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Impact of Community-Based Health Workers on Community-Led Total Sanitation Implementation on Latrine Ownership and Practice of Open Defecation among Household Members in Turkana County, Kenya

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Abstract

Community-led total sanitation (CLTS) is a widely used method to tackle health issues related to open defecation within the community. Research indicates successful CLTS in arid and semi-arid areas, but lacks understanding of its implementation, engagement of Community-Based Health Workers, and their expertise. The study aimed to assess the influence of Community-Based Health Workers on the implementation of a Community-Led Total Sanitation approach in Turkana County, Kenya.The survey utilized a community-based cross-sectional design, with 200 community-based health workers and 430 households recruited using multi-stage sampling as participants, and 21 key informants selected purposively. Excel and STATA version 17 were utilized for data management, analysis, and presentation of quantitative results, while NVivo was utilized for qualitative analysis. Quantitative data was analyzed using descriptive and inferential statistics, while qualitative data was analyzed using thematic methods. The study revealed a positive trend in sanitation infrastructure, with 69.93% of households owning latrines. Facing challenges using latrines demonstrated a highly significant association with both latrine ownership ($p < 0.001$) and open defecation ($p < 0.001$), indicating that household members encountering difficulties with latrine usage are less likely to own one and more likely to practice open defecation. CBHWs playing a role ($p < 0.001$) are all significantly associated with both latrine ownership and reduced open defecation, underlining the influential role of CBHWs in promoting improved sanitation practices and infrastructure within households in Turkana County, Kenya. The study revealed that Community-Based Health Workers significantly enhance households' sanitation infrastructure and support decreases in open defecation practices.

Keywords: *Community-Based Health Workers, Community-Led Total Sanitation, Households, Open Defecation, Practice.*

Introduction

Kamal Kar created the idea of Community-led Total Sanitation (CLTS) for Bangladesh's rural areas around the year 2000 [1]. Around 2011, the CLTS strategy attained widespread acceptance [2]. When CLTS was first implemented in a nation, non-governmental organizations frequently took the lead [3]. Communities may receive recognition from their local governments by being granted "open defecation free" (ODF) status [4]. The initial CLTS plan purposely excluded toilet subsidies because they could make the procedure more difficult [5]. At least 53 nations use CLTS in some capacity [6]. It is a participative strategy intended to inspire a shift in everyone's

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behaviour in rural areas [7]. The CLTS technique was first created in 2009 in Bangladesh and it has subsequently been used all around the world [8].

In 2011, the Open Defecation Free Rural Kenya was committed to making the whole country free of open defecation by the year 2020, and to do so, in May 2011, they started the Open Defecation Free (ODF) Rural Kenya Campaign [9]. By the end of 2014, 15% of Kenyan villages had adopted CLTS, with 7% of those villages declaring themselves ODF; the highest concentration of ODF villages was in Busia, Kisumu, and Siaya Counties [10]. In these counties, the ODF status was 33%, 30%, and 29%, respectively [11]. Despite several purposeful attempts, Kenya failed to make progress toward the MDG target of halving the population without access to clean water and toilets by 2015 [12].

A better approach to sanitation is crucial for maintaining human health [13]. Access implies that everyone will be able to easily access a facility for sanitation and hygiene whenever they need it, wherever they are, whether at home or in a public setting [14]. Numerous water-related illness outbreaks, such as the cholera outbreaks in Turkana in 2013 and 2018, as well as the high rates of typhoid and trachoma, have been linked to open defecation [15]. After lack of water, poor sanitation is the second biggest problem affecting communities in Turkana County, Kenya [16].

The Kenya Campaign was launched, and other sanitation campaigns have been running in Turkana from 2007 when Community-Led Total Sanitation (CLTS) programs were first executed [17]. Despite all these efforts, there hasn't been much progress since open defecation is still practiced by a large percentage of the population (72%) [18]. In addition, there aren't many latrines available, and as such, residents don't practice good personal hygiene [19]. Collectively, these issues have led Turkana County to have a high burden of water-related diseases, despite a rise in the number of community health units to 167 and the number of community-based health workers to 2,238 [20].

