

Representative Patterns of Community Clean and Healthy Living Behaviors among Scabies Cases in Wolofeo

Maria Kornelia Ringgi Kuwa^{a*}, Bambang Budi Raharjo^b, Antonia Rensiana Reong^c, Marianus Oktavianus Wega^d

^{a,c,d} Sekolah Tinggi Ilmu Kesehatan St. Elisabeth Keuskupan Maumere, Kabupaten Sikka

^b Universitas Negeri Semarang

*Corresponding Author: mariakorneliaringgikuwa@gmail.com

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ABSTRACT

Introduction:

Scabies is a contagious skin condition and a persistent public health issue in many tropical regions, including Indonesia. Clean and Healthy Living Behaviors play a central role in preventing transmission, particularly in communities with limited sanitation.

Objectives:

This study aimed to identify community patterns of knowledge, attitudes, and practices related to Clean and Healthy Living Behaviors scabies cases in the Wolofeo region.

Methods:

This descriptive quantitative study included 70 respondents selected through purposive sampling from individuals who had previously received outpatient treatment for scabies at the Wolofeo Health Center. Data were collected using a standardized questionnaire that had undergone content validation and reliability testing. Validity was supported by a CVI of 0.87, and reliability was confirmed through a pilot test yielding a Cronbach's Alpha of 0.82. Data were analyzed descriptively using frequency and percentage distributions.

Results:

Most respondents demonstrated good knowledge of hygiene and scabies prevention. Attitudes toward Clean and Healthy Living Behaviors were overwhelmingly positive, with nearly all participants expressing favorable views. All respondents reported good hygiene practices, indicating strong behavioral adoption of preventive measures. Demographic characteristics, particularly adulthood and senior high school education levels, were associated with higher readiness to implement preventive behaviors.

Conclusions:

The community showed strong preparedness for scabies prevention through good knowledge, positive attitudes, and consistent hygiene practices. However, a small subset exhibited limited understanding and less favorable attitudes, highlighting the need for sustained health education. Future research should incorporate observational methods to validate self-reported practices and better inform targeted prevention strategies.

Introduction

Scabies is a contagious skin condition classified as a Neglected Tropical Disease (NTD) and remains a substantial public health concern worldwide, particularly in tropical and subtropical regions. The World Health Organization estimates approximately 200-300 million cases annually, with global prevalence ranging from 0.2% to 71% depending on population density and socioeconomic conditions, and the disease is endemic in parts of Africa, Latin America, South and Southeast Asia. Over the past three decades, the global burden has increased, as reflected in persistently high prevalence rates and disability-adjusted life years (DALYs) with comparable



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upward trends reported in Europe (Aždaji et al., 2022; Gupta et al., 2025; Li et al., 2024). In Indonesia, scabies remains one of the most common communicable skin diseases, with prevalence in certain high-risk communities reported to range between 5% and 25%, particularly in densely populated and low-resource settings.

Several studies have documented prevalence rates exceeding 10% in congested residential environments and boarding schools in East Java. This is indicative of persistent transmission that is driven by suboptimal Clean and Healthy Living Behaviors (CHLB) and inadequate sanitation. Preliminary reports from Wolofeo suggest ongoing exposure to environmental and behavioral risk factors, with recurring cases within the community at the local level. Transmission is further exacerbated by behavioral determinants, including infrequent bathing, sharing personal items, and limited access to clean water (Alga et al., 2023; Karnita et al., 2024; Nursanti et al., 2024; Yulianti et al., 2025), as well as overcrowded living conditions (Ayele et al., 2023; Joseph et al., 2024). Despite the preventable nature of scabies, there is a scarcity of context-specific evidence that describes the clean and healthy living behavior patterns of communities in endemic areas. The imperative necessity for research to produce local epidemiological data and behavioral insights to inform targeted, evidence-based prevention strategies in Wolofeo is underscored by this gap.

