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Determinants of Internal Medicine Outpatient Service Utilization at Klinik Utama Kasehat Walafiat, Aceh Besar, Indonesia: A Cross-Sectional Study

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Abstract

Utilization of specialist outpatient services is an important indicator of healthcare access and health-seeking behavior. Despite the availability of Internal Medicine Specialist outpatient services at Kasehat Walafiat Primary Clinic, service utilization remains suboptimal. Understanding the factors associated with healthcare utilization is essential for improving access and service planning. This study aimed to examine the associations of health beliefs regarding specialist services, enabling access factors, and healthcare need factors with the utilization of Internal Medicine Specialist outpatient services at Kasehat Walafiat Primary Clinic, Aceh Besar, Indonesia. A quantitative cross-sectional study was conducted among adults residing within the clinic's service area. Data were collected using a validated and reliable structured questionnaire and analyzed using descriptive statistics and binary logistic regression. The findings showed that health beliefs regarding specialist services, enabling access factors, and healthcare need factors were significantly associated with the utilization of Internal Medicine Specialist outpatient services. Among the study variables, healthcare need factors demonstrated the strongest association with service utilization. These findings suggest that the utilization of specialist outpatient services is influenced by individual perceptions of specialist care, access-related conditions, and perceived healthcare needs. Efforts to improve specialist outpatient service utilization should focus on strengthening community health education, improving access to healthcare services, simplifying service procedures, and promoting the early detection and continuous management of chronic health conditions.

1. Introduction

Outpatient specialist services play an important role in healthcare systems by providing consultation, diagnosis, monitoring, and follow-up care for conditions that do not require inpatient treatment [1]. Internal medicine specialist outpatient services are particularly important because they manage chronic and non-communicable diseases that require continuous monitoring and long-term treatment [2]. Many patients present with conditions such as hypertension, diabetes mellitus, cardiovascular disorders, metabolic diseases, and other chronic illnesses that necessitate regular medical supervision [2]. Utilization of these services reflects not

only medical need but also an individual's ability and willingness to seek healthcare when symptoms or perceived health risks arise [3–5].

Although healthcare utilization has been widely investigated in Indonesia, most previous studies have focused on hospital services, national survey data, or general outpatient utilization [3, 6]. Limited evidence is available regarding the utilization of internal medicine specialist outpatient services in private primary healthcare facilities serving peri-urban communities. Furthermore, studies examining the roles of health beliefs toward specialist services, enabling access conditions, and healthcare needs in influencing specialist outpatient service utilization at the community level remain scarce. Therefore, additional evidence is needed to better understand the factors associated with specialist outpatient service utilization in specific healthcare settings.

In Aceh Besar Regency, Indonesia, the growing burden of chronic diseases has increased the need for accessible specialist outpatient services at the primary care level. Klinik Utama Kasehat Walafiat is one of the major private primary healthcare facilities serving peri-urban communities in the region and receives substantial outpatient visits from surrounding areas. However, preliminary clinic data demonstrated fluctuations and declining trends in outpatient visits, suggesting that healthcare needs do not always translate into actual service utilization. This situation highlights the importance of identifying factors associated with specialist outpatient service utilization within the clinic setting.

Healthcare utilization is influenced by various behavioral, accessibility, and health-related factors [7]. Previous studies have shown that health beliefs, enabling access conditions, and perceived healthcare needs are important determinants of healthcare-seeking behavior and service utilization [3–5]. Individuals are more likely to utilize healthcare services when they perceive greater benefits from seeking care, encounter fewer access barriers, and recognize a need for medical attention [8]. Therefore, these three domains were selected as the primary variables examined in this study.

Evidence from Indonesia and other settings indicates that the utilization of outpatient and hospital services is influenced by demographic characteristics, socioeconomic status, health insurance coverage, geographic accessibility, self-rated health, chronic conditions, and perceived healthcare needs [3, 6]. Although Indonesia has expanded financial protection through the National Health Insurance (JKN) scheme, non-financial barriers such as distance, health literacy, transportation, access to service information, and perceived necessity may still affect decisions to seek healthcare services [5, 6, 9].