Due to different contextual concerns and challenges, CLTS adoption has been slow in many parts of Kenya [21]. ODF achievement in diverse communities is hampered by many contextual difficulties, and Turkana County is no exception [22]. To date, no specific research has been carried out to examine the obstacles that community-based health professionals face in Turkana County [23].

Even though there have been numerous studies on CLTS conducted in both Kenya and other nations, most of the studies conducted in Kenya have not made a conclusive statement regarding the adoption and implementation of the CLTS approach as a strategy used to address the issue of open defecation [24]. There is a shortage of data on the examination of community-based health workers' (CBHWs) knowledge, function, motivation, and obstacles related to the implementation and adoption of the CLTS strategy to achieving ODF status [25].

It is upon this background that the current study was set to determine the impact of CBHWs on CLTS implementation on latrine ownership and the practice of open defecation among household members in Community-Led Total Sanitation in Turkana County in Kenya. The current survey aimed at evaluating the effectiveness of CBHWs in the implementation of CLTS in Turkana County, Kenya.

Methods

Study Area

The study was conducted in Turkana County, the most populous county in North-Western Kenya, which is bordered by Uganda, Ethiopia, South Sudan, Lake Turkana, Marsabit County, and the Ilemi Triangle. The county, with a population of 926,976 according to the 2019 census, is located south and east of West Pokot, Baringo, and Samburu Counties [26a].

The County comprises seven sub-counties: Loima, Kibish, Turkana Central, Turkana West, Turkana East, Turkana South, and North Turkana. Turkana, Kenya's poorest county, faces challenges such as dry and semi-arid environment, distance from capital, limited access to services, and poverty. Kenyan Fact Sheet 2011 highlights school attendance and electricity availability.

Turkana County ranks 47th out of 47 in infant vaccination, literacy, sanitation, and health care indicators. The arid region experiences high temperatures and heavy rainfall, impacting its economy based on nomadic pastoralism. Disease outbreaks and unusual migratory patterns persist. Livestock numbers are slowing down, making it difficult for locals to make a living off herding alone. [26b].

About 95% of Kenya's pastoralist population lives below poverty line, with poor sanitation being the second biggest issue. Eighty-two percent of Turkana residents lack access to sanitary services, impacting health and economic growth, and most use open defecation for years [27]

Study Design and Participants

A community-based cross-sectional survey was conducted within Community-Based Health Workers, within households, key informants and focus group discussion participants to collect information on effectiveness of Community-Based Health Workers on implementation of CLTS approach.

Data Collection

A total of 12 research assistants participated in data collection. They were trained for two days on data collection procedures and other aspects related to the study. A structured questionnaire was used to collect data from households and CBHWs, while an interview guide and schedule were used to collect data from Key informants and FGD participants.

Data Management and Analysis

Excel and STATA version 17 were both used for data management, analysis and presentation of quantitative results while NVivo was used for qualitative. Descriptive and inferential statistics such as mean, standard deviation, frequencies and their percentages, chi-square test and multivariate logistics were used for analysis of quantitative data and thematic analysis for qualitative data. Regression analysis was used to test for association. In all tests, $p<0.05$ were considered statistically significant.

Ethical Consideration

The study obtained ethical approval from Mount Kenya University Ethics and Research Committee (ERC) (MKU/ISERC/2659) and National Council for Science, Technology and Innovation (NACOSTI) (679798) Kenya. It also sought written consent from all study participants.

Results and Findings

Characteristics of the Respondents

The recruitment rates for both households (97.4%; 419 of 430) and community-based health workers (98.0%; 196 of 200) for the study were high, and good enough for quantitative analysis and inferences. For households' characteristics (Table 1), most of the study participants were aged over 40 years (52.51%), with a relatively balanced gender distribution. Similarly, majority of the participants were married (68.74%), unemployed (61.58%) and identified as Christian (90.21%). Educationally, the sample was diverse, with significant proportions having completed secondary school (22.43%) or post-secondary education (27.45%).