Clean and Healthy Living Behaviors (CHLB) play a critical role in scabies prevention, and health education interventions have been shown to improve individual hygiene practices (Fall et al., 2024; Kurnia & Putri, 2025). However, existing studies predominantly examine isolated personal hygiene variables, such as bathing frequency or clothing hygiene, without capturing the integrated, representative pattern of behaviors operating simultaneously at the community level. Consequently, it remains scientifically unclear how combinations of behavioral components, including environmental sanitation practices, water management, utilization of hygiene facilities, and social interaction habits (e.g., sharing clothing or bedding), collectively characterize communities experiencing recurrent scabies transmission. Moreover, most prior research adopts a Knowledge-Attitude-Practice (KAP) framework that emphasizes cognitive and individual dimensions, rather than mapping comprehensive behavioral patterns within real-world endemic settings. This leaves a critical gap in understanding how multidimensional CHLB patterns manifest in affected populations and how they may inform more contextually tailored prevention strategies. Therefore, this study offers novelty by systematically describing representative community-level CHLB patterns in an endemic area, moving beyond fragmented personal hygiene indicators to generate a more holistic behavioral profile relevant for targeted intervention development in Wolofeo.

Preliminary observations in Wolofeo indicate a variable, although rising incidence of scabies, especially in densely populated regions with inadequate access to clean water. However, no research has explicitly delineated the community's CHLB patterns that may facilitate disease transmission. Addressing this gap is crucial for developing interventions customized to local behaviors and environmental contexts. This study seeks to identify representative clean and healthy behavior patterns associated with scabies occurrence in the Wolofeo population. The results are anticipated to enhance theoretical understanding of community health behaviors and to inform the development of targeted, sustained scabies prevention measures. This study aimed to identify community patterns of knowledge, attitudes, and practices related to Clean and Healthy Living Behaviors among scabies cases in the Wolofeo region.

Methods

This research employed a descriptive, quantitative design to identify representative patterns of Clean and Healthy Living Behaviors among scabies cases. This study aimed to identify community patterns of knowledge, attitudes, and practices related to Clean And Healthy Living



Behaviors among scabies cases in the Wolofeo region. The study population comprised all residents within the Wolofeo Health Center's operational region who were documented as outpatient scabies patients from January to December 2024, totaling 86 individuals. The sample was selected using a purposive sampling method based on established criteria, with 70 respondents meeting the eligibility criteria and participating in the survey. The inclusion criteria comprised persons who had undergone outpatient treatment for scabies, had reading skills, and were aged 15-45 years. Individuals absent during the data collection period or reluctant to participate or complete the questionnaire were excluded from the study.

Data were collected using a standardized questionnaire to assess three primary components of CHLB: knowledge, attitudes, and practices regarding scabies prevention and general hygiene behaviors. The questionnaire underwent content validity testing before use, yielding a Content Validity Index (CVI) of 0.87, indicating high validity. A pilot study with 15 respondents was conducted to assess reliability, yielding a Cronbach's Alpha of 0.82, confirming the instrument's reliability and internal consistency. The questionnaire was thereafter administered directly to respondents who satisfied the inclusion criteria. The gathered data were analyzed using univariate methods to characterize respondents' knowledge, attitudes, and habits. The results were conveyed as frequencies and percentages to elucidate community CHLB trends about scabies prevention in the Wolofeo region.

Results

Table 1. Characteristics of Respondents Based on Age Group, Gender, Educational Level, and Occupation

Characteristics	n	%
Age Group		
Adolescents (16–20 years)	11	15.7
Adults (21–45 years)	48	68.6
Elderly (45–65 years)	11	15.7
Gender		
Male	29	41.4
Female	41	58.6
Educational Level		
Elementary School	20	28.6
Junior High School	17	24.3
Senior High School	26	37.1
Higher Education	7	10.0
Occupation		
Housewife	20	28.6
Farmer	15	21.4
Entrepreneur	8	11.4
Laborer	9	12.9
Employee	7	10.0
Student	11	15.7
Total Respondents	70	100.0

The respondents' characteristics indicated that the predominant age group was adults aged 21-45 years (68.6%), suggesting that this age group accounted for the majority of individuals who sought outpatient care for scabies at the Wolofeo Health Center. Female respondents accounted for the predominant share (58.6%), suggesting either greater consumption of health services or increased accessibility for women during the data collection period. Regarding educational attainment, the majority of respondents had completed senior high school (37.1%), indicating a



moderate level of education that may have affected their understanding of Clean and Healthy Living Behaviors. Housewives constituted the predominant demographic (28.6%), underscoring their pivotal role in domestic hygiene management and their increased propensity to engage in community health evaluations.

