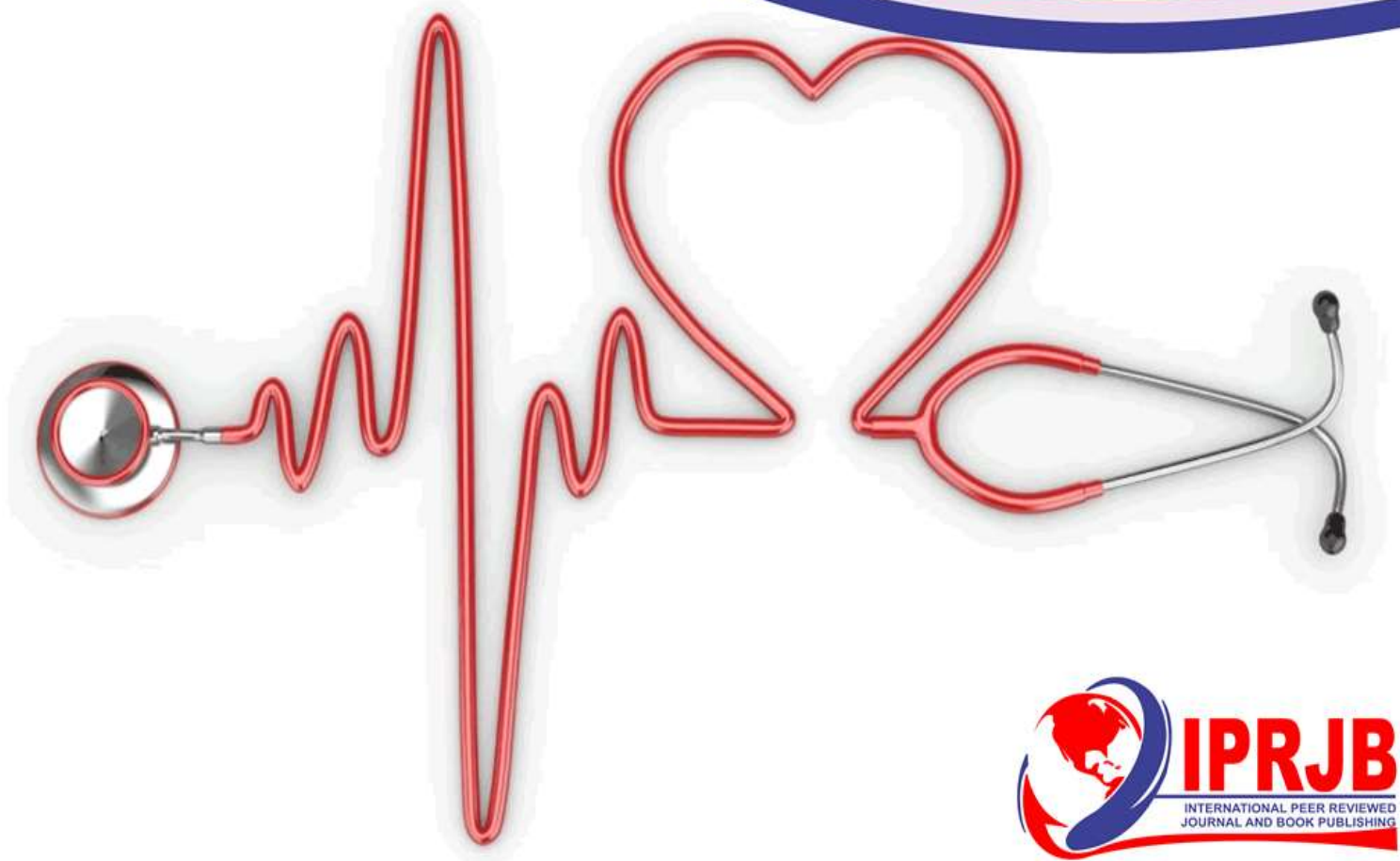


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**Asthma Self-Management Practices among Patients with Asthma at Chuka
County Referral Hospital (CCRH), Kenya**

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Abstract

Purpose: Asthma is a global public health problem that affects people of all ages contributing significantly to morbidity and mortality. It is a chronic inflammatory disease of the respiratory tract. This study aimed at assessing self-management practices for asthma control among adult patients with asthma.