Table 1. Demographic Characteristic for Household

Characteristics	n	%
Age Category		
21-30	47	11.22
31-40	152	36.28
> 40 Years	220	52.51
Gender		
Female	208	49.64
Male	211	50.36
Marital Status		
Married	288	68.74
Separated	61	14.56
Unmarried	11	2.63
Widowed	59	14.08
Religion		
Christian	378	90.21
Muslim	41	9.79
Education		
No Formal Education	113	26.97
Primary	97	23.15
Secondary School	94	22.43
Post-Secondary School	115	27.45
Occupation		
Employed	95	22.67
Own a Business	66	15.75
Unemployed	258	61.58

Demographic Characteristics for Community Based Health Worker

The demographic analysis of community-based health workers reveals several notable patterns (Table 2). Most health workers fall within the age range of 31-40 (71.94%), with a relatively balanced gender distribution. The majority were married (83.67%) and identify as Christian (98.47%). Educationally, there was a diverse range of attainment levels, with a significant portion having completed post-high school education (45.92%). In terms of occupation, a substantial portion were employed (41.84%) or self-employed (33.67%), with roles primarily in agriculture (10.2%) or pastoralism (14.29%). Moreover, majority were Community Health Volunteers (57.65%), with varying durations of service, with a notable proportion having worked for 2-4 years (46.43%).

Table 2. Demographic Characteristics for Community Based Health Workers

Characteristics	n	%
Age Category		
21-30	17	8.67
31-40	141	71.94
>40	38	19.39

Gender		
Female	97	49.49
Male	99	50.51
Marital Status		
Married	164	83.67
Separated	19	9.69
Unmarried	3	1.53
Widowed	10	5.1
Religion		
Christian	193	98.47
Muslim	3	1.53
Education Level		
No Formal Education	49	25
Primary	42	21.43
High School	15	7.65
Post High School	90	45.92
Occupation		
Agriculture	20	10.2
Employed	82	41.84
Pastoralism	28	14.29
Self Employed	66	33.67
Position in Health Unit		
Community Health Extension	83	42.35
Community Health Volunteer	113	57.65
Duration Worked		
2-4 Years	91	46.43
5-7 Years	32	16.33
8-10 Years	13	6.63
Below 2 Years	60	30.61

Open Defecation and Latrine Ownership Related Characteristics

As illustrated by the findings in Table 3 below, a significant proportion of households in Turkana County own a latrine (69.93%), indicating a positive trend in sanitation infrastructure. However, a significant portion also still practice open defecation (42.24%), suggesting ongoing challenges in behavior change. While most households' members do not face challenges using latrines (76.37%), a considerable minority does (23.63%), emphasizing the need for continued support and education. Importantly, many respondents agreed that CBHWs play an important role (76.61%), indicating their perceived

effectiveness in promoting sanitation practices. Furthermore, Pit latrines are the predominant type of latrine (88.40%), with a considerable number constructed within the past 1-2 years (37.88%), reflecting recent efforts in sanitation infrastructure development. These findings highlight the crucial role of CBHWs in facilitating CLTS implementation in the community.

Table 3. Open Defecation and Latrine Ownership Related Characteristics

Characteristic	**n**	%
Own a latrine		
No	126	30.07
Yes	293	69.93
Use open defecation		
No	242	57.76
Yes	177	42.24
Faces challenge using Latrine		
No	320	76.37
Yes	99	23.63
CBHWs Play important role		
Not Agree	98	23.39
Agree	321	76.61
Type of latrine		
Pit Latrine	259	88.40
Ventilated Pit Latrine	34	11.60
Time since latrine construction		
1-2 Years	111	37.88
Less Than 1 Year	64	21.84
Over 2 Years	118	40.27

CBHWs Influence on Household Latrine Ownership and Use of Open Defecation

Community-Based Health Workers (CBHWs) activities such as educating and supporting the households had a great effect on household latrine ownership and the practice of open defecation, as illustrated in **Figure 1**. Households that received education from CBHWs were significantly more likely to own a latrine (76.74%) compared to those who did not (38.67%). Similarly, the incidence of open defecation use was significantly lower among households educated by CBHWs (37.79%) compared to those without such education (62.67%). Likewise, households receiving support from CBHWs exhibited higher rates of latrine ownership (85.39%) and lower rates of open defecation (29.22%) compared to those not receiving support (27.03% and 78.38%, respectively). These findings therefore demonstrate the pivotal role of CBHWs in promoting improved sanitation practices and infrastructure within households in Turkana County.

