

ORIGINAL RESEARCH

Examining The Relationship Between Support Resources And Regular Health Check-ups Among Vietnamese Middle-aged Women

Análisis de la relación entre recursos de apoyo y chequeos médicos regulares entre mujeres vietnamitas de edad mediana

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Abstract

Background. Regular health check-ups are vital for preventive healthcare. but remain underutilized among Vietnamese middle-aged women. This study investigates how various types of supportive resources influence their engagement in regular check-ups. **Methods.** Survey data were collected from 494 women aged 40–60 in northern Vietnam. Logistic regression was used to identify predictors of regular health check-up behaviors. **Results.** Among participants, 50.2% reported undergoing regular check-ups. Age and education were not significant predictors. However, women living in urban areas, those with fixed working hours, and retirees were more likely to have regular check-ups than their rural and self-employed counterparts. Support from family, friends, and policy/service-based resources significantly increased the likelihood of check-up participation ($\beta = 1.593$ and 2.110 , respectively). **Conclusion.** Supportive networks play a crucial role in encouraging preventive health behaviors. Enhancing communication strategies and access to policy-based resources is essential, particularly for disadvantaged women, to promote regular health maintenance.

Keywords: Support Resources; Regular Health Check-ups; Middle-aged Women; Social Support.

Resumen

Antecedentes. Los chequeos médicos regulares son vitales para la atención preventiva, pero siguen siendo infrautilizados entre las mujeres vietnamitas de edad madura. Este estudio investiga cómo diversos tipos de recursos de apoyo influyen sobre su participación en chequeos regulares. **Métodos.** Se levantaron los datos mediante una encuesta de 494 mujeres de entre 40 y 60 años en el norte de Vietnam. Se utilizó una regresión logística para identificar los predictores de la realización de chequeos médicos regulares. **Resultados.** El 50.2% de las participantes reportó someterse a revisiones médicas regulares. La edad y la educación no fueron predictores significativos. Sin embargo, las mujeres que viven en zonas urbanas, las que tienen un horario laboral fijo y las jubiladas obtuvieron una mayor probabilidad de someterse a revisiones médicas regulares que las mujeres rurales y las que trabajan por cuenta propia. El apoyo de familiares, amigos y recursos basados en políticas y servicios aumentó significativamente la probabilidad de participar en las revisiones ($\beta = 1.593$ y 2.110 , respectivamente). **Conclusión.** Las redes de apoyo desempeñan un papel crucial en el fomento de conductas favorables a la salud preventiva. Mejorar las estrategias de comunicación y el acceso a recursos basados en políticas de salud es esencial, especialmente entre mujeres desfavorecidas, para promover el mantenimiento regular de su salud.

Palabras clave. Recursos de apoyo; Chequeos de salud regulares; Mujeres de mediana edad; Apoyo social.



Introduction

Currently, non-communicable diseases (NCDs) have become a significant concern and a major health burden for many countries worldwide. According to WHO, NCDs kill 41 million people each year, equivalent to 74% of all global deaths. Each year, 17 million people die from an NCD before the age of 70. The leading causes of NCD-related deaths include cardiovascular diseases, cancers, chronic respiratory diseases, and diabetes, which together account for over 80% of all premature NCD deaths.¹ Notably, the burden of NCDs has increasingly shifted to low- and middle-income countries in recent years, with 86% of these premature deaths occurring in these regions.^{1,2} Vietnam is one of the countries facing a rising burden of NCDs due to rapid economic growth and urbanization.³ Official national estimates from the Vietnam Ministry of Health (MOH) indicate that NCD-related deaths accounted for 73% of deaths in 2014, 63% in 2016, and 80% in 2018.⁴

WHO also emphasizes that detection, screening, and treatment are key components in responding to NCDs.¹ These measures can be effectively implemented through regular health check-ups.² Studies have highlighted the benefits of regular health check-ups, including disease prevention, health promotion, and reduced mortality rates.^{2,5} Routine health screenings help detect diseases at an early stage or identify modifiable risk factors, enabling timely treatment, particularly for NCDs. This approach can reduce morbidity and mortality rates⁶ while improving patient survival rates.⁷ Additionally, regular health check-ups contribute to shorter future hospital stays, lower personal economic losses, reduced national health insurance costs, and overall improved health and quality of life.⁸ Regular health check-ups are also recognized as an essential self-care practice for individuals.⁹