Preliminary clinic visit records showed that the Internal Medicine Specialist Polyclinic had the highest number of outpatient visits among available services. However, the number of visits declined from 1,347 in July 2025 to 1,202 in August 2025, representing a decrease of 10.8%. This decline suggests that healthcare utilization may fluctuate even when the demand for internal medicine specialist services remains substantial. Understanding the factors associated with service utilization at the local level is therefore important for improving healthcare access, service planning, health promotion, and the early identification of healthcare needs.

Health beliefs toward specialist services, enabling access factors, and healthcare needs factors were selected because they represent key dimensions of healthcare-seeking behavior. Health beliefs influence perceptions regarding the benefits and necessity of specialist care [10], enabling access factors determine an individual's ability to reach and utilize healthcare services [11], and healthcare needs factors reflect perceived health conditions that motivate healthcare utilization [12]. Together, these factors provide a comprehensive framework for understanding specialist outpatient service utilization within the study setting.

This study aimed to examine the associations of health beliefs toward specialist services, enabling access factors, and healthcare needs factors with the utilization of Internal Medicine Specialist Outpatient Services at Klinik Utama Kasehat Walafiat, Aceh Besar, Indonesia. The study contributes to the limited body of evidence on specialist outpatient service utilization in private primary healthcare settings, particularly in peri-urban communities in Indonesia. In addition, the findings are expected to provide empirical evidence that can support healthcare managers and policymakers in developing targeted strategies to improve service accessibility, utilization, and healthcare planning.

2. Materials and Methods

2.1. Study Design and Setting

A cross-sectional design was considered appropriate because it allows the assessment of associations between study variables and healthcare utilization within a defined population at a specific point in time. This design is widely used in healthcare utilization research because of its efficiency in identifying factors associated with service utilization patterns.

Table 1. Operational definition of study variables.

Variable	Operational Definition	Indicators	Measurement	Scale
Utilization of Internal Medicine Specialist Outpatient Services (Y)	Utilization of Internal Medicine Specialist Polyclinic services during the previous three months.	Utilization of specialist outpatient services during the previous three months.	Questionnaire	Nominal (0 = Not utilized, 1 = Utilized)
Health Beliefs toward Specialist Services (X1)	Respondents' beliefs and perceptions regarding the importance of obtaining specialist healthcare services, including perceived treatment needs, health awareness, and knowledge of specialist services.	(1) Perceived treatment needs; (2) Health awareness; (3) Knowledge of specialist services.	Questionnaire	Ordinal (Very Poor, Poor, Good, Very Good)
Enabling Access Factors (X2)	Conditions that facilitate or support access to specialist healthcare services.	(1) Facilities and infrastructure; (2) Distance and transportation; (3) Financial capability; (4) Primary healthcare referral procedures.	Questionnaire	Ordinal (Very Unlikely, Unlikely, Likely, Very Likely)
Healthcare Needs Factors (X3)	Actual or perceived health conditions that motivate the utilization of specialist healthcare services.	(1) Physical health conditions; (2) Psychological health concerns.	Questionnaire	Ordinal (Very Low Need, Low Need, Moderate Need, High Need)

This study employed a quantitative analytical cross-sectional design. Data were collected at a single point in time to assess the relationships between the independent variables and the utilization of internal medicine specialist outpatient services. The study was conducted in communities located within an approximately 5-km radius of Klinik Utama Kasehat Walafiat, Aceh Besar, Indonesia. The 5-km radius was selected to represent the clinic's primary service coverage area and to capture communities with relatively similar geographic accessibility to specialist outpatient services. This distance was considered appropriate based on local transportation conditions and the clinic's routine service coverage in peri-urban areas of Aceh Besar. The study area included the districts of Ingin Jaya, Darul Kamal, and Kuta Baro, which were selected because they constitute the clinic's nearest service coverage area. Data collection was conducted from February to March 2026.

2.2. Population and Sample

The study population consisted of residents living in the districts of Ingin Jaya, Darul Kamal, and Kuta Baro within the service coverage area of Klinik Utama Kasehat Walafiat. The target population comprised adult residents who had experienced internal medicine-related health complaints within the previous six months and met the study eligibility criteria.

The minimum sample size was calculated using the Snedecor and Cochran formula [13] with a 95% confidence level and a 10% margin of error. To improve representativeness and account for potential nonresponse, a total of 300 respondents were included in the study. Sampling was conducted proportionally across the three districts using a cluster sampling approach.