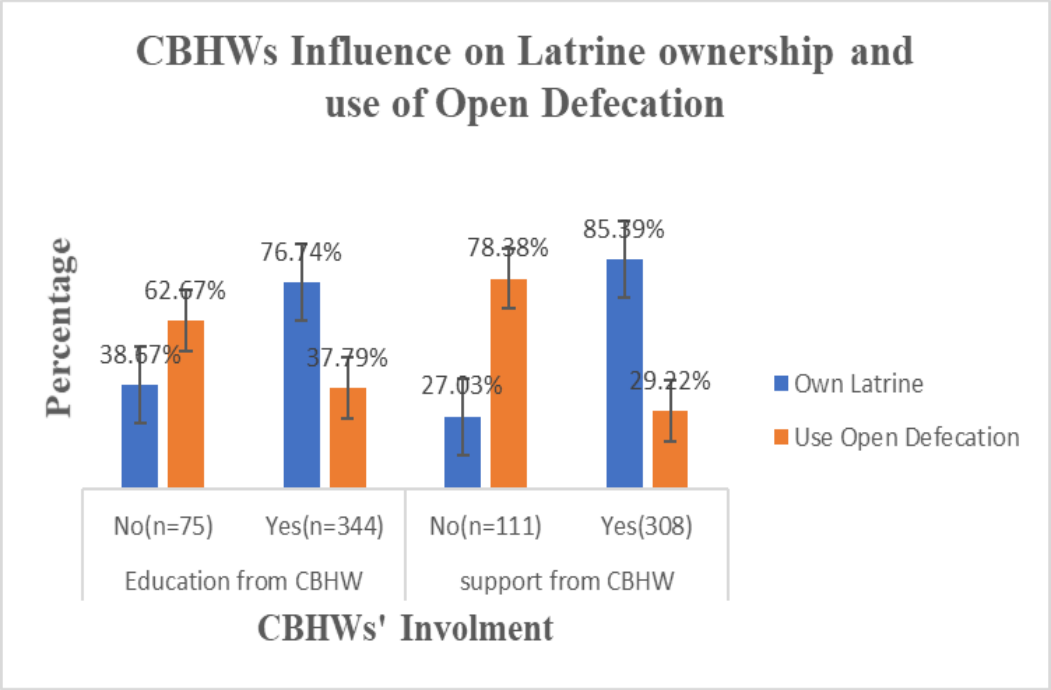

Figure 1. CBHWs Activities' Influence on Household Latrine Ownership and Use of Open Defecation.

Factors Associated with Latrine Ownership and Use of Open Defecation

Table 4 presents factors associated with latrine ownership and the use of open defecation among households in Turkana County. Facing challenges using latrines demonstrated a highly significant association with both latrine ownership ($p < 0.001$) and open defecation ($p < 0.001$), indicating that households' members encountering difficulties with latrine usage are less likely to own one and more likely to practice open defecation. Moreover, receiving education from CBHWs ($p < 0.001$), receiving support from CBHWs ($p < 0.001$), and CBHWs playing a role ($p < 0.001$) are all significantly associated with both latrine ownership and reduced open defecation, underlining the influential role of CBHWs in promoting improved sanitation.

Table 4. Factors Associated with Latrine Ownership and Use of Open Defecation Practices and Infrastructure Within Households

Characteristics	**Own A Latrine**		**p**	**Used Open Defecation**		p
	No, N(%)	**Yes, N(%)**		**No, N(%)**	**Yes, N(%)**	
Age Category			0.820			0.842
21-30	13(27.66)	34(72.34)		28(59.57)	19(40.43)	
31-40	44(28.95)	108(71.05)		85(55.92)	67(44.08)	
> 40 Years	69(31.36)	151(68.64)		129(58.64)	91(41.36)	
Gender			0.332			0.444
Female	58(27.88)	150(72.12)		124(59.62)	84(40.38)	
Male	68(32.23)	143(67.77)		118(55.92)	93(44.08)	
Marital Status			0.849			0.564
Married	85(29.51)	203(70.49)		161(55.9)	127(44.1)	
Separated	17(27.87)	44(72.13)		40(65.57)	21(34.43)	
Unmarried	4(36.36)	7(63.64)		6(54.55)	5(45.45)	

Widowed	20(33.9)	39(66.1)		35(59.32)	24(40.68)	
Religion			0.906			0.077
Christian	114(30.16)	264(69.84)		213(56.35)	165(43.65)	
Muslim	12(29.27)	29(70.73)		29(70.73)	12(29.27)	
Education			0.841			0.775
No Formal Education	31(27.43)	82(72.57)		68(60.18)	45(39.82)	
Primary	28(28.87)	69(71.13)		59(60.82)	38(39.18)	
Secondary School	30(31.91)	64(68.09)		54(57.45)	40(42.55)	
Post-Secondary School	37(32.17)	78(67.83)		15(55.56)	12(44.44)	
Occupation			0.652			0.719
Employed	25(26.32)	70(73.68)		55(57.89)	40(42.11)	
Own a Business	20(30.3)	46(69.7)		41(62.12)	25(37.88)	
Unemployed	81(31.4)	177(68.6)		146(56.59)	112(43.41)	
Faces challenge using Latrine			**< 0.001**			**< 0.001**
No	120(37.5)	200(62.5)		166(51.88)	154(48.13)	
Yes	6(6.06)	93(93.94)		76(76.77)	23(23.23)	
Education from CBHW			**< 0.001**			**< 0.001**
No	46(61.33)	29(38.67)		28(37.33)	47(62.67)	
Yes	80(23.26)	264(76.74)		214(62.21)	130(37.79)	
support from CBHW			**< 0.001**			**< 0.001**
No	81(72.97)	30(27.03)		24(21.62)	87(78.38)	
Yes	45(14.61)	263(85.39)		218(70.78)	90(29.22)	
CBHW play a role			**< 0.001**			**< 0.001**
No	72(73.47)	26(26.53)		24(24.49)	74(75.51)	
Yes	54(16.82)	267(83.18)		218(67.91)	103(32.09)	

Association between Household Factors and Latrine Use and Open Defecation

The significant household-related factors at bivariate level were subjected to multivariate logistic regression as shown in **Table 5**. Households facing challenges using the latrine were 11.09 times more likely to own a latrine ($p<0.001$) and 0.37 times less likely to practice open defecation ($p=0.001$). Similarly, receiving support from CBHWs significantly increased the likelihood of owning a latrine (AOR=9.47, $p<0.001$) and reduced the likelihood of practicing open defecation (AOR=0.13, $p<0.001$). The study further found CBHWs playing a role being associated with an increased likelihood of latrine ownership (AOR=2.93, $p=0.019$) but does not significantly influence the practice of open defecation. The results emphasize the crucial role of support from CBHWs and addressing

challenges in promoting latrine ownership and reducing open defecation within households.

Table 5. Multivariate Logistic Regression of Household Related Factors

Characteristics	Own A Latrine		p	Used Open Defecation		p
	AOR	95% CI		AOR	95% CI	
Faces challenge using Latrine						
No	REF			REF		
Yes	11.09	4.18-29.42	0	0.37	0.21-0.65	0.001
Education from CBHW						
No	REF			REF		
Yes	0.84	0.35-2.02	0.699	2.01	0.88-4.59	0.098
support from CBHW						
No	REF			REF		
Yes	9.47	4.26-21.02	0	0.13	0.06-0.29	0
CBHW play a role						
No	REF			REF		
Yes	2.93	1.19-7.2	0.019	0.52	0.22-1.26	0.15

*COR, crudes odd ratio; AOR, adjusted odds ratio; *P-values were calculated using logistic regression model*

Discussion

The study shows high recruitment success among community-based health workers and households, with 98.0% and 97.4% respectively, indicating robust participation and reliable conclusions. The study's findings may be influenced by the mature demographic of participants, who constitute 52.51% of the total, who are over 40 years old. The study's findings are based on a religiously homogeneous sample, with a majority of participants (90.21%) identifying as Christians, ensuring unbiased conclusions. The study's findings suggest that the unemployed demographic, comprising 61.58% of participants, may reflect the community's economic conditions and potentially impact health outcomes and behaviors. The study, with 68.74% of participants being married, examines the impact of education on CLTS outcomes, considering the implications of marital status on health and social support. The variety in educational attainment allows for examining the influence of education on CLTS outcomes within the study. Overall, these characteristics provide a comprehensive snapshot of the study population, which is critical for contextualizing the findings and understanding the broader implications of the research.

Health workers aged 31-40 are crucial for community-based health work due to their experience and physical capabilities, and their balanced gender distribution ensures diverse perspectives and approaches. Married health workers' (83.6%) stability and commitment may affect care quality and community trust, while cultural and religious factors, particularly among 98.47% of Christian-identified health workers, may influence community implementation. The diverse educational attainment, with 45.92% having post-high school education, demonstrates a well-educated workforce capable of comprehending and executing intricate health interventions. Health workers, both employed (41.84%) and self-employed (33.67%), are largely characterized by economic stability and resourcefulness, which could potentially enhance their performance in their roles. The community's economic activities, including agriculture and pastoralism, may impact the availability and priorities of health workers. The Community Health Volunteers, with 57.65% and a

significant proportion of 2-4 years of service, demonstrate a dedicated workforce with valuable experience and potential for long-term impact. Demographic characteristics offer valuable insights into community-based health workers' profiles, enabling effective CLTS program and intervention tailoring to leverage their strengths and tackle potential challenges.

A significant proportion of households (69.93%) own a latrine. This indicates a positive trend in the development of sanitation infrastructure in Turkana County. Despite this progress, 42.24% of households still practice open defecation. This suggests that there are ongoing challenges in changing sanitation behaviors among a large portion of the population. Most households (76.37%) do not face challenges in using latrines, indicating that the majority find the existing facilities adequate. However, 23.63% of households do experience difficulties, underscoring the need for continued support, education, and possibly improvements in latrine design and maintenance. A substantial majority (76.61%) of respondents agree that CBHWs play an important role in promoting sanitation practices. This reflects the perceived effectiveness of CBHWs in the community, especially in the context of CLTS initiatives. Pit latrines are the predominant type, accounting for 88.40% of all latrines. This indicates a common preference or availability of this type of latrine. A notable number of these pit latrines (37.88%) have been constructed within the past 1-2 years. This reflects recent efforts and investments in improving sanitation infrastructure. The study findings underscore the importance of CBHWs in facilitating CLTS implementation and promoting sanitation practices. While there is significant progress in latrine ownership and infrastructure development, there remain challenges in eliminating open defecation and ensuring all households can effectively use latrines. Continued efforts in education, behavior change campaigns, and infrastructure support are essential to further improve sanitation practices in Turkana County.

The study highlights the significant impact that Community-Based Health Workers (CBHWs) have on improving sanitation practices and infrastructure within households in Turkana County. The study compares latrine ownership and the practice of open defecation between households that received education and support from CBHWs and those that did not. Households educated by CBHWs: 76.74% owned a latrine. Households not educated by CBHWs: 38.67% owned a latrine. Households supported by CBHWs: 85.39% owned a latrine. Households not supported by CBHWs: 27.03% owned a latrine. Households educated by CBHWs: 37.79% practiced open defecation. Households not educated by CBHWs: 62.67% practiced open defecation. Households supported by CBHWs: 29.22% practiced open defecation. Households not supported by CBHWs: 78.38% practiced open defecation. These findings clearly demonstrate the effectiveness of CBHWs in enhancing sanitation conditions. The education and support provided by CBHWs significantly increased the likelihood of households owning a latrine and decreased the prevalence of open defecation. This underscores the pivotal role of CBHWs in promoting better health practices and improving the overall sanitation infrastructure in Turkana County. Their interventions are crucial in fostering sustainable health improvements in community settings.

The study findings highlight several key factors that influence these sanitation outcomes, with a particular focus on the role of Community-Based Health Workers (CBHWs). Households facing challenges using latrines are significantly less likely to own one, as indicated by a highly significant p-value ($p < 0.001$). Similarly, these households are significantly more likely to practice open defecation ($p < 0.001$). This suggests that practical difficulties or barriers in using latrines discourage ownership and proper sanitation practices.