Methodology: The study adopted a descriptive cross-sectional survey design. A sample size of 118 patients was obtained using Fisher's et al formula and the sample was selected using simple random sampling. A researcher administered questionnaire was used to collect data. Data was analyzed using statistical package for social sciences version 26 to generate frequencies, mean and measures of central tendency. Pearson's correlation coefficient was used to determine the relationship between self-management practices and asthma control.

Findings: The study concluded that there is a negative correlation between self-management practices and Frequency of Asthma Control, $r = -0.190$ with a significance $p\text{-value} = 0.045$. This implies that frequency of asthma symptoms and practice of trigger identification and control are statistically significant at 0.05 level (2-tailed). Key facilitators of asthma self-management practices include; effective communication with healthcare workers, availability and affordability of medications in government hospitals. Some of the reported barriers to asthma self-management include presence of comorbidities, poor self-control and lack of knowledge on ASM.

Unique Contribution to Theory, Practice and Policy: This study recommends implementation of outreach programs in the community to increase awareness about asthma and associated self-management essentials.

Keywords: *Health Behavior, General Health, Public Health, Self-management*

JEL Codes: *I12, I10, I18*

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INTRODUCTION

Asthma is a global public health problem that affects people of all ages contributing significantly to morbidity and mortality. According to estimates, 4.3% of the world's population has asthma, with at least 400 million people living with the disease (Asher et al., 2020). The Global Asthma Report (2018) indicates that, asthma is responsible for 461,000 deaths worldwide and 15 million lost disability-adjusted life years (DALYs). In the developed countries there is a significant racial disparity in the occurrence of asthma severity and mortality. In the United States, asthma prevalence is at 7.6% among the general adult population. However, the burden is much lower (5%) among the Mexicans and Asians (Enilari & Sinha, 2019). Despite high income countries having a higher prevalence of asthma, LMICs have the highest rate of asthma-related mortality. This is different in developing countries where asthma related mortality is higher among those who are more economically advantaged (Dharmage et al., 2019).

Prevalence estimates of asthma in Africa range from 2% to 53% nationally and an average of 12% among adult population. South Africa has been depicted as having the highest cumulative prevalence of asthma (53%), followed by Egypt (26.5%), Nigeria (18.4%), Ethiopia (16.3%), and Gambia (1.9%) (Kwizera et al., 2019). About 4 million people that accounts for 7.5% of Kenya's population, are believed to have asthma (Irungu et al., 2022). Studies have shown that a significant number of children (30%) with asthma in Kenya progress to adult ages with their asthma persisting (To et al., 2020). The Global Burden of Disease (2015) notes that Kenya has an asthma DALYs rate of 201-300 per 100,000 people.

Several factors have been linked to an elevated chance of getting asthma, including, urbanization and lifestyle factors. Asthma has also been found to run in families especially among close relatives, and is also common among people suffering from allergic conditions such as hay fever and eczema. It is a disease that reduces the quality of life among those living the disease. Without self-management it can lead to a near fatal asthma which is a medical emergency with poor prognosis. Self-management refers to the measures individuals take to maintain a healthy lifestyle, attend to their social, emotional, and psychological needs, take care of their enduring conditions, and prevent further illness or accidents (Van de Velde et al., 2019). The purpose of asthma self-management is to prevent asthmatic attack for a considerable time for patients to enjoy quality life. This is because, self-management is founded on concepts of self-efficacy as well as confidence in the ability to engage in actions that successfully achieve asthma control. Adherence to prescribed treatment and lifestyle modification are the mainstay to good asthma control.

A Kenya based research on frequency of asthma symptoms concluded that asthma was on an upward trend with an increase in prevalence from 10.4% to 13.8% in Eldoret and 17.1% to 18% in Nairobi (King'e et al., 2021). In Tharaka Nithi County there has not been any study pertaining asthma prevalence. However existing data in the Kenya Health information System (2019-2022) indicates that in Chuka County Referral Hospital, asthma accounts for 25% of all diseases of lower respiratory illness.

Problem Statement

Despite the increasing asthma burden in Tharaka Nithi, no empirical study has explored patients' self-management practices at CCRH. In Kenya, asthma prevalence is approximately 7.5% with a DALY's rate of 300 per 100,000 persons. Globally, asthma prevalence is estimated

to be 4.3% with about 400 million people living with the disease while in Africa the prevalence is 12%.