Several studies have examined the factors influencing individuals' decisions to undergo health check-ups. Findings indicate that demographic characteristics, lifestyle factors, and medical history significantly impact health check-up behaviors.^{10, 11} Numerous studies have reported that men are less likely than women to undergo regular health check-ups.^{12, 13} Some research suggests that older

individuals are more likely to participate in regular health screenings,¹⁴ while other studies have found no significant differences across age groups.^{15, 16} Individuals with lower income, lower socioeconomic status, unemployment, or lower education levels are generally less likely to undergo regular health check-ups.¹⁷ However, some studies have found no correlation between education level and health check-up participation.¹⁸ Marital status has also been identified as an influencing factor, with single individuals being less likely to participate in health check-ups.^{17, 19} Additionally, geographical distance from healthcare facilities has been found to influence individuals' decisions regarding health check-ups.⁸ A lack of trust in the quality and competence of healthcare providers, especially at local health stations, also acts as a barrier.^{20, 21, 22} Moreover, individuals with limited social support networks are less likely to undergo regular health check-ups.^{17, 23} Another significant barrier to health check-ups is fear-related concerns, such as anxiety about discovering a serious illness, potential consequences, and fear of medical treatments.^{6, 17}

In Vietnam, regular health check-ups are considered an employee welfare policy for those working in both private and public organizations, as well as for retired elderly individuals. According to the recommendations of the Vietnam Ministry of Health, people should have regular health check-ups at least every six months.⁸ However, participation rates remain low, with only 51.2% of urban residents undergoing regular health check-ups,²⁴ and a significantly lower rate of 24% in northern mountainous areas.⁸

Regular health check-ups have been extensively studied worldwide and in Vietnam. Previous studies have analyzed health check-up behaviors across different population groups, identifying key predictors such as health beliefs, barriers, and socio-demographic characteristics. However, several research gaps remain. First, limited research has explored the relationship between regular health check-ups and supportive resources. Second, most studies have focused on the general population, young adults, or the elderly, leaving a gap in understanding the health check-up behaviors of middle-aged Vietnamese women. Therefore, this

study aims to explore the relationship between health beliefs, supportive resources, and regular health check-ups among Vietnamese middle-aged women.

Methodology

Ethical consideration and procedure

This study was approved by the University of Social Sciences and Humanities, Vietnam National University, Hanoi, where the principal investigator is employed. In this survey, a questionnaire was developed to include questions about participation in regular health check-ups, self-assessment of supportive resources for self-care, and certain demographic characteristics. A scale for assessing supportive resources for self-care was developed by the research team.

The study was conducted in two locations: Hanoi and QuangNinh province in northern Vietnam. The research team collaborated with the Women's Union at the ward and commune levels in these areas to invite middle-aged women (aged 40 to 60) to participate. In our invitation, we introduced the study's objectives, procedures, as well as potential benefits and risks for prospective participants. We explicitly stated that participation was entirely voluntary and that participants could withdraw at any time. Their information would be used solely for research purposes and would be kept confidential.

A total of 494 women agreed to participate and completed the survey. Trained interviewers conducted the survey using the questionnaire at a community center. Each interview lasted between 20 to 30 minutes, and each participant received a small incentive upon completion.

Measures

Regular Health Check-up. Participants were asked: "How often do you undergo a general health check-up each year?" The response options included: every six months, once a year, never had a health check-up, or only when feeling unwell. In the data analysis using SPSS, the research team recoded this variable into two categories: those who have

periodic regular health check-ups and those who do not.

Supportive Resources. The research team developed a supportive resource scale to evaluate the main supportive resources available to middle-aged women for self-care. This scale consists of 15 items divided into two subscales:

- (i) Family and Friends Support (7 items) – covers support from family, friends, and colleagues in activities such as encouragement, household assistance, financial support, health care, information support, and access to services.
- (ii) Policy and Service Support (6 items) – covers healthcare services and medical information dissemination from local clinics within the community (e.g., "My local healthcare services are comprehensive and of good quality"); and existing healthcare policies related to women's health care.

