



## A Case Study of Complementary Alternative Medicines in Primary Healthcare in Ghana

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### Authors' contributions

This work was carried out in collaboration among all authors. All authors read and approved the final manuscript.

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### ABSTRACT

**Background:** The embryonic field of complementary alternative medicine in Ghana is gradually taking shape. Alternative medicine in Ghana is an important system of medical practice with legislation currently pending for promulgation.

**Objectives:** To support this embryonic industry for potential role into our primary healthcare and public health system, there is a need for robust health care policy in the area of standardization coupled with strong political willpower and research in Ghana. The aim of this case study is to reflect the role of complementary alternative medicine in primary healthcare in Ghana.

**Methods:** The study incorporates a mixed method engaged in integrated data analysis to investigate the challenges of practitioners of complementary alternative medicines as primary healthcare givers. Additionally, it evaluates the pull factors that drive consumers to complementary alternative remedies from the perspectives of the practitioners and finally, to evaluate the opinions of practitioners on consumers' push factors from mainstream medicine using Ghana as a case model.

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**Results:** This study demonstrates that there is a role of complementary alternative medicine in primary healthcare delivery as well as the public health system. However, there are multifactorial challenges in the sector as respondents outlined lack of standardization, disunity and mistrust between complementary alternative medicine and mainstream medical practice. Some of these opposing forces prevent recognition of these remedies into the national healthcare delivery system. **Conclusion:** While our findings demonstrate that there is a role of complementary alternative medicines in our public health and primary healthcare in Ghana, we recommend collaboration between complementary alternative and conventional medical practitioners for improvement of quality of life the consumers. We are of the view that, unhealthy competition between the two medical systems should be controlled.

*Keywords: Complementary alternative medicine; primary healthcare; public health emergency; Ghana; collaborations.*

## 1. INTRODUCTION

We are motivated by the fact that brilliant medicine in modernism as described by Franklin and Richard, [1], should usher Ghana into a new dimension of healthcare practice in these current health problems. What fuels our passion? A desire to offer service [2], devotion to heal the black race and provide brilliant medical information. It is always our hope and desire that patients get the top priority medical information in their treatment pathway. Besides, medical pluralism should not compromise our jurisdiction. This is supported by Chan and Chan, [3] position which agrees that, medicine has evolved. Hence, it must respond to the new trend or else it will become irrelevant.

We further believe in the postmodernist theory of new ideas for primary healthcare in promotion and introduction of Complementary Alternative Medicine (CAM) into our primary healthcare delivery [3]. The World Health Organization (WHO) defines CAM as "a broad set of health care practices that are not part of that country's own tradition or conventional medicine and are not fully integrated into the dominant health-care system" [4]. For instance, an earlier assertion by [5] agrees that postmodernists believe medical practice has evolved and therefore it is time to think beyond the box of the conventional approach to healthcare. Fast forward, