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Generative and degenerative disease management and treatment in Ghana: Consumer's perception on the efficacy of herbal medicine in healthcare Delivery

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Abstract
This study examines how the herbal medicine consumer's perceived the effectiveness of herbal medicine in the healthcare delivery. The increasing popularity and usage of herbal medicines in Sunyani is the belief that herbal medicine is efficacious in the treatment and management of generative and degenerative diseases. This favorable level of perceived efficacy supports their continued use of herbal medicine in the study area in particular and Ghana at large. In all, a sample of 139 consumers were randomly selected from the study area. Questionnaire and interview scheduled were administered to 139 consumers consisting 57 males and 82 females. Descriptive statistics such as Likert and Frequency tables were employed in the analysis of quantitative data. Quotations were also used in analyzing qualitative data collected. The findings indicate that 94% of the males and 88% of the females agreed that herbal medicine is very effective in the treatment of both generative and degenerative illnesses. They endorsed that herbal medicine is preferred to orthodox medicine due to its less side effects. However, there were few herbal products that have been adulterated.

Keywords
Efficacy, Healthcare Delivery, Herbal Medicine, Perception

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Contents

1. Introduction

Herbal Medicine (HM) still forms the fundamentals of indigenous health systems across the world (Knaul et al, 2018). HM is the use of seeds, berries, roots, leaves, barks of trees or flowers for medicinal purposes. The World Health Organization (WHO) in 2017 highlighted that herbal medicine is still being used by the majority of the population. The use of herbal medicine to cure diseases and to improve health and the general wellbeing of people have been in existence since ancient times (De Mooii, 2018; Karimu et al, 2018; Kanchan and Ghosh, 2012; Wilson et al, 2018). Herbal medicine plays a significant role in meeting the demands of healthcare delivery globally. An increased demand for herbal products is rapidly rising in most of the developed and developing countries. Worldwide interest in these herbal products and traditional health systems has risen. (WHO, 2017; Axelrod et al, 2018).

In Africa, current studies on HM so far have established that eighty percent of the rural populations in African countries rely on HM products for their health care needs. The WHO has estimated that in the next two decades, 70 percent of people living in both rural and urban communities in Africa will rely on herbal medicine

(Oluwadare et al, 2018; WHO, 2018). Ghana has taken a keen interest in developing the herbal medicine industry by ensuring that wholesome herbal drugs are manufactured to support the orthodox medicine in the treatment of both generative (diabetes, hypertension, cancer) and degenerative (whooping cough, malaria, body pain) diseases (Adu-Gyamfi, 2018). There are a number of herbs that cure many diseases such as Diabetes, Hypertension, Ulcer to mention but few (Atreya et al., 2018). Besides, few studies have been conducted nationally concerning the efficacy of herbal medicine in the treatment of generative and degenerative diseases. Gyasi et al (2015) conducted an extensive study on the utilization of herbal medicine for managing malaria in the urban-periphery of the Ashanti Region. Their study focused on public perceptions of the role of herbal medicine in the healthcare delivery system. The findings revealed that respondents strongly believed in the effectiveness of herbal medicine for treating and managing malaria.

The study utilized a qualitative approach to examine the utilization of herbal medicine specifically for malaria management in the urban-periphery. In a similar situation, Karimu et al., (2018) have done a detailed research on gender utilization of herbal medicine in the Western North Region. They indicated in their research that 68% of the females in their study area used herbal medicine more as compare to 32% of the males. In spite of their detailed work done, they did not quantitatively scrutinize the people's perceptions concerning the efficacy of the HM in the Sunyani Municipality. Hence, the need to use mixed method approach to examine how efficacious some herbal medicines could be would be a major concern to the researcher. The objectives of this research were thus: i. to assess the consumer's perception on the efficacy of herbal medicine in Sunyani. ii. to examine the consumers' perception on the effectiveness of herbal medicine as a therapy on selected diseases in the study area. Again, a hypothesis which state that there is no statistical significant relationship between Socio-Demographics and the use of herbal medicine in the study area was tested using chi-square. The study is associated with Health Promotion Models (HPM), which concentrate on examining individuals' knowledge and attitudes towards health, as well as their personal experiences related to it. According to this theory, to comprehend the majority of their health-related choices, it is necessary to consider people's lifestyles, psychological well-being, and social and cultural surroundings.