Just as with many other chronic illnesses effective management of asthma requires a patients' active participation in self-management practices such as self-monitoring of symptoms, use of recommended action plans, adherence to recommended therapies and environmental control practices. Promoters of the chronic care model indicate that there are benefits of practicing self-management in chronic illness as it influences the outcomes of a disease. Management of these ailments has shifted from health worker- patient relationship to a paradigm where patients with chronic diseases play a crucial role in their management. Self-management in chronic illness entails lifestyle modification, and adherence to treatment. Patients who undertake self-management measures have been found to have reduced emergency hospital visits, reduced financial obligations and improved quality of life (Anekwe & Rahkovsky, 2018).

In view of these self-management includes adherence to treatment, identification and control, of triggers and weight reduction measures. Patient non adherence to treatment recommendations has become a global concern and is being described as a silent epidemic which contributes to treatment failure. Non adherence is classified into three phases which include: failure to start treatment, failure to take treatment as prescribed in terms of dosing and frequency, and a lack of persistence with the taking medication (Bernier & Egan, 2019). Amin et al. (2020) notes that non adherence to asthma treatment presents in various patterns, the most common being under use of medication, where, a patient consistently uses a lower dose than that prescribed. The study by Amin presented a contextual gap as it focused on non-adherence to asthma treatment and the gap will be filled by the current study as it will cover self-management practices among patience with asthma. Other forms of non-adherence include reliance on reliever medication to relieve exacerbations while other patients may adhere to a specific drug among those prescribed. Prolonged under treatment leads to inadequately controlled symptoms leading to increased dependence on pro re nata (PRN) treatments to let go of symptoms (Wilson & Platts-Mills, 2018). There are effective self-management practices that improve adherence which include seeking asthma self-management information, aligning daily routines with the medication schedule, having reminder mechanism through use of reminder Apps (Perez et al., 2019), or other local mechanisms, and incorporating a treatment supporter.

Recognition and prevention of triggers is the cornerstone of environmental secondary prevention of asthma. Asthma can be triggered by either allergenic or non-allergenic causes. House dust mites (HDMs) are among the causes of allergic reactions. Measures to avoid exposure to dust mite allergy include use of allergen proof bed garments, weekly cleaning of beddings in hot water, maintaining a dry well-ventilated indoor to reduce humidity, buying washable toys for children and washing cloths before wearing if they have not been in use for a long time. A research by Pei et al. (2020), that sought to assess the effect of indoor environment on mite allergen concentration, concluded that the nature of ventilation can affect mite concentration due to indoor humidity and that household human behavior of frequent cleaning and reduction of fabrics, affects concentration of dust mites. Thus, self-management entails reducing indoor humidity through adequate ventilation and management of house hold fabrics. The study by Pei, presents a conceptual gap as it focuses on one asthma self-management practice which is reducing indoor humidity. The current study will fill the gap by involving different asthma self-management practices.

A randomized control trial by Georga et al. (2019) that aimed to demonstrate the effect of stress management on asthma using perceived stress scale and asthma control tests concluded that stress management plays a crucial role in asthma control. Thus, effective management of stress requires recognition of stressors, thereafter engaging in stress management initiatives. Some of the strategies that have been found to alleviate stress include spirituality which covers belief patterns about illness, death, life after death and the belief in a powerful spiritual being. Similarly, an international journal on psychology by Karmakar (2017), noted that music therapy and engaging in a social group, are effective self-management strategies in managing stress that can prevent asthma exacerbations.

Lifestyle modification is the process of altering chronic harmful habits while adopting appropriate new behaviors as a means to prevent or control illness. Certain lifestyle behaviors have been known to increase asthmatic attacks including inappropriate diet, tobacco use, and excessive exercise (Alomary et al., 2022). Modification of lifestyle includes weight reduction measures through engaging in moderate physical activities, and appropriate diet and cessation of harmful habits. Obesity and overweight have been linked significantly with both a risk for development and worsening of asthma, making it a major public health problem. It's both a risk factor to asthma among both children and adults and also a disease modifier leading to ineffective response to drugs, and more severe attacks (Peters et al., 2018). The underlying association between excessive fat and asthma control is multi-factorial: It is believed that there's alteration of adaptive and innate immunity among obese patients with asthma, causing suppression of T- helper lymphocytes that are involved in allergic response.