The inclusion criteria were established to ensure that respondents had sufficient exposure to healthcare needs that could potentially require internal medicine specialist services. Individuals who were unable to complete the questionnaire independently or who declined participation were excluded from the study.

Proportional allocation was applied to ensure adequate representation from each district according to the distribution of the eligible population within the study area.

2.3. Variables and Measurement

The operational definitions, indicators, and measurement scales of the study variables are presented in Table 1. The dependent variable was utilization of Internal Medicine Specialist Outpatient Services. The independent variables consisted of health beliefs toward specialist services, enabling access factors, and healthcare needs factors. All independent variables were measured using Likert-scale items, with higher scores indicating more favorable perceptions, better access conditions, or greater healthcare needs, depending on the respective construct.

2.4. Instrument and Data Collection

Data were collected using a structured questionnaire covering respondent characteristics, healthcare

Table 2. Respondent characteristics.

Characteristic	Category	N	%
Age	<30 years	14	4.7
	30-39 years	101	33.7
	40-49 years	111	37.0
	>50 years	74	24.7
Sex	Male	140	46.7
	Female	160	53.3
Education	Basic education (elementary/junior high)	0	0.0
	Secondary education (senior high/vocational)	23	7.7
	Higher education	277	92.3
Occupation	Civil servant	145	48.3
	Non-civil servant	84	28.0
	Not working	71	23.7
Marital status	Married	173	57.7
	Unmarried/widowed/divorced	127	42.3

utilization, health beliefs toward specialist services, enabling access factors, and healthcare needs factors. The questionnaire was developed based on a review of the healthcare utilization literature and adapted to the context of specialist outpatient services. Prior to data collection, respondents were informed about the study objectives, confidentiality procedures, and their right to withdraw from participation at any time without consequence.

2.5. Validity and Reliability

A pilot test was conducted prior to the main study to assess the validity and reliability of the instrument. Item validity was evaluated using corrected item-total correlation, with a minimum acceptable value of 0.30. Reliability was assessed using Cronbach's alpha coefficient, with values greater than 0.70 considered acceptable. The Cronbach's alpha values were 0.921 for Health Beliefs toward Specialist Services, 0.962 for Enabling Access Factors, and 0.808 for Healthcare Needs Factors.

2.6. Data Analysis

Data processing included editing, coding, data entry, and tabulation. Descriptive analysis was used to summarize respondent characteristics and study variables using frequencies, percentages, means, minimum values, maximum values, and standard deviations.

Binary logistic regression analysis was used to examine the associations between health beliefs toward specialist services, enabling access factors, healthcare needs factors, and the utilization of Internal Medicine Specialist Outpatient Services. Results were presented as regression coefficients (B), odds ratios (ORs), and p-values. Statistical significance was determined at $p < 0.05$.

Binary logistic regression was selected because the dependent variable was dichotomous, namely utilization versus non-utilization of specialist outpatient services. This method is appropriate for estimating the associations between independent variables and the likelihood of healthcare service utilization.

2.7. Ethical Considerations

This study received ethical approval from the Health Research Ethics Committee, Faculty of Medicine, Universitas Syiah Kuala (Approval Number: 24/UN11.1.7/MKM/2026). Participation was voluntary, and informed consent was obtained from all respondents prior to data collection. Respondent confidentiality and anonymity were maintained throughout the study.

3. Results and Discussion

3.1. Respondent Characteristics

A total of 300 respondents were included in the analysis. As shown in Table 2, the largest age group was 40-49 years (37.0%), followed by 30-39 years (33.7%). Female respondents slightly outnumbered male respondents (53.3% vs. 46.7%). Most respondents had a higher educational background (92.3%), were employed as civil servants (48.3%), and were married (57.7%). These characteristics suggest that the study sample consisted primarily of adults with relatively high educational attainment and stable community residency, which may contribute to greater awareness of healthcare service utilization.

3.2. Distribution of Health Beliefs toward Specialist Services, Enabling Access Factors, and Healthcare Needs Factors

As shown in Table 3, of the 300 respondents, 179 (59.7%) had utilized the Internal Medicine Specialist Polyclinic during the previous three months, while 121 (40.3%) had not. The distribution of the study variables showed that

Table 3. Distribution of study variables (n = 300).