2. Materials and methods

2.1 Profile Dimension of Sunyani Municipality

The Sunyani Municipality is positioned within the Bono Region of Ghana and is one among the twenty-two administrative districts in the region. It was established by Legislative Instrument (LI) 1874. Sunyani serves as both the traditional and administrative capital of Sunyani Municipality. The town is noted to be a nodal town because it is strategically located where roads from Berekum, Kumasi, Atronie, Odumasi, and Techiman meet. The Sunyani Municipality is situated between latitudes 70 20'N and 70 05'N and longitudes 20 30'W and 20 10'W. It shares its borders with the Sunyani West District to the north, Berekum East District to the west, Asutifi District to the south, and Tano North District to the east. Covering a total land area of 829.3 square kilometers (320.1 square miles), the municipality has abundant land, with about one-third remaining uninhabited or not under cultivation. This presents promising opportunities for future investment in herbal medicine and other ventures. Sunyani has the second highest population in Bono Region after Techiman. This makes the production and trading in herbal medicine a very lucrative business. The herbal medicine activities in Sunyani Municipality have gained much attention in recent times as compared to herbal medicine activities in other districts within the region.

2.2 Research Approach

A mixed method strategy which combines both qualitative and quantitative research methods in the collection of data at the same time was used in this study (Creswell and Hirose, 2019; Morse, 2016). This strategy assisted the researcher to utilize different methods to study groups of consumers. Mixed method strategy is chosen to collect data for this research due to its numerous merits over either qualitative or quantitative method in gathering data. In the first place, combining qualitative and quantitative approaches in gathering data at the same time aided in reducing personal biases of this research. Again, the use of mixed approach in this study was appropriate because; social life, human actions and inaction are highly complex and dynamic. Besides, the researcher used this approach to collect more comprehensive data, and this provided a broader perspective of the overall issue or research problem based on the information obtained. Further evidence and support can be obtained from combining both approaches into one study (Korstjens, 2018; Kumar, 2019).

2.3 Research Design

Moser and Korstjens (2018) describe a research design as a plan or blueprint that enables researchers to conduct a study while maintaining optimum control over various factors that could potentially impact the validity of their findings. In their study, a cross-sectional design was adopted. According to Spector (2019), a cross-sectional design is utilized to gather information about a specific population during a specific period. In the current study conducted in Sunyani, Ghana, the cross-sectional design was advantageous in providing immediate knowledge and understanding of the herbal medicine activities in the re-

gion. This design facilitated the acquisition of an overall snapshot of the herbal medicine landscape as it existed during the study. Additionally, this strategy enabled the collection of diverse data from various participants involved in the herbal medicine value chain within Sunyani.

2.4 Sampling Techniques

This study, the researchers employed probability sampling techniques to ensure a representative sample. Specifically, a combination of stratified and simple random sampling techniques was utilized.

Stratified sampling was employed to divide the population of interest, which in this case is individuals involved in herbal medicine activities in Sunyani, into distinct subgroups or strata based on specific characteristics such as age, gender, or occupation. This approach aimed to ensure that each stratum was adequately represented in the sample, thus providing a more accurate representation of the overall population.

Within each stratum, simple random sampling was then used to select participants. Simple random sampling involves randomly selecting individuals from each stratum without any bias or predetermined pattern. This method ensures that all individuals within each stratum have an equal chance of being included in the sample, enhancing the generalizability of the findings.

By employing a combination of stratified and simple random sampling techniques, the researchers aimed to obtain a diverse and representative sample of individuals involved in herbal medicine activities in Sunyani, thus increasing the validity and reliability of the study's results. Simple random sampling is where every individual in the sampling frame will have an equal opportunity of being selected as part of the sample (Mania et al, 2018). Given the estimated proportion of the population of 214 in Sunyani that depends on herbal medicine for their primary health care, a sample size of 139 was drawn from the target population for the study. The target population of 214 was obtained from the records kept by the herbal medicine association's office in Sunyani.

2.5 Sample Size Determination

The desired sample size for this study was determined using Yamane's, formula in 1967

$$n = \frac{N}{1+Ne^2}$$

Where;

'n' is the sample size

'N' is total population of the sample frame

'e' is the margin of error which will be 5% with 95% confidence level.