Receiving education from CBHWs is strongly associated with increased latrine ownership ($p < 0.001$). Households that received education from CBHWs are significantly less likely to engage in open defecation ($p < 0.001$). This highlights the effectiveness of educational interventions by CBHWs in improving sanitation practices.

Receiving support from CBHWs is also significantly associated with higher latrine ownership ($p < 0.001$). Households receiving support from CBHWs show a significant reduction in the practice of open defecation ($p < 0.001$). The support could include various forms of assistance, such as material, technical, or motivational support, which contribute to better sanitation outcomes. The involvement of CBHWs in any capacity is highly significant in increasing latrine ownership ($p < 0.001$).: CBHWs playing a role in household sanitation is significantly associated with reduced open defecation ($p < 0.001$). This further emphasizes the critical influence of CBHWs in promoting and sustaining improved sanitation practices. The study demonstrates the pivotal role of CBHWs in enhancing sanitation conditions. Their educational efforts, support, and overall involvement are crucial factors in increasing latrine ownership and reducing open defecation practices. Addressing the challenges that households face in using latrines is also essential for improving sanitation outcomes. The data underscores the importance of comprehensive interventions that include both educational and practical support from CBHWs to achieve sustainable health and sanitation improvements in Turkana County.

The results of a multivariate logistic regression analysis, examined the significant household-related factors affecting latrine ownership and the practice of open defecation among households in Turkana County. The analysis highlights the influence of various factors, with a particular focus on the role of Community-Based Health Workers (CBHWs) and the challenges households face in using latrines. Households facing challenges using the latrine are 11.09 times more likely to own a latrine ($p < 0.001$). This result suggests that despite facing difficulties, these households might prioritize latrine ownership to address their sanitation needs. Households facing challenges using latrines are 0.37 times less likely to practice open defecation ($p=0.001$). This indicates that overcoming these challenges could significantly reduce the practice of open defecation. Receiving support from CBHWs significantly increases the likelihood of owning a latrine, with an Adjusted Odds Ratio (AOR) of 9.47 ($p< 0.001$). This demonstrates the substantial impact of CBHW support on improving household sanitation infrastructure. Support from CBHWs also significantly reduces the likelihood of practicing open defecation, with an AOR of 0.13 ($p<0.001$). This shows that CBHWs' support is crucial in promoting proper sanitation practices and reducing open defecation. The involvement of CBHWs is associated with an increased likelihood of latrine ownership, with an AOR of 2.93 ($p=0.019$). This finding highlights the importance of CBHWs' engagement in encouraging households to invest in latrines. The role of CBHWs does not significantly influence the practice of open defecation in the multivariate analysis, suggesting that other factors may play a more prominent role in this aspect. The results underscore the critical role of CBHWs in promoting latrine ownership and reducing open defecation among households in Turkana County. The significant positive impact of CBHW support on both latrine ownership and sanitation practices highlights the importance of their involvement in community health initiatives. Additionally, addressing the challenges households face in using latrines is essential for achieving better sanitation outcomes. The findings emphasize the need for comprehensive support and targeted interventions to foster sustainable health and sanitation improvements in the community.

Conclusion

Community-Based Health Workers (CBHWs) play an important part in the successful implementation of Community-Led Total Sanitation (CLTS) approaches in Turkana County, Kenya. The findings of this study showed a significant impact of CBHWs on improving households' sanitation infrastructure and reducing open defecation practices. Although there is a notable progress in latrine ownership, the use of open defecation is still a challenge, emphasizing the need for sustained behavior change efforts and community engagement.

Although there is a notable progress in latrine ownership, the use of open defecation is still a challenge, emphasizing the need for sustained behavior change efforts and community engagement by CBHWs. Strengthen Training Programs: The government should invest in comprehensive training programs for Community-Based Health Workers (CBHWs) in Turkana County and other counties with related characteristics, focused on Community-Led Total Sanitation (CLTS) approaches. These programs should emphasize not only technical aspects but also behavioral change communication strategies to effectively engage communities.

Conflict of Interest

We hereby declare that there are no conflicts of interest regarding the thesis.

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