A randomized control study by Okoniewski et al. (2019), assessed effect of weight loss among adults diagnosed with obesity and asthma. The interventions that were employed for weight reduction included dietary limitations and exercises with an intervention duration of between 8 weeks to 18 months. The study concluded that there was a reduction in body mass index (BMI) of between 1.8% to 14.5%, in all the RCTs including, portraying an improvement, in lung function and asthma control. A similar study by Mohan et al. (2019), concluded that obesity is associated with poor asthma management outcomes hence the need to have weight reduction measures such as exercise and diet restrictions. Lifestyle influences such as inappropriate diet and sedentary lifestyle have been linked to inadequate asthma control, increased hospital utilization including reduced quality of life (Nyenhuis, 2017).

Non allergenic causes include vigorous exercises, emotional distress, weather, respiratory illness, occupational exposures and smoking (Bhatia et al., 2022). Every patient with asthma has sensitivity to certain allergens that induce exacerbations. These triggers can only be avoided or controlled by actively identifying the suspicious triggers, and their patterns so as to engage in control measures. A modifiable risk factor to asthma exacerbation that can be successfully avoided through self-management strategies such as avoiding smoke, quitting smoking and using alternative source of fuel for cooking.

A study by Muhonja (2023), assessed knowledge, attitude and practices of patients 18-65 on the use of personalized asthma action plans in Nyamira County. Cross-sectional study design was employed in this research. Participants were selected using systematic sampling. Significant differences in categorical variables were found using the Chi-square and Fisher's Exact Test. The threshold for statistical significance was set at $p < 0.05$. Results: The study sample size was 220 asthma patients. The majority of responders were unaware of PAAPs. Concerning attitude, most of participants had a negative attitude about the use of PAAPs,

believing that they should only be used by the extremely ill. Poor practices were seen among the patients who had access to these tools, with 39.0% checking them at home and 61.0% never checking them at all. Statistically there were significant association between the various patients' factors influencing use of asthma action plans among adult asthmatic patients with a $p = 0.021$. Conclusion: The majority of the patients 76.4% who participated in this research did not use the personalized asthma action plan cards. Additionally, the majority of participants reported poor practices on PAAPs, low levels of awareness, and negative attitudes. To combat the low-level knowledge, negative attitude, and poor practices among asthma patients, the ministry of health should raise awareness about the use of PAAPs. This study presents both contextual and geographical gap. The contextual gap will be filled by our current study by concentrating on self-management practices among adult patients inclusive of those above 65 years. The geographical gap became about since the the study was carried out in Nyamira county and the current study will be carried out in Chuka county.

A study by Chakaya et al. (2023), assessed patient demographics, disease characteristics, and asthma treatment patterns in the Kenyan cohort of the SABA use IN Asthma (SABINA) III study. Cross-sectional study was conducted at 19 sites across Kenya, with patient recruitment from August 1, 2019, to November 30, 2019. Patients aged ≥ 12 years with a physician documented diagnosis of asthma, ≥ 3 prior consultations with their HCP, and medical records containing data for ≥ 12 months prior to the study visit were eligible for enrollment in the study. Notably, 71.9% of patients overall were prescribed SABA in excess of current treatment recommendations (≥ 3 SABA canisters/year), which translated into a high disease burden, emphasizing an urgent need for improvements in asthma care. In Kenya, 54.8% of patients were treated in primary care, which was considerably higher than that observed in SABINA III (17.2%). This study presents a conceptual gap as it concentrated on the use of the SABA use IN Asthma while the current study generalized self-management practices among asthma patients.

Studies have established that despite having medications, patient still have poor asthma control. Poorly controlled asthma leads to a myriad of health consequences including decreased QoL and reduced work productivity. In developing countries where there is data, the main reason cited for poor asthma control is inadequate self-management practices. Kenya like most developing countries has high asthma morbidity due to environmental and lifestyle factors. However, there limited data on self-management practices among patients with asthma in Kenya. For the last decade, Tharaka Nithi County has been recording steady rise in asthma prevalence with asthma accounting for 25% of the diseases of the respiratory tract. Self-management is key to control the attacks and requires that the person suffering from asthma makes therapeutic, environmental as well as behavioral modification to control asthmatic attacks. This can significantly improve on indicators of good asthma control, reduce unscheduled health care consultations and also improve the quality of life among patients with asthma. Chuka County Referral Hospital was used for the study because it had a high burden of asthma patients compared to other institutions in the county.