Using the formula, the sample size for the study was:

$$n = \frac{N}{1+Ne^2}$$

$$n = \frac{214}{1+214x0.05^2}$$

$$n = \frac{214}{1.1975}$$

$$n = 139$$

This means the sample size was approximately 65% of the population in the study area.

Simple proportion formula was then used to determine the sample sizes of the respondents as shown in the Table 1.

Table 1. Sample Size for the Study

Herbal Medicine User	Male	Female	Grand Total
Total No	$\frac{88\times139}{214} = 57$	$\frac{126\times139}{214} = 82$	**139**

Source: Author own Construct, 2022

2.6 Sources of Data/Data Collection Tools

The study utilized a combination of primary and secondary sources of data. To obtain primary data, the researchers collected information directly from consumers. They employed various instruments, including questionnaires, interview schedules, and focus group discussions, to gather this primary data. In addition, focus group discussions was used in accumulating primary data. Questionnaire was administered to consumers who can read, understand and write well. Similarly, interview schedule was administered to the herbal medicine users who needed interpretations of the questions and they were guided by researchers during the administration of the interview schedule. Secondary information was gathered from various sources including the internet, census and survey reports, books, journals, students' theses, and other published and unpublished documents. The quantitative data was analyzed using percentage whilst qualitative data was analyzed using quotations.

3. Results

3.1 Perception on the Efficacy of Herbal Medicine

This section explores the perceptions of individuals in Sunyani, Ghana regarding the role of herbal medicine in the healthcare delivery system. Throughout history, diseases have posed significant threats to human life, leading people from diverse cultural backgrounds to utilize various plant products, animal products, and chemical substances for managing, curing, caring, and treating illnesses, as well as disease prevention and promotion. The efficacy of herbal medicine has been tried and tested in the study area on many diseases and it comes second to none when talking about effectiveness (Gyasi et al, 2016).

Table 2. Consumer's Perception on the Efficacy of Herbal Medicine in Sunyani

Statement	SA (%)		A (%)		N (%)		D (%)		SD		Total (%)	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
Herbal medicine is perceived to be effective in the treatment of illnesses because it is prepared under hygienic environment	35(61)	49(60)	19(33)	23(28)	0(0)	3(4)	2(4)	5(6)	1(2)	2(2)	57(100)	82(100)
Herbal medicine is believed to be safe and out of harm	42(73)	53(65)	8(14)	13(16)	2(4)	2(2)	4(7)	9(11)	1(2)	5(6)	57(100)	82(100)
Herbal medicine has greater patronage than orthodox medicine due to its perceived effectiveness	24(42)	26(32)	13(23)	47(57)	0(0)	0(0)	11(19)	9(11)	9(16)	0(0)	57(100)	82(100)
Herbal medicine is effective because the herbalists use scientific process in preparation of the herbal drugs	9(16)	12(15)	14(25)	18(22)	25(44)	31(38)	7(12)	19(23)	2(3)	2(2)	57(100)	82(100)
There is believed that the efficacy of herbal medicine is backed by Spiritism	3(5)	7(8)	4(7)	9(11)	16(28)	17(21)	21(37)	28(34)	13(23)	21(26)	57(100)	82(100)

Sources: Field Data, 202

The perceptions on the efficacy of herbal medicine produced and used on patients covered issues such as herbal medicine is perceived to be effective in the treatment of illnesses, herbal medicine is believed to be safe and out of harm, herbal medicine has greater patronage than orthodox medicine due to its effectiveness and the herbalists used scientific process in preparation of herbal drugs to improve its efficacy. Also, herbal drugs are perceived to be effective because they are prepared under a hygienic environment and the efficacy of herbal medicine has a direct relationship with preparation. All these were measured using potency, drug prescription as well as the hygienic environment under which the medicine was produced. Many people are of the view that there are a number of sicknesses that orthodox medicine cannot cure except herbal medicine. Table 1 illustrates diverse opinions given by users in relation to how herbal medicine is perceived to be effective in the treatment of illnesses. It is upon this assertion that a research question was posed during data gathering to find out the perceptions people have on the effectiveness of herbal medicine in healthcare delivery in the Sunyani, Ghana. The result is highlighted in Table 2.