Participants rated each item on a 5-point Likert scale (1 = strongly disagree; 2 = somewhat disagree; 3 = somewhat agree; 4 = moderately agree; 5 = strongly agree). The Cronbach's alpha for the overall scale was 0.907, with subscale reliabilities of 0.895 and 0.856, respectively. Factor analysis yielded a KMO index of 0.878, with Bartlett's test p -value < 0.001 .

Demographics. The demographic characteristics of the participants included: Residence (0 = urban; 1 = rural); Age (40–60 years old); Employment status (0 = "Self-employed"; 1 = "Fixed-hour employment"; 2 = "Retired"); Education level (0 = "Intermediate and below"; 1 = "College, university, and higher").

Data analysis

Survey data were analyzed using SPSS version 22.0. In addition to descriptive analysis, two logistic regression models were conducted to examine regular health check-up behaviors among middle-aged women. In the first model, demographic variables were included as predictors. In the second model, two additional predictive factors—supportive resources—were added to the regression model.

Table 1: Key characteristics of studied variables (N = 494)

Variables	Categories	N	%
Residence areas	Urban	271	54.9
	Rural	223	45.1
Employment status	Self-employed	256	51.8
	Fixed-hour employment	118	23.9
	Retired	59	11.9
Education level	Intermediate and below	287	60.7
	College, university and higher	186	39.3
Regular health check-up	Periodic health check-ups	248	50.2
	No regular health check-ups	246	49.8
Variables	Categories	M	SD
Age		48.0	5.67
Supportive resources	Family and Friends Support	3.59	0.71
	Policy and Service Support	3.19	0.83

Results

Descriptive Characteristics of Key Studied Variables

Table 1 summarizes the key characteristics of participants and other studied variables. Among the 494 middle-aged women who participated in the study, the average age was 48 years old, with 54.9% living in urban areas and 60.7% having an intermediate or lower educational degree. Regarding employment status, the majority were still working (75.7%).

Results showed that 50.2% of respondents reported undergoing regular health check-ups, while 49.8% did not. There is no significant difference between these two rates.

Self-reported supportive resources for self-care among middle-aged women are also presented in Table 1. Support from family and friends was rated the highest (M = 3.59; SD = 0.71), followed by policy and service resources (M = 3.19; SD = 0.83).

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Table 2 presents the results of the regression analysis. In both models, age and education level were not significant predictors of regular health check-ups:

In Model 1, urban women were 2.11 times more likely to undergo regular health check-ups than their rural counterparts. Middle-aged women with fixed-hour jobs and retirees were 6.13 times and 4.39 times more likely to have regular check-ups than self-employed women, respectively.

In Model 2, after adding supportive resources as predictors, the demographic findings remained consistent. Women with fixed-hour jobs were 5.86 times more likely to have regular check-ups than self-employed women, while retirees were 3.27 times more likely to undergo health check-ups.

Regarding supportive resources, both family and policy support were significant predictors of health check-ups:

- Family and Friends Support had a positive and statistically significant coefficient of 1.593 ($p < 0.05$), indicating that women who reported greater support from family and friends were more likely to have regular check-ups.
- Policy and Service Support had a significant coefficient of 2.110 ($p < 0.05$), suggesting that women who perceived stronger policy and service support (e.g., availability of quality healthcare services) were more likely to undergo regular check-ups.

Table 2: Logistic regression model for different types of regular health check-ups among Vietnamese middle-aged women.