Variable	Category	N	%
Health beliefs toward specialist services	Very unfavorable	91	30.3
	Unfavorable	3	1.0
	Favorable	52	17.3
	Very favorable	154	51.3
Enabling access factors	Very unlikely to support utilization	81	27.0
	Unlikely to support utilization	55	18.3
	Likely to support utilization	95	31.7
	Very likely to support utilization	69	23.0
Healthcare needs factors	Very low need	2	0.7
	Low need	196	65.3
	Moderate need	79	26.3
	High need	23	7.7

Table 4. Descriptive statistics of study variables (n = 300).

Variable	N	Min.	Max.	Mean	SD
Health Beliefs Score	300	20	32	27.27	5.13
Enabling score	300	30	60	43.99	9.39
Healthcare Needs Score	300	7	24	15.29	3.41

Table 5. Logistic regression analysis of factors associated with internal medicine specialist outpatient service utilization.

Variable	B	OR	95% CI	p-value	Interpretation
Health beliefs toward specialist services	0.073	1.076	1.028–1.126	0.002	Significant
Enabling access factors	0.045	1.046	1.020–1.074	<0.001	Significant
Healthcare needs factors	0.087	1.091	1.016–1.172	0.016	Significant

more than half of the respondents had very favorable health beliefs toward specialist services (51.3%). Enabling access factors were relatively favorable, with 31.7% categorized as likely and 23.0% as very likely to support healthcare utilization. Healthcare needs factors were dominated by the low-need category (65.3%), indicating that many respondents did not perceive a strong current need for specialist care. This finding may reflect routine follow-up visits among patients with chronic conditions who continue to utilize specialist outpatient services despite perceiving their symptoms as mild or stable. In addition, some respondents may have attended the clinic for preventive monitoring, prescription refills, or scheduled evaluations through the national health insurance referral system. Therefore, healthcare utilization may still occur even when perceived healthcare needs are relatively low.

As presented in Table 4, the high mean score for enabling access factors suggests that most respondents perceived healthcare services as relatively accessible in terms of transportation, financial affordability, and service availability. In contrast, the lower mean score for healthcare needs factors may indicate that many respondents did not perceive severe or urgent health conditions at the time of the study. Nevertheless, specialist outpatient service utilization remained relatively common, suggesting that healthcare-seeking behavior may also be driven by routine follow-up visits, preventive monitoring, and the ongoing management of chronic conditions rather than acute illness alone.

3.3. Logistic Regression Analysis

The binary logistic regression results presented in Table 5 showed that health beliefs toward specialist services, enabling access factors, and healthcare needs factors were significantly associated with the utilization of Internal Medicine Specialist Outpatient Services. Health beliefs toward specialist services were significantly associated with utilization (B = 0.073; OR = 1.076; p = 0.002). Enabling access factors were also significantly associated with utilization (B = 0.045; OR = 1.046; p < 0.001). Healthcare needs factors demonstrated the strongest association with utilization (B = 0.087; OR = 1.091; p = 0.016).

Respondents with more favorable health beliefs toward specialist services were more likely to utilize specialist outpatient care. Similarly, better enabling access conditions, including transportation, financial capability, and healthcare service procedures, were associated with greater utilization. Among the study variables, healthcare needs factors demonstrated the strongest association, indicating that individuals who perceived greater physical or psychological health needs were more likely to seek specialist outpatient services.

3.4. Discussion

This study found that health beliefs toward specialist services, enabling access factors, and healthcare needs factors were significantly associated with the utilization of Internal Medicine Specialist Outpatient Services at Klinik Utama Kasehat Walafiat. The findings indicate that specialist outpatient service utilization is influenced not only by individuals' perceptions of healthcare benefits but also by accessibility conditions and perceived healthcare needs.

Health beliefs toward specialist services were significantly associated with healthcare utilization (OR = 1.076; p = 0.002). This finding indicates that respondents with greater awareness of their health conditions, stronger perceptions regarding the importance of specialist care, and better knowledge of available specialist services were more likely to utilize Internal Medicine Specialist Outpatient Services. Individuals who recognize the benefits of specialist consultation are generally more willing to seek medical care when health concerns arise [14]. Similar findings have been reported by previous studies, which found that health awareness, perceived health status, and healthcare knowledge significantly influence healthcare-seeking behavior and outpatient service utilization [6, 15]. These studies suggest that individuals with a better understanding of disease prevention and treatment are more likely to engage with formal healthcare services in a timely manner.