Table 2 highlights the data gathered during field surveys from one hundred and thirty-nine consumers (139) being males and females responded strongly agreed, agreed, uncertain, disagreed and strongly disagreed to the questionnaire and interview schedule given. First and foremost, Table 2 indicates that 61% male and 60% female and 33% male and 28% female responded strongly agree and agree to respectively to the perceived efficacy of herbal medicine in the treatment of illness because the herbal medicine is prepared under hygienic environment. In support of the above claim, some consumers testified that they have used herbal medicine before and the effect was positive by achieving the aims for which the medicine was used. During focus group discussions, a female respondent in Sunyani said:

> *"For over ten years, my husband battled cerebrovascular disease, also known as stroke. Despite numerous visits to conventional hospitals, we struggled to find an effective treatment. However, our situation changed when we turned to herbal medicine for help. Thanks to the intervention of herbal remedies, my husband's health drastically improved. He is now in excellent physical condition and has even returned to work. This personal experience has led me to firmly believe in the substantial efficacy of herbal medicines."* by a 42 year old female consumer at Sunyani, 2022.

In fact, there were many testimonies given by the users during the survey concerning the effectiveness of herbal medicine. For example, a male user of herbal medicine in Sunyani said during focus group discussions that:

> *"I fully rely on herbal medicine whenever I am sick because they are very effective to cure diseases in the blood like diabetes once and for all"* by a 54 year old male consumer at Sunyani, 2022.

It implies that due to the high potency of herbal medicine, most illnesses are treated and not referred to orthodox hospitals. The respondents affirmed that they have never been referred to the orthodox hospital because herbal medicines were able to cure their diseases ninety nine percent. A female herbal medicine user in Sunyani during an interview highlighted that:

> *"Even some sick people move from conventional hospitals to them for treatment and almost all referrals of patients to herbalists or herbal practitioners occurred unofficially in an uncoordinated manner"* by a 38 year old female consumer at Sunyani, 2022.

Notwithstanding the effectiveness of herbal medicine, four percent males and six percent females who have used herbal medicine before stressed that herbal medicine is not as effective as people portrayed. Therefore, people should be educated on possible dangers associated with the use of herbal medicine.

In the second place, 73% males and 65% of females of the consumers strongly agree that herbal medicine is believe to be save and out of harm. This was endorsed by 14% and 16% of the males and females users respectively. the long standing testify was that the respondents have been using herbal medicine for more than three decades but they never had any severe side effects. This signifies that herbal medicine is very wholesome for consumption.

Table 3. Consumers' Perceptions of using Herbal Medicine as a Therapy

Ailment	Yes (%)	No (%)	Don't Know (%)	Total (%)
Diabetes	36 (25.9%)	03 (2.2%)	03 (2.2%)	42 (30.3%)
Hypertension	23 (16.6%)	09 (6.5%)	02 (1.4%)	34 (24.5%)
Eye Sight Problems	13 (9.4%)	06 (4.3%)	01 (0.7%)	20 (14.4%)
HIV/Aids	12 (8.6%)	02 (1.4%)	05 (3.6%)	19 (13.6%)
infertility	07 (5.0%)	00 (0.0%)	00 (0.0%)	07 (5.0%)
Cancer	10 (7.2%)	05 (3.6%)	02 (1.4%)	17 (12.2%)
Total	101 (72.7%)	25 (18.0%)	13 (9.3%)	139 (100%)

Sources: Field Data, 2022

3.2 Consumers' Perceptions on the Effectiveness of Herbal Medicine as a Therapy on Selected Diseases

There is an ongoing debate on whether herbal medicine is capable of treating certain generative diseases or not. In order to clear this doubt, the respondents were asked about how effective are herbal medicine use in treating specific common generative diseases in the study area. Table 3 show their responses.

It is also imperative to highlight some perceptions of respondents of using specific herbal medicines as treatment of some specifics generative illnesses in the study areas. It is evident from Table 3 that 25.9% of the consumers responded 'yes' believing that herbal medicine can cure Diabetes whilst 2.2% of the respondent said 'No'. It was pointed out by 16.6% of the respondents that herbal medicine is used to treat hypertension. On the other hand, 6.5% of the consumers responded 'No'. Apart from the above mentioned ailments that herbal medicine was used to cure them, other diseases that were stated included eye sight problems said by 9.4% of the respondents and HIV/Aids 8.6% of the respondents highlighted herbal medicine can cure it. At least each respondent did indicate that one or more ailments can be treated using herbal medicine. The study confirmed the results of Adu-Gyamfi (2018) who found that herbal medicine is being used in the treatment of various ailments such as Bad Breath, Diabetes, Hypertension, Sore Throat and Cough as well as HIV/AIDS. He further indicated that those orthodox drugs prescribed by medical doctors in managing the above mentioned diseases were manufactured from herbal/plant products. These findings mean that herbal medicine production does not only serve as a source of income and employment to the people but also serves as medicine for management of certain disease conditions. In relation to the above, a male consumer in Sunyani reiterated:

> Ever since I started using herbal medicine, I have never visited a hospital for the past 19 years. Even chewing the sticks of plants can cure certain diseases

(A 47 year old male consumer at Sunyani, 2022).

This implies that herbal medicine is a very good product for promoting the healthy life of many people across the length and breadth of Ghana. Though this argument has no scientific backing, the herbalists mostly talked from experience and in effect, money which is supposed to be used to pay hospital bills could be saved for other fundamental purposes. Again, good health can be translated into more work which will give more money to reduce poverty level and enhance living conditions.

3.3 The Relationship between Socio-Demographics and the Usage of Herbal Medicine

There is no statistical significant relationship between Socio-Demographics and the use of herbal medicine in the study areas

From Table 4, a chi-square test of difference was conducted to investigate the relationship between respondents' Socio-Demographics (gender) and their use of herbal medicine. The outcome of the test revealed that there was no statistically significant association between gender and the usage of herbal medicine in the study areas. This conclusion is supported by a p-value of 0.221, exceeding the significance threshold of 0.05. Consequently, we reject the null hypothesis, which states that there is no statistically significant relationship between gender and the use of herbal medicine in the study areas. Based on the study's results, it has been observed that although a considerable portion of herbal medicine users are financially well-off, this distinction is not substantial enough to make generalizations among users and draw meaningful predictions. Consequently, the hypothesis stating that there is no statistically significant relationship between gender and the use of herbal medicine in the study area has been validated. This finding aligns with previous research, such as the work by Oppong and Phiri (2018), which also found no association between gender and the utilization of herbal medicine. However, it is important to note that this finding is inconsistent with other studies that have reported differences in the use of herbal medicine based on wealth disparities between individuals.

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	Male	Percent	Female	Percent	N	Percent
Gender * Use of your herbal drugs for patients	57	41%	82	59%	139	100.0%

Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	6.999a	5	.221
Likelihood Ratio	7.959	5	.159
Linear-by-Linear Association	1.220	1	.269
N of Valid Cases	23		

a. 11 cells (91.7%) have expected count less than 5. The minimum expected count is .22.

Sources: Field Data, 2022

4. Discussion

The effectiveness of herbal medicine as an alternate medicine in treatment of specific illnesses has become great concern to the researcher with the aim of assessing the perception on the efficacy of herbal medicine and also examine user perceptions of the efficacy of herbal medicine in the study area. The findings of the study revealed that there was no established and authorized referral system in place between herbalists and orthodox medical systems within the study areas. It was observed that herbal medicine was commonly used for treating and managing various ailments including spiritual diseases, bone fractures, skin abscesses, impotence, and infertility. This indicates that herbal remedies play a significant role in the healthcare of the people in Sunyani, and even in Ghana as a whole. However, it is important to note that one of the key components in a robust healthcare system is the implementation of a prompt referral mechanism, where patients can be efficiently directed from one area (such as the herbalist system) to another (such as the orthodox medical system). This ensures the safety of patients and guarantees effective treatment of diseases. It must be emphasized that most patients that used herbal medicine were healed or treated without difficulties. The consumers stressed that hardly will one see a user being referred to orthodox healthcare system; though it does happen but rarely. This confirms the study conducted by Oppong and Phiri (2018) that in 'Agyeme' herbal clinic in Sunyani, out of 264 patients who visited his clinic with various forms of illness and treated with herbal medicine, 248 were completely healed and discharged. In line with this, there is a need to stipulate that it is hard time herbal medicine integrated well with the orthodox healthcare system so that the system will complement each other. The lack of official collaboration between herbal medicine and orthodox medicine systems poses a significant obstacle to progress, leading to rivalry between the two. In some cases, this collaboration is non-existent. However, it is worth noting that a small percentage (3%) of users disagree with the notion that herbal medicine is ineffective in treating their diseases. The data further indicated that 68% and 10% of the respondents strongly agree and agree respectively by specifying that the use of herbal medicine is remarkably safe with no or slight adverse effects compared with the use of orthodox medicine. The safety of use of herbal medicine can be guaranteed because quite a number of herbalists practiced under hygienic environments which could hardly develop further infections to their clients and complicate their health problems (Atreya et al, 2018 and Abbo et al, 2018). In this regard, majority of the respondents representing 78% agreed with the assertion that herbal drugs are perceived to be prepared under a hygienic environment. It is evident from Table 6.1 that the produced herbal medicines were produced under accurate environmental standards prescribed and described by the Ministry of Health. However, they claimed that the use of herbal medicine is not safe as compared with the use of orthodox medicine. Those consumers who admitted that the herbal medicine is not safe buttressed their claim by indicating that some of the herbal producers produce their herbs (plants) under filthy environment and they hardly disinfect their tools (cooking utensils) and other substances for herbal drug production thoroughly before concoction, decoction and other preparations are made.

In addition, herbal medicine has greater patronage than orthodox medicine due to its perceived effectiveness in the study areas. In this regard, 54% and 37% of the consumers affirmed that herbal medicine has greater patronage than orthodox medicine. This supports the findings of World Health Organization (WHO), (2018) that 65% of rural populace in Africa depend on herbal medicine for treatment and management of both generative and degenerative diseases. Another supportive study was done by Atreya et al. (2018) in Greater Accra region specifying that in typical Ga communities like Teshie, Chokor, Nima to mention but few mostly rely on herbal medicine for healthcare delivery. They added that getting in touch with the herbalists is not difficult at all and wherever one finds him or herself, either in their communities, villages or cities, herbal products are available. This was however confirmed by 75 and 52 consumers who claimed "strongly agree" and 'agree' for the herbal medicine has greater patronage than orthodox medicine due to its perceived effectiveness in the study areas. Moreover, few of the respondents strongly disagree and disagree that herbal medicine having greater patronage than orthodox medicine due to its perceived effectiveness. They added that orthodox medicine is the most patronised and accessible healthcare system in the study areas and Ghana at large, but they further indicated that most people find it difficult to access the orthodox healthcare system in the rural areas in Ghana due to the fact that it is not accessible and affordable and that has resulted to low patronage. Due to the current financial and economic challenges, many individuals opt for herbal medicine as it is both cost-effective and efficient. In today's world, herbal medicine is generally more affordable, making it a popular choice among both rural and urban populations who may have limited access to orthodox medical care due to financial constraints.

A number of consumers representing 55% and 45% respectively strongly agree and agree that herbal medicine is effective because herbalists use scientific processes in preparation of the herbal drugs. Thus, holding other factors constant, the higher the use of scientific process in herbal medicine production, the higher the patronage of herbal medicine and vice versa. This is because when the consumers get to know that the majority of herbal products on the market passed through scientific process, they will develop trust in herbal medicine and consume

more. However, if many people are aware that herbal medicines are not produced through scientific process, they will not use them irrespective of how affordable and accessible they are. So, means of herbal medicine production should not be an intervening obstacle hindering the use of herbal medicine in the study communities. Therefore, the access to primary healthcare partly rests on the medium of production. The study has shown that there are both male and female consumers in the study areas. The community surveyed has males and females who were evenly distributed across the study community. The herbal medicine is more accessible to the people and most of the herbal drugs were produced through scientific processes. The herbalists are much closer to the users, hence, clients are able to determine the medium of production before accessing the herbal medicine facility unlike other parts of Ghana where clients have less idea of how herbal medicine is produced before accessing healthcare facilities. The consumers have been living among the herbalists in the community for a very long time. Herbal medicine users place a significant amount of trust in herbalists and their services. However, it is important to note that these users may not always consider factors such as safety, quality, and standard of services provided by herbalists. Most herbal medicines offered to the users were perceived to be effective as supported by Table1. This means that the users of herbal medicine do not complain about the negative effects of herbal drugs. In this regard, Li et al. (2019) indicated in their research conducted in China which specified that herbal medicine users in China have used herbal products for many centuries and are still using it due to its potency. They lamented that herbal medicine has been an integral part of their daily consumption and for that matter they make sure the herbal medicine is processed through proper scientific process. This was evident in the treatment of such diseases like hypertension, malaria, ulcer, infertility, sexual weakness, diabetes, eye problems and typhoid among others.