Table 2. Distribusi Frekuensi Community's Clean and Healthy Behaviors berdasarkan Knowledge, Attitude, and Practices

Variable	Category	n	%
Knowledge	Good	59	84.3
	Poor	11	15.7
Attitudes	Good	68	97.1
	Poor	2	2.9
Practices	Good	70	100.0
	Poor	0	0

The results showed that a significant majority of participants demonstrated a solid understanding of Clean and Healthy Living Behaviors and their connection to scabies prevention, with 59 respondents (84.29%) demonstrating good knowledge. Regarding attitudes, almost all participants (68, 97.14%) held a favorable view of CHLB, with 68 individuals categorized as having a positive attitude. Additionally, every respondent (100%) indicated effective preventive practices, demonstrating a robust commitment to recommended hygiene behaviors. The findings indicated that the community in the Wolofeo area demonstrated a high level of awareness, favorable perceptions, and appropriate actions regarding CHLB to prevent scabies.

Discussion

Knowledge

The continuing occurrence of scabies cases in Wolofeo suggests that knowledge alone may not be sufficient to interrupt transmission, despite the fact that the majority of respondents demonstrated excellent knowledge of Clean and Healthy Living Behaviors (CHLB) and scabies prevention (84.3%). In the Knowledge-Attitude-Practice (KAP) framework, knowledge is merely the initial cognitive component that can influence attitudes and subsequent behaviors. Nevertheless, consistent preventive practices are not routinely achieved in environments where structural constraints, such as overcrowding, limited water access, and shared living facilities, persist despite adequate knowledge. This discrepancy may help explain why scabies persists despite generally favorable levels of knowledge (Ayele et al., 2023; Fall et al., 2024; Kudzordzi et al., 2025; Zewude et al., 2024).

From the Health Belief Model (HBM) perspective, individuals may have knowledge about transmission and prevention, but they may not recognize scabies as a severe condition or may underestimate their susceptibility to reinfection. If perceived severity and susceptibility are low, preventive measures may not be maintained. In addition, the perceived advantages of rigorous hygiene protocols may be outweighed by perceived obstacles, including financial constraints, communal living practices, and restricted access to clean water (Ayele et al., 2023; Widaty et al., 2022). Persistent transmission has been extensively documented as a result of reinfection within households or close-contact settings (Mitchell et al., 2024; Tavoletti et al., 2025), underscoring the need for collective and community-based interventions rather than solely individual-level approaches.

The presence of 15.7% of respondents with poor knowledge further indicates uneven distribution of health literacy within the community, potentially creating transmission clusters.



Similar findings have been reported in other studies, in which variations in knowledge and access to health promotion programs were associated with differences in preventive behaviors (Anggina & Prameswarie, 2024; Widaty et al., 2022). Behavioral change theories emphasize that sustainable disease control requires not only information dissemination but also enabling environments, social reinforcement, and structural support (Indarjo et al., 2022; Irijayanti et al., 2023). Therefore, while the relatively high knowledge level is encouraging, these findings suggest that effective scabies control in Wolofeo requires integrated strategies that address environmental determinants, collective practices, and behavioral reinforcement mechanisms alongside educational interventions.

Attitudes

The persistence of scabies cases in Wolofeo suggests that positive attitudes alone are insufficient to disrupt transmission, despite 97.1% of respondents expressing a favorable attitude toward Clean and Healthy Living Behaviors (CHLB) and scabies prevention. Within the Knowledge-Attitude-Practice (KAP) framework, attitude is a representation of an affective disposition to act. Nevertheless, the conversion of positive attitudes into sustained preventive practices depends on environmental support and contextual feasibility (Fall et al., 2024; Kudzordzi et al., 2025). This may account for the apparent paradox. Communities continue to experience recurrent infections despite reporting favorable attitudes. The practical implementation of hygiene intentions may be impeded by structural determinants, including congestion, limited water availability, and shared sleeping arrangements (Ayele et al., 2023; Joseph et al., 2024).