	Standardized coefficient (β)			
	Model 1		Model 2	
	β	<i>S.E</i>	β	<i>S.E</i>
Demographics				
Age	1.027	0.024	1.030	0.025
Education level (ref. Intermediate and below)				
<i>College, university and higher</i>	0.746	0.298	0.604	0.311
Residence areas (ref. Rural)				
<i>Urban</i>	2.111*	0.234	1.714*	0.247
Employment status (ref. Self-employed)				
<i>Fixed-hour employment</i>	6.130*	0.325	5.866*	0.336
<i>Retired</i>	4.390*	0.450	3.273*	0.481
Supportive resources				
Family and Friends Support			1.593*	0.200
Policy and Service Support			2.110*	0.197
Summary statistic				
Log likelihood	470.403		433.005	
χ^2 (df)	5		7	

Note: * $p < 0.05$

The Log-likelihood value decreased from 470.403 in Model 1 to 433.005 in Model 2, and χ^2 (df) increased from 5 to 7, indicating an improved model fit with the inclusion of supportive resources.

Discussion

This research result shows that the rate of regular health check-ups among middle-aged Vietnamese women in northern Vietnam is comparable to that of individuals who do not undergo regular health check-ups. This rate is also similar to another study conducted on the general population, including both men and women across different age groups. In the study by Vuong in urban areas, the rate of regular health check-ups was only 51.2%.²⁴ This rate was even lower in the northern mountainous region, where only 24% of the population underwent regular health check-ups.⁸ In other countries, such as Saudi Arabia, only 34.3% of older and middle-aged adults underwent regular health check-ups.²⁵

In Japan, the rate of regular health check-ups among individuals aged 48 and above was 38.4%.²⁶ The rate of regular health check-ups among middle-aged Vietnamese women is also comparable to that of other countries in the region and worldwide. For instance, in Germany, the rate of regular health check-ups among women was 49.8%.²⁷ Those who undergo regular health check-ups often do so because they benefit from welfare policies, workplace regulations, or retirement programs; Additionally, some individuals seek regular health check-ups to "feel more at ease".^{9, 28} Conversely, several factors contribute to why many people do not undergo regular health check-ups, including financial constraints, lack of time, and busy work schedules, leading them to neglect regular health check-ups.^{9, 24} Moreover, distrust in the quality of healthcare services is another reason why many people avoid regular health check-ups.^{8, 20, 21, 24} Some individuals also fear discovering a severe illness during a check-up. Women, in particular,

experience an internal conflict: they want to know if they have a disease but, at the same time, fear receiving a diagnosis. As a result, they postpone regular health check-ups and only seek medical attention when symptoms appear.⁹ The fear of medical examinations has been documented in various other studies.^{6, 17} This is a significant issue because avoiding official regular health check-ups increases the risk of undiagnosed and untreated conditions. Additionally, alongside skipping regular health check-ups, self-diagnosis and self-treatment are common. Previous studies have shown that a high percentage of people opt for these alternative approaches.⁸ Therefore, raising awareness and promoting regular health check-ups among the general population, especially middle-aged women, is a crucial goal for public health care.

One of the key findings of this study is that middle-aged women reported receiving more support for self-care in general and regular health check-ups in particular from family and friends than from policy and service resources. The regression model also indicates that receiving support from these sources predicts the likelihood of undergoing regular health check-ups among middle-aged women. Family and friends provide various forms of support, including emotional encouragement, financial assistance, information, and direct caregiving from relatives and close friends. In Vietnam, where community bonds are strong, interpersonal relationships are close-knit, and mutual support is highly valued—especially within families, friend groups, neighbors, and colleagues—such support plays a crucial role. Additionally, the extended family model, in which children live with their parents, remains common, reinforcing caregiving responsibilities among family members.⁹ Family-based support, particularly from cohabiting relatives, is vital in encouraging health-related practices, including regular health check-ups, through two key aspects:

- (i) The care and support from family members allow middle-aged women to have more time for themselves and influence their decision to undergo regular health check-ups.²⁹
- (ii) Furthermore, individuals feel a sense of responsibility to maintain their own health, as it directly impacts the well-being of their family members. When a family member falls ill, it significantly affects the quality of life of the

entire household.³⁰ Similar findings have been observed in studies conducted in developing countries, where social support from family, friends, and colleagues plays a crucial role in self-care among middle-aged women. Among these sources, spouses are often the most influential and closest supporters.¹⁹ Therefore, social work practitioners should prioritize these support systems when designing intervention programs for individuals, groups, and communities.