Another area worthy for discussion is the belief that the efficacy of herbal medicine has a direct relationship with Spiritism. 23 and 12 representing 16% and 9% of the consumers strongly agree and agree respectively that some consumers believe that the efficacy of herbal medicine has direct relationship with Spiritism. They lamented that some herbalists claimed they got their gift as herbal medicine producers through revelation, dream and vision. A consumer testified that the selection and combination of herbs to produce a particular drug is obtained through dreams or vision according to the herbalist. Zougagh et al. (2019) argued that herbalists who believed in Spiritism are mostly powerful. They highlighted in their research conducted in Nigeria that a majority of the herbalists do consult their oracles before prescribing herbal medicine for a patient hence believing that the efficacy of herbal medicine has direct relationship with Spiritism. This practice, however, poses a serious challenge to acceptable and sound medical practices envisaged by the Ministry of Health for Ghanaian citizenry.

Our predecessors have used herbs or plant products in management and treatment of many generative sickness long before the introduction of orthodox medicine into our healthcare system (Zhao et al, 2019). Herbal medicine had played and still played a major role in primary health delivery from sickness through to child birth. The significance of herbal medicine in primary healthcare has been emphasized in various African countries and globally (Biggs et al, 2018). According to respondents, diseases such as Malaria, Typhoid, Eye Sight problems, and Infertility are believed to be more effectively treated with herbal medicine compared to orthodox medicine. The positive perception towards herbal medicine among consumers in the study areas is attributed to its alignment with their socio-cultural roots. It is important to acknowledge and support the practices of herbal medicine in order to encourage their contribution to primary healthcare. The findings of this research will guide the Ministry of Health (MoH) on policies formulation of healthcare in the study area and Ghana at large. The findings unveil the truth about the knowledge people have on herbal medicine and how this knowledge is supporting the production and the consumption of herbal medicine in the study area. The findings are link to the Health Promotion Model which guided this research. According to the model, the people's experiences play a crucial role in their health outcome. The exploitation of people's knowledge and attitudes concerning individual experiences are related to the Health Promotion Model. The health related decisions taken by the people was paramount to this research in terms of lifestyle, psychological health and social and cultural environment.

5. Limitation of the Study

The research faced a number of challenges and efforts were made to overcome them. It was difficult to get some of the respondents to fill their questionnaires in Sunyani due to commerciality of these areas. To ratify this, telephone calls were made in some cases to complete the data collection. Although the study employed both qualitative and quantitative approaches in data collection, samples of herbal medicine on the market could not be tested scientifically to prove its efficacy. Most of the evidence with regards to efficacy were based on experiences and testimonies given by the consumers.

6. Conclusion

The role herbal medicine plays in primary healthcare delivery in both rural and urban communities in the treatment and management of life threatening and dreadful diseases is second to none. Herbal medicine is easily

available, affordable and accessible in Sunyani, hence consumers utilize it. It is expedient to highlight that herbal medicine is effectively used for the treatment of diseases such as arthritis/rheumatism, piles, infertility, malaria, typhoid, eye problems and other diseases of mental nature. Herbal medicine is expected to remain prevalent in the study areas due to its effectiveness in treating and managing various medical conditions. To ensure its continued use, the health sector and government should dedicate efforts towards modernizing, improving, and standardizing herbal medicine. It is crucial to establish a coordinated mechanism that facilitates collaboration between the herbal system and orthodox healthcare system. This includes implementing an official referral system to enhance healthcare services and align with the goals of universal health coverage and Sustainable Development Goal five (MDGs 5) on health. The quality of herbal drugs should be improved so that the knowledge and the views consumers have on herbal medicine concerning its quality would be enhanced. The producers should not compromise quality in their production process. In this regard, care must be taken in order to process the herb drugs under a very hygienic environment to avoid the perception of the herbal medicine being adulterated. When the quality of herbal medicine is low, it will affect the consumption level.

Reflexivity Statement

This paper was prepared from the PhD thesis conducted in Ghana. Though this research was self-funded by the authors, we acknowledge the contributions of the executive body of the herbal medicine association and the health director (Dr. Isaac Donkor) of Sunyani regional hospital as well as other opinion leaders in the study community. These individuals did not play any role in designing this research, analyzing data and manuscript preparation or decision to publish the paper.

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