Theoretical Framework

Albert Bandura's Social Cognitive Theory (SCT), one of the most influential learning theories, serves as the theoretical basis for this study. According to SCT, cognitive processes have a significant role in modifying behavior (Toomey & Alligood, 2006). Social cognitive theory supports the process-based approach to self-management. Bandura (2004), postulates a

complex causal structure in which objectives, outcome expectations, perceived barriers, and facilitators interact with self-efficacy beliefs to control human motivation, behavior, and wellbeing. The SCT defines a set of determinants that includes benefits of various health practices, a perceived level of self-efficacy indicating self-control over one's health habits and outcome expectations regarding the expected costs and benefits for different health habits.

Social Cognitive Theory (SCT) is integral to understanding how individuals engage in asthma self-management practices, particularly within the context of Chuka County Referral Hospital (CCRH). SCT emphasizes the dynamic interplay of personal, behavioral, and environmental factors in shaping health-related behaviors. This theoretical framework guides both data collection and interpretation in the study of asthma self-management, providing insight into the factors that influence patients' ability to effectively manage their condition.

In line with SCT, data collection in this study will focus on assessing key constructs such as self-efficacy, observational learning, and environmental influences. Self-efficacy, a central concept of SCT, refers to an individual's belief in their ability to successfully manage asthma symptoms. Measuring patients' self-efficacy will provide critical insights into how confident they feel in their ability to follow prescribed medications, avoid asthma triggers, and engage in symptom monitoring. This can be assessed through surveys or interviews that explore patients' perceptions of their capabilities in managing asthma.

SCT also underscores the importance of observational learning, where individuals adopt behaviors by observing others. In this study, patients' exposure to role models—such as healthcare providers, family members, or peers who manage asthma effectively—will be evaluated. Questions in surveys or interviews can explore how witnessing others' asthma management strategies influences patients' own behaviors, such as medication adherence or trigger avoidance.

Furthermore, environmental influences, such as social support and healthcare access, play a significant role in shaping asthma self-management behaviors. Patients with strong family support or access to healthcare services are more likely to engage in consistent asthma management. Data on social support and healthcare accessibility will be collected through questionnaires that assess the level of assistance patients receive from family members or healthcare providers, as well as their access to asthma medications and treatment facilities.

In terms of data interpretation, the study will examine how self-efficacy correlates with specific asthma management behaviors. For instance, patients with higher self-efficacy are expected to report greater adherence to medication regimens and better symptom monitoring. By interpreting this data through the lens of SCT, researchers can identify areas where patients' self-efficacy might be lacking and design targeted interventions to enhance their confidence in managing asthma.

Observational learning will also be a key focus during data analysis. If patients who have observed others manage asthma effectively report higher adherence to self-management practices, this would support the role of modeling in behavior change. Moreover, the study will interpret how environmental factors, like social support, affect asthma management. Data may reveal that patients with strong family support or access to healthcare are more likely to manage their asthma proactively, leading to fewer exacerbations and improved health outcomes.

Additionally, recent applications of SCT in chronic disease management provide a valuable context for this study. For example, SCT has been successfully applied to improve self-management in chronic conditions like diabetes, hypertension, and asthma. In diabetes care, SCT interventions focused on increasing self-efficacy and observational learning were shown to improve medication adherence and glycemic control (Berman et al., 2022). Similarly, in asthma management, SCT-based interventions that boost self-efficacy and provide social support have been shown to reduce exacerbations and improve quality of life (Allen et al., 2023). These findings highlight the practical applications of SCT in chronic disease management and underscore its relevance to asthma care at CCRH. By applying SCT to asthma self-management, healthcare professionals can design interventions that enhance patients' observational learning, boost self-efficacy, and create supportive environments. Strategies such as patient education, peer mentoring programs, and digital health tools can empower individuals to take control of their condition, improve their quality of life, and reduce asthma-related complications. This theoretical perspective provides a solid foundation for promoting sustainable asthma management behaviors at Chuka County Referral Hospital and beyond. The following diagram visually represents the application of Social Cognitive Theory to asthma self-management. It shows the dynamic interplay between patient-level factors, environmental influences, and behavioral outcomes.

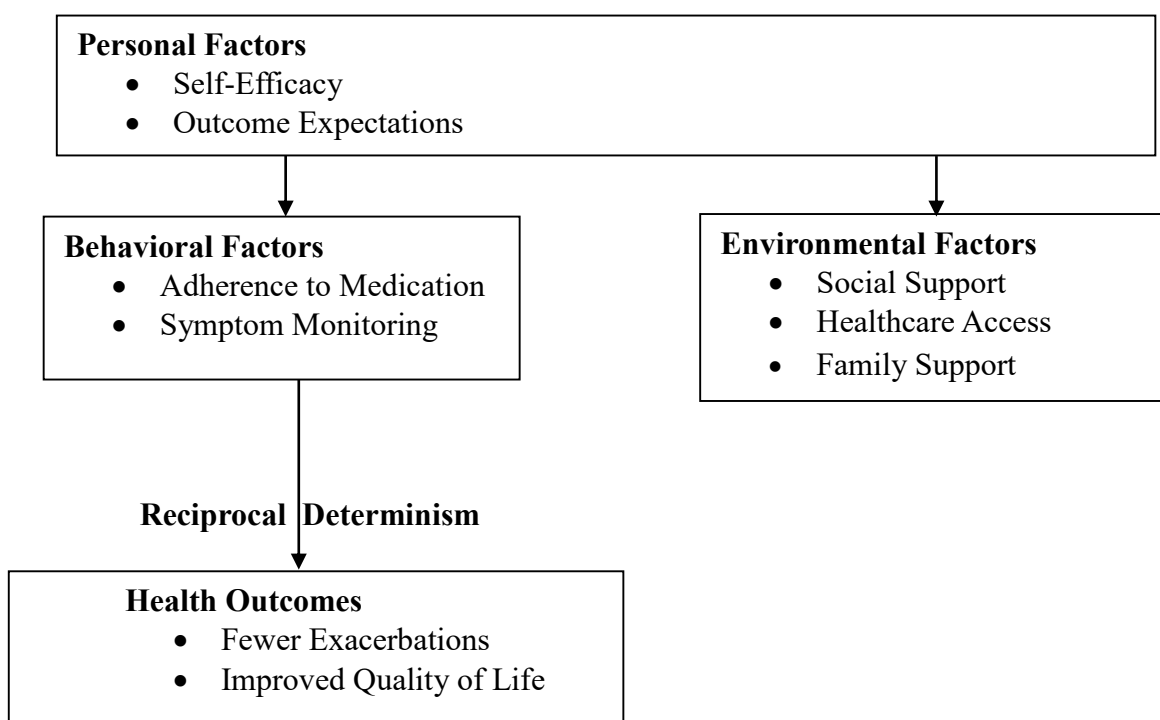


Figure 1: Conceptual Framework

METHODOLOGY

The study was conducted at Chuka County Referral Hospital (CCRH), situated in Tharaka Nithi County. A descriptive cross-sectional survey was used to collect information concerning self-management practices for asthma control among patients with asthma at CCRH. This design enabled assessment of various variables at the same time at reasonable span of time and cost. This study involved adults with an asthma diagnosis of at least six months duration prior to the

study. Patients with such duration had an advantage of having more contact with health facility. The sample size of 118 participants was calculated based on fishers' et al formula. Simple random sampling technique was used to select the study participants. A researcher administered structured questionnaire was used to capture information on asthma self-management practices. The research assistants conducted face-to-face interviews where they interpreted the questions to the respondents while recording responses as provided by the respondents. Pretesting of the research instrument was conducted at Chuka County Referral Hospital among 12 patients with asthma comprising 10% of the sample size. The purpose of pretesting was to assess for clarity of the instrument, to ascertain its acceptability, check for ambiguity, and sequencing of the research questions. To achieve internal validity, the researcher made sure that the study was carefully planned while proper quality controls and implementation procedures were put in place, including plans for effective recruitment, data collection, analysis, and a representative sample size. External validity was ensured by use of a probability sampling method that improves generalization of the findings of the study. To determine whether the study instrument was reliable, the Cronbach alpha was used where a value of alpha greater than 0.7 is considered statistically acceptable. Quantitative data was coded and entered into SPSS (v.26) for running data analysis. The researcher utilized descriptive statistics to summarize the data. To evaluate the relationship between dependent and independent variable, Pearson's moment correlation coefficient was applied. Following that, frequency distribution tables, graphs, and charts were used in result presentation.

RESULTS

Adherence to Medication

As shown in Table 1, only 41.5% of the respondents reported possessing inhalers other than salbutamol. A majority of the respondents (58.5%) do not possess any other inhaler inhalers for symptom control.

Table 1: Possession of Inhaler other than Salbutamol to Prevent Asthma Attacks

	Frequency	Percent	Valid Percent	Cumulative Percent
Yes	49	41.5	41.5	41.5
No	48	40.7	40.7	82.2
At times	21	17.8	17.8	100.0
Total	118	100.0	100.0	

The findings presented in Table 2 provides insights into some adherence indicators; the self-reported behavior of respondents regarding the use of salbutamol inhaler specifically during asthmatic attacks suggests that only 54.2% of the respondents use salbutamol during asthmatic attacks and a significant proportion (45.8%) not taking reliever medication (salbutamol) during attacks. Despite an above average compliance, this analysis points out significant gaps in medication adherence as evidenced by use of non-prescribed medications (about 25% of respondents).

In addition, about 33.1% of respondents reported failure to take medication as prescribed as only 66.9% adhered to prescription.

Table 2: Summary Statistics for other Indicators of Adherence to Medication

Indicator		Percentage
Taking salbutamol only during asthmatic attack	Yes	54.2
	No	40.7
	at times	5.1
Use of other medication apart from the prescribed	Yes	16.1
	No	74.6
	at times	9.3
Taking asthma medication as prescribed	Yes	66.9
	No	13.6
	at times	19.5

The findings presented in Table 3 outlines reasons affecting adherence to asthma medications as reported by respondents; non-adherence due to absence of symptoms (30.5%), forgetfulness (28.8%), high cost of medications (43.2%) and unavailability of prescribed medications in government health facilities (36.4%). Other cited reasons for non-adherence include; fear of side effects (9.3%) and discomfort or embarrassments in using Inhalers (13.6%).

Table 3: Reasons affecting taking of Asthma Medications

Reason	Percentage (%)
Absence of symptoms	30.5
Forgetfulness	28.8
High cost of medications	43.2
Unavailability of prescribed medicines in government health facility	36.4
Fear of side effects	9.3
Discomfort using inhalers	13.6

Identification and Control of Triggers

The study finding indicates that a majority of the respondents (84.75%) had experienced an asthma attack within three months prior to the study while only 15.25% had not experienced this attack. (Figure 2).

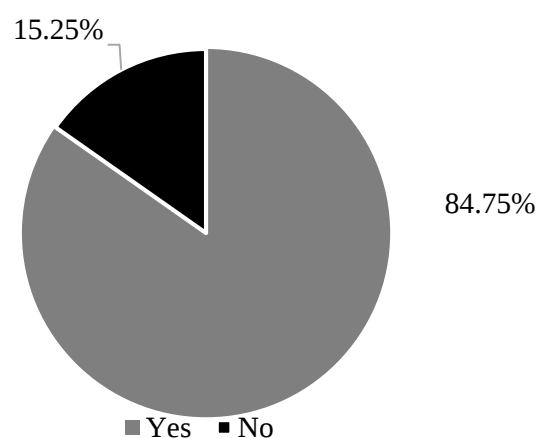


Figure 2: Proportion of those who had Experienced Asthma Attacks over the Previous 3 Months Prior to the Interview

As shown in Table 4, cold weather is reported as the most common trigger of asthma attacks, affecting a significant majority of respondents (80.5%). This is followed by dust (54.2%), Smoke from cigarettes and other sources (51.7). Other reported triggers are vigorous physical activity (28%) pointing to exercise induced asthma. In addition, stress (14.4%) and some medications (7.6%) were reported by a smaller percentage of respondents though represents notable trigger factors to some particular individuals.

