analysis confirmed that respondents with higher working hours had a lower tendency to perform outpatient treatments, which was reflected in the significant difference in average working hours between the user and non-service user groups. This condition suggests that workers with high workloads tend to delay or avoid the use of health services due to considerations of lost income and reduced physical capacity due to high workload [17]. In contrast, the out-of-work or non-labor force groups showed a higher tendency to use services, indicating that time availability is an important supporting resource in health-seeking behavior, especially in labor market structures with limited social protection [18].

The high opportunity cost results in a loss of income, thus strengthening the individual's economic priorities over the health needs themselves [19]. Meanwhile, the absence of meaningful differences between urban and rural areas shows that geographical access alone is no longer the main determinant of the utilization of outpatient services, but is influenced by other factors such as economic conditions, transportation availability and individual perceptions of health service needs [20]. These findings are in line with previous research in East Java that showed that the gap in access to basic health services between urban and rural areas tends to narrow, especially in primary health services. Where the utilization of health centers between urban and rural areas, the expansion of primary health service coverage and the implementation of health insurance policies have contributed to reducing geographical barriers, especially for basic outpatient services [21].

In terms of need factors, the existence of health complaints is related to reduced working hours and encourages individuals to pay more attention to their health conditions, which reflects that medical needs remain the main driver in the utilization of health services [22]. Although *predisposing characteristics* and *enabling resources* contribute to shaping the tendency to utilize health services, an individual's decision to access outpatient services is ultimately triggered more by health needs that are felt and experienced directly. Within the framework of *Andersen's Behavioral Model*, perception of illness (*perceived need*) and actual health conditions (*evaluated need*) are the most direct determinants in encouraging individuals to seek health services, especially when complaints begin to interfere with physical activity and ability to work daily [23].

In addition, the findings show that health conditions have a direct impact on the ability to work, where respondents who report health complaints have lower working hours than individuals without complaints. The decline in work capacity due to health problems increases individual awareness of the

importance of medical care, so that health needs are no longer perceived as an option, but rather as an urgent need. The relationship between medical needs and treatment decisions is also reflected in the significant difference in working hours between groups that utilize outpatient services and those that do not, where individuals with lower working hours tend to come from groups with health problems, so that treatment decisions are more influenced by the severity and impact of health conditions on daily activities than by the availability of facilities alone [24].

Overall, these findings confirm that the utilization of outpatient services is determined not only by the availability of services, but also by the complex interactions between individual characteristics, supporting resources and perceptions of health needs.

Conclusion

This study shows that the use of outpatient health services in East Java province is still at a low level and is greatly influenced by the state of work and working hours. Employed and unemployed individuals tend to use outpatient healthcare less often than those who do not, suggesting that the work aspect is a barrier to accessing healthcare. In addition, working hours also have a negative relationship with the utilization of outpatient health services, where longer working hours reduce the likelihood of visiting outpatient services, thus confirming that time constraints are an important factor in influencing health behavior.

Primary and secondary education levels were associated with lower chances of utilizing outpatient services compared to the out-of-school group, while higher education did not show a significant relationship. Residential areas were also not significantly related to the utilization of outpatient services, indicating that the difference in geographic access between urban and rural areas in East Java was not a major determinant. Overall, the results of this study confirm that the use of outpatient services is more influenced by work dynamics and time availability than geographical factors.

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