Enabling access factors were also significantly associated with healthcare utilization (OR = 1.046; p < 0.001). Transportation availability, service affordability, accessibility of healthcare facilities, and healthcare procedures influence an individual's ability to translate healthcare needs into actual service utilization. Respondents who perceived fewer barriers to accessing healthcare services were more likely to utilize specialist outpatient care [16, 17]. This finding is consistent with previous studies, which demonstrated that healthcare accessibility, insurance coverage, transportation availability, and healthcare infrastructure remain important determinants of healthcare utilization across different settings [6]. The relatively modest effect size observed in this study may be explained by the homogeneous geographic accessibility among respondents, as all participants resided within approximately 5 km of the clinic and therefore experienced similar transportation conditions.

Healthcare needs factors demonstrated the strongest association with utilization (OR = 1.091; p = 0.016). Respondents experiencing greater physical complaints or psychological health concerns were more likely to seek specialist outpatient services [18]. This finding suggests that perceived healthcare needs remain the most immediate motivation for seeking healthcare. Individuals generally seek medical attention when symptoms interfere with daily activities, generate concern regarding their health status, or require ongoing management of chronic conditions [19]. Similar findings have been reported by Babitsch et al. [3], and Hajek et al. [15], who found that perceived illness severity, chronic disease status, and self-rated health are among the strongest predictors of healthcare utilization. The stronger association observed in this study may reflect the nature of internal medicine services, which primarily address chronic and recurrent health conditions requiring continuous monitoring and follow-up care [20].

Interestingly, healthcare needs factors demonstrated the strongest statistical association despite the majority of respondents being categorized as having relatively low healthcare needs. This apparent inconsistency may be explained by the characteristics of specialist outpatient services. Many respondents may have utilized services for routine follow-up visits, prescription refills, chronic disease monitoring, or scheduled evaluations despite not perceiving their current symptoms as severe. Therefore, healthcare utilization may continue even when perceived healthcare needs are relatively low because utilization is influenced not only by current symptoms but also by long-term disease management and preventive healthcare practices.

Although 59.7% of respondents utilized the Internal Medicine Specialist Polyclinic, 40.3% reported no utilization during the previous three months. This finding suggests that the availability of healthcare services alone does not guarantee utilization. Some individuals may have adequate access and favorable attitudes toward healthcare but may postpone or avoid specialist consultation when they do not perceive an immediate healthcare need [15]. Therefore, efforts to improve appropriate utilization should focus not only on increasing service availability but also on strengthening community health education, improving awareness of chronic disease symptoms, simplifying referral procedures, and promoting the early detection and routine monitoring of chronic health conditions.

Overall, the findings indicate that improving specialist outpatient service utilization requires not only enhancing healthcare accessibility but also strengthening health awareness and encouraging the early recognition of healthcare needs. These factors should be considered when planning community-based interventions and developing outpatient healthcare services.

4. Conclusions, Implications and Limitations

This study demonstrated that health beliefs toward specialist services, enabling access factors, and healthcare needs factors were significantly associated with the utilization of Internal Medicine Specialist Outpatient Services at Klinik Utama Kasehat Walafiat, Aceh Besar. Most respondents had utilized the service during the previous three months, although a considerable proportion had not accessed specialist outpatient care. Among the study variables, healthcare needs factors showed the strongest association with utilization, indicating that perceived physical and psychological health conditions remain the most immediate drivers of healthcare-seeking behavior. These findings suggest that specialist outpatient service utilization is influenced by a combination of health beliefs, accessibility conditions, and perceived healthcare needs.

The findings imply that efforts to improve appropriate specialist outpatient service utilization should not focus solely on healthcare availability but also on strengthening community awareness of chronic disease management and the importance of early consultation. Health promotion activities should specifically target individuals with low perceived healthcare needs who may delay consultation despite experiencing chronic or recurrent symptoms. In addition, healthcare providers and local health authorities should improve access to service information, simplify referral procedures, support continuity of care for patients with chronic diseases, and strengthen early detection and routine monitoring programs for internal medicine-related conditions at the community level.