According to the Health Belief Model (HBM), favorable attitudes may indicate a general agreement with hygiene principles, but they do not necessarily correspond to a strong perceived susceptibility or perceived severity of scabies. If individuals do not perceive scabies as a condition with serious health or social consequences, or do not perceive reinfection as probable, preventive behaviors may not be consistently prioritized. In addition, even among individuals who maintain favorable attitudes, perceived obstacles, including financial constraints, communal cultural norms, or inadequate sanitation infrastructure, may surpass perceived advantages (Tavoletti et al., 2025; Widaty et al., 2022). Mitchell et al (2024) also suggest that collective behavioral synchronization is crucial for effective control, as reinfection within households or close-contact networks may also sustain transmission.

The small percentage of respondents (2.9%) who expressed less favorable attitudes may indicate vulnerable demographics with limited exposure to health promotion or a lower perception of risk. According to behavioral change theory, the formation and maintenance of attitudes necessitate continuous reinforcement, social modeling, and facilitating environments, rather than a single educational exposure (Indarjo et al., 2022; Mawardi et al., 2024). Consequently, although the general attitudinal climate in Wolofeo appears to be favorable to prevention initiatives, sustainable scabies control necessitates integrated strategies that prioritize coordinated community-level action, enhance perceived risk and benefits, and address environmental constraints, rather than relying solely on positive individual attitudes.

Practices

The persistent occurrence of scabies in Wolofeo poses a significant interpretive challenge, particularly given that 100% of respondents reported excellent Clean and Healthy Living Behavior (CHLB) practices. The behavioral culmination of knowledge and attitudes is reflected in practice within the Knowledge-Attitude-Practice (KAP) framework. Nevertheless, the presence of



ongoing transmission implies that reported practices may not completely reflect actual behavioral consistency or collective adherence. Ayele et al (2023) and Joseph et al (2024) have suggested that this apparent discrepancy indicates that individual-level hygiene behaviors, which are reported as adequate, may not be sufficient to interrupt transmission in environments characterized by close physical contact, shared sleeping arrangements, and environmental limitations.

Preventive practices are sustained not only by knowledge, but also by perceived susceptibility, perceived severity, perceived benefits, and perceived barriers, according to the Health Belief Model (HBM). Despite individuals reporting consistent personal hygiene and bathing, the efficacy of these behaviors may be compromised by structural constraints, such as congested housing, limited water supply, or shared bedding (Tavoletti et al., 2025; Widaty et al., 2022). Persistent cases may be further elucidated by reinfection within households or social networks, particularly if treatment is not administered simultaneously to all close contacts (Mitchell et al., 2024). Consequently, the persistence of scabies may indicate deficiencies in the implementation of collective or synchronized behaviors rather than the absence of individual hygiene initiatives.

Additionally, the uniformly positive practice findings may indicate potential self-reporting bias. Social desirability bias is common in behavioral health research, especially when respondents are aware of normative expectations (Indarjo et al., 2022). The absence of variability in reported practices limits the ability to identify specific behavioral risk gradients, suggesting that observational or mixed-method approaches may provide more nuanced insights into real-world implementation. Behavioral change theory emphasizes that sustainable preventive behavior requires enabling environments, social reinforcement, and supportive infrastructure, not merely individual compliance (Kurnia & Putri, 2025; Zewude et al., 2024). Therefore, while the reported practices are encouraging, effective scabies control in Wolofeo likely depends on strengthening environmental sanitation, ensuring collective treatment strategies, and integrating community-based monitoring mechanisms alongside individual hygiene promotion.

Conclusion

This study indicates that the Wolofeo community demonstrates high levels of knowledge, positive attitudes, and self-reported excellent practices regarding Clean and Healthy Living Behaviors (CHLB) for scabies prevention. However, the persistence of scabies suggests that individual awareness alone is insufficient to interrupt transmission, as structural factors such as overcrowding, environmental sanitation, water access, and potential household reinfection may play a substantial role. These findings emphasize the need for integrated control strategies that extend beyond health education, including strengthened environmental sanitation, synchronized household treatment, routine screening, and community-based monitoring by primary healthcare providers. Future research integrating observational or mixed-method approaches is recommended to validate self-reported behaviors and better inform targeted, context-specific interventions.

Ethics approval and consent to participate

Ethical clearance for this study was granted in accordance with institutional and national research regulations. Prior to data collection, participants received an explanation of the study's objectives, procedures, and their rights, after which written informed consent was secured. Throughout the research, the privacy and anonymity of all participants were carefully protected.



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