Table 4: Triggers of Asthma Attack Experienced in 3 Months

Reason	Percentage (%)
Cold weather	80.5
Dust	54.2
Stress	14.4
Some medication	7.6
Vigorous activity	28.0
Smoke	51.7

Lifestyle Modification

The findings presented in Table 5 indicate that asthma diagnosis has influenced Activities of Daily Living (ADL) to a significant 81.4% of the respondents. Those who take measures to avoid known asthma triggers were 88.2% and only 47.5% were taking measures to achieve physical fitness. The analysis also indicates that in about 20% of the respondents, 'asthma diagnosis has not influenced their choice of ADL. A significant 52.6% do not modify their lifestyle to attain physical fitness as a form of self-management measure.

Table 5: Lifestyle Modification and Asthma

	Percentage (%)
Asthma diagnosis influence on choice of ADL	81.4
yes	81.4
no	8.5
at times	10.1
Measures are taken to avoid known triggers	88.2
yes	88.2
No	9.3
at times	2.5
Measures are taken for physical fitness	47.5
yes	47.5
No	42.4
at times	10.1
Measures are taken to avoid smoke, cold weather	83.1
yes	83.1
No	8.4
at times	8.5

Association between Self-Management Practices (Identification and Trigger Control) and Frequency of Asthma Control

The findings presented in Table 6 shows the Pearson product-moment correlation index obtained on frequency of asthma symptoms and identification and control of triggers. The findings show that $r = -0.190$ with a significance $p\text{-value} = 0.045$. This implies that frequency of asthma symptoms and practice of trigger identification and control are statistically significant at 0.05 level (2-tailed) and negatively correlated. This negative correlation implies that as the frequency of asthma symptoms increases, self-management practices related to trigger identification and control tend to decrease. Conversely, as self-management practices

related to identification and trigger control increase (that is individuals engage more in these practices), the frequency of asthma symptoms tends to decrease. Generally, individuals who are more proactive in identifying and controlling triggers for asthma have good self-management practices and tend to experience fewer asthma symptoms.

Table 6: Pearson's Product Moment Correlation Coefficient between Frequency of Asthma Symptoms and practice of Trigger Identification and Control

		Assessment of frequency of asthma symptoms	Self-management practices(identification and trigger control)
Assessment of frequency of asthma symptoms	Pearson Correlation	1	-.190*
	Sig. (2-tailed)		.045
	N	118	118
Self-management practice (identification and trigger control)	Pearson Correlation	-.190*	1
	Sig. (2-tailed)	.045	
	N	118	118

*Correlation is significant at the 0.05 level (2-tailed)

CONCLUSION AND RECOMMENDATIONS

Conclusion

The study concluded that there is a negative correlation between self- management practices and Frequency of Asthma Control, $r = -0.190$ with a significance p -value = 0.045. This implies that frequency of asthma symptoms and practice of trigger identification and control are statistically significant at 0.05 level (2-tailed). Key facilitators of asthma self-management practices include; effective communication with healthcare workers, availability and affordability of medications in government hospitals. Some of the reported barriers to asthma self-management include presence of comorbidities, poor self-control and lack of knowledge on ASM. The study concludes that significant knowledge gaps exist among patients with asthma at Chuka County Referral Hospital (CCRH) regarding key asthma symptom triggers and medication usage, impacting negatively on self-management. There are significant gaps in asthma medication adherence which includes over reliance on reliever medication as opposed to controller medication for asthma. The study also revealed that non-adherence to asthma medications is driven by factors such as high cost of medications, forgetfulness, fear of side effect, and unavailability of prescribed medication in government health facilities.

Recommendations

Implementing educational programs, providing resources, and fostering a supportive environment for patients are key components in improving asthma self-management in CCRH. The study recommends conducting regular workshops and seminars to provide education to patients about asthma, including its triggers and techniques for self-management. Secondly the study recommends provision of simple brochures that explain how to use asthma medication, ways to avoid triggers, and techniques for breathing exercises. Thirdly, conducting outreach programs in the community to increase awareness about asthma and associated self-management essentials. Lastly, the study recommended making sure patients have access to required medications and comprehend their proper usage (Inhalers, nebulizers).

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