Several limitations should be acknowledged. First, the cross-sectional design limits the ability to establish causal relationships between the study variables and healthcare utilization. Future studies should employ longitudinal or prospective designs to better assess causal relationships. Second, the analysis focused on the associations between the study variables and utilization and did not adjust for potential confounding variables such as age, sex, education, occupation, and marital status. Future studies should incorporate these variables into multivariable analytical models. Third, the use of self-reported questionnaires may have introduced recall bias and subjective perception bias. Future studies should combine self-reported data with medical records or other objective sources of information. Finally, the study was conducted within the service area of a single healthcare facility, which may limit the generalizability of the findings to populations with different geographic, socioeconomic, and healthcare system characteristics. Future research should include multiple healthcare facilities and broader geographic settings.

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Informed Consent Statement: Informed consent was obtained from all participants involved in the study.

Data Availability Statement: The data supporting the findings of this study are available from the corresponding author upon reasonable request, subject to institutional and ethical restrictions.

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References

1. Ameh, S., Gómez-Olivé, F. X., Kahn, K., Tollman, S. M., and Klipstein-Grobusch, K. (2014). Predictors of Health Care Use by Adults 50 Years and over in a Rural South African Setting, *Global Health Action*, Vol. 7, No. 1. doi:10.3402/gha.v7.24771.
2. Bernabeu-Wittel, M., Para, O., Voicehovska, J., Gómez-Huelgas, R., Václavík, J., Battegay, E., Holecki, M., van Munster, B. C., Angermann, C., Battegay, E., Bernabeu-Wittel, M., Bryant, C., Elis, A., Ertl, G., Gómez-Huelgas, R., Grine, S., Holecki, M., Kürrle, A., Lidove, O., Para, O., Saglam, B., Santos, L., Tuttolomondo, A., Václavik, J., van Munster, B., and Voicehovska, J. (2023). Competences of Internal Medicine Specialists for the Management of Patients with Multimorbidity. EFIM Multimorbidity Working Group Position Paper, *European Journal of Internal Medicine*, Vol. 109, 97–106. doi:10.1016/j.ejim.2023.01.011.
3. Babitsch, B., Gohl, D., and Von Lengerke, T. (2012). Re-Revisiting Andersen's Behavioral Model of Health Services Use: A Systematic Review of Studies from 1998–2011, *GMS Psycho-Social-Medicine*, Vol. 9, Doc11. doi:10.3205/psm000089.
4. Aday, L. A., and Andersen, R. (1974). A Framework for the Study of Access to Medical Care, *Health Services Research*, Vol. 9, No. 3, 208.
5. Andersen, R. M. (1995). Revisiting the Behavioral Model and Access to Medical Care: Does It Matter?, *Journal of Health and Social Behavior*, Vol. 36, No. 1, 1. doi:10.2307/2137284.
6. Wulandari, R. D., Laksono, A. D., Nantabah, Z. K., Rohmah, N., and Zuardin, Z. (2022). Hospital Utilization in Indonesia in 2018: Do Urban–Rural Disparities Exist?, *BMC Health Services Research*, Vol. 22, No. 1, 491. doi:10.1186/s12913-022-07896-5.
7. Kusama, T., Todoriki, H., Osaka, K., and Aida, J. (2020). Majority of New Onset of Dental Caries Occurred from Caries-Free Students: A Longitudinal Study in Primary School Students,

International Journal of Environmental Research and Public Health, Vol. 17, No. 22, 8476. doi:10.3390/ijerph17228476.

8. Janz, N. K., and Becker, M. H. (1984). The Health Belief Model: A Decade Later, *Health Education Quarterly*, Vol. 11, No. 1, 1–47. doi:10.1177/109019818401100101.

9. World Health Organization. (2024). Noncommunicable Diseases - Key Facts, from https://www.who.int/news-room/fact-sheets/detail/noncommunicable-diseases.

10. Jones, C. L., Jensen, J. D., Scherr, C. L., Brown, N. R., Christy, K., and Weaver, J. (2015). The Health Belief Model as an Explanatory Framework in Communication Research: Exploring Parallel, Serial, and Moderated Mediation, *Health Communication*, Vol. 30, No. 6, 566–576. doi:10.1080/10410236.2013.873363.

11. SoleimanvandiAzar, N., Kamal, S. H. M., Sajjadi, H., Harouni, G. G., Karimi, S. E., Djalalinia, S., and Forouzan, A. S. (2020). Determinants of Outpatient Health Service Utilization According to Andersen's Behavioral Model: A Systematic Scoping Review, *Iranian Journal of Medical Sciences*, Vol. 45, No. 6, 405. doi:10.30476/ijms.2020.85028.1481.

12. Chuang, E., and Safaeinili, N. (2024). Addressing Social Needs in Clinical Settings: Implementation and Impact on Health Care Utilization, Costs, and Integration of Care, *Annual Review of Public Health*, Vol. 45, No. 1, 443–464. doi:10.1146/annurev-publhealth-061022-050026.

13. Jones, D. H. (1994). Book Review: Statistical Methods, 8th Edition George W. Snedecor and William G. Cochran Ames: Iowa State University Press, 1989. Xix + 491 Pp, *Journal of Educational and Behavioral Statistics*, Vol. 19, No. 3, 304–307. doi:10.3102/10769986019003304.

14. van Loenen, T., van den Berg, M. J., Faber, M. J., and Westert, G. P. (2015). Propensity to Seek Healthcare in Different Healthcare Systems: Analysis of Patient Data in 34 Countries, *BMC Health Services Research*, Vol. 15, No. 1, 465. doi:10.1186/s12913-015-1119-2.

15. Hajek, A., Kretzler, B., and König, H.-H. (2021). Determinants of Healthcare Use Based on the Andersen Model: A Systematic Review of Longitudinal Studies, *Healthcare*, Vol. 9, No. 10, 1354. doi:10.3390/healthcare9101354.

16. Cheng, Q., Fattah, R. A., Susilo, D., Satrya, A., Haemmerli, M., Kosen, S., Novitasari, D., Puteri, G. C., Adawiyah, E., Hayen, A., Mills, A., Tangcharoensathien, V., Jan, S., Thabrany, H., Asante, A., and Wiseman, V. (2025). Determinants of Healthcare Utilization under the Indonesian National Health Insurance System – A Cross-Sectional Study, *BMC Health Services Research*, Vol. 25, No. 1, 48. doi:10.1186/s12913-024-11951-8.

17. Agustina, R., Dartanto, T., Sitompul, R., Susiloretni, K. A., Suparmi, Achadi, E. L., Taher, A., Wirawan, F., Sungkar, S., Sudarmono, P., Shankar, A. H., Thabrany, H., Agustina, R., Dartanto, T., Sitompul, R., Susiloretni, K. A., Suparmi, Achadi, E. L., Taher, A., Wirawan, F., Sungkar, S., Sudarmono, P., Shankar, A. H., Thabrany, H., Soewondo, P., Ahmad, S. A., Kurniawan, M., Hidayat, B., Pardede, D., Mundiharno, Nelwan, E. J., Lupita, O., Setyawan, E., Nurwahyuni, A., Martiningsih, D., and Khusun, H. (2019). Universal Health Coverage in Indonesia: Concept, Progress, and Challenges, *The Lancet*, Vol. 393, No. 10166, 75–102. doi:10.1016/S0140-6736(18)31647-7.

18. Madyaningrum, E., Chuang, Y.-C., and Chuang, K.-Y. (2018). Factors Associated with the Use of Outpatient Services among the Elderly in Indonesia, *BMC Health Services Research*, Vol. 18, No. 1, 707. doi:10.1186/s12913-018-3512-0.

19. Elnegaard, S., Pedersen, A. F., Sand Andersen, R., Christensen, R. de-P., and Jarbøl, D. E. (2017). What Triggers Healthcare-Seeking Behaviour When Experiencing a Symptom? Results from a Population-Based Survey, *BJGP Open*, Vol. 1, No. 2, bjgpopen17X100761. doi:10.3399/bjgpopen17X100761.

20. Schlünsen, A. D. M., Christiansen, D. H., Fredberg, U., and Vedsted, P. (2022). Effectiveness of a 24-Hour Access Outpatient Clinic for Patients with Chronic Conditions in Hospital Outpatient Follow-Up: A Registry-Based Controlled Cohort Study of Healthcare Utilisation and Mortality, *Integrated Healthcare Journal*, Vol. 4, No. 1. doi:10.1136/ihj-2020-000069.