Our research findings also indicate that women living in urban areas are more likely to undergo regular health check-ups compared to those in rural areas. This can be explained by the following reasons: (i) Women in urban areas have better access to healthcare services since cities are home to numerous hospitals and major medical centers. The urban area examined in this study is the inner city of Hanoi, the capital of Vietnam. Hanoi offers a wide range of medical facilities, including public and private hospitals, general and specialized hospitals, and institutions ranging from tier-1 hospitals to top-tier national hospitals. In contrast, rural and mountainous regions of Vietnam, including the surveyed areas, face significant limitations. In these areas, people seeking regular health check-ups typically visit local commune health stations, which are the nearest medical facilities, or district-level hospitals. However, a severe shortage of healthcare personnel and medical equipment in commune health stations, especially in remote regions, discourages people from undergoing regular health check-ups.⁸ Thus, the availability and quality of healthcare facilities are key factors influencing individuals' decisions to seek medical services. This finding aligns with previous studies conducted in Vietnam.^{8, 20, 21, 22} (ii) In this study, 40.1% of the surveyed women were employed in jobs with fixed working hours. Employment with regular working hours was identified as a predictive factor for regular health check-ups among middle-aged women across both regression models. Women in regulated working environments often benefit from workplace welfare policies, which typically include an annual regular health check-up. This welfare policy is a major reason why Vietnamese individuals, in general, undergo regular health check-ups.^{9, 28}

Within the scope of this study, educational level and age were not statistically significant predictors of regular health check-up behavior among middle-aged women. This result is consistent with findings from previous studies.^{15, 16, 18}

Limitations

This study has some limitations that must be considered when interpreting the results. First, the study used a convenience sampling method and was conducted in two northern provinces of Vietnam. As a result, the findings may not be generalizable to middle-aged women in other regions beyond northern Vietnam. Second, our research primarily focuses on quantitative data analysis, which may limit the depth of insights and explanations regarding the psychological and social characteristics of middle-aged women. Therefore, additional qualitative research is needed to gain a more comprehensive understanding of this subject. Finally, this study relies on self-reported data, which may introduce recall bias. Despite these limitations, our findings contribute valuable data on healthcare for middle-aged Vietnamese women. These results can also serve as a reference for developing healthcare intervention programs for this group in the current context.

Conclusion

Our analysis reveals that factors such as age and education level do not show a significant correlation with regular health check-ups. However, factors that do influence regular health check-up behavior include demographic characteristics such as place of residence and employment status, as well as support resources for self-care at the micro level (family and friends) and at the policy and service level.

Based on these findings, we propose the following recommendations to promote regular health check-ups in particular and self-care practices in general among middle-aged women:

(i) Strengthening Social Work Interventions: Social workers should focus on empowering individuals by leveraging their available resources, especially at the micro level, to encourage self-care behaviors. Additionally,

there should be a strong push to enhance healthcare services, particularly in rural areas. Investments in upgrading healthcare infrastructure, ensuring adequate medical equipment and supplies for rural healthcare facilities, and improving the quality and reliability of local healthcare services are necessary to encourage their utilization.

- (ii) Enhancing Awareness through Communication Efforts: Effective communication strategies should be implemented to raise awareness among middle-aged women about the benefits and necessity of regular health check-ups. Increased awareness can motivate women to engage in regular medical examinations.
- (iii) Expanding Health Insurance Coverage for Regular Health Check-ups: One of the key drivers of regular health check-ups is workplace welfare policies. However, freelance workers who are not affiliated with specific organizations do not benefit from these policies. According to Vietnam's current Health Insurance Law, regular health check-ups are not covered by insurance, which poses a barrier to promoting regular health check-up behavior. If health insurance policies were to include a certain percentage of coverage for regular health check-ups for specific groups of insured individuals, this could significantly encourage regular health check-ups among the general population and particularly among middle-aged women. By facilitating early disease detection and treatment, this policy would reduce the burden of severe illnesses and maximize the effectiveness of proactive healthcare. A proactive approach not only improves individual health outcomes but also enhances the overall efficiency of the healthcare system by lowering long-term treatment costs and improving public health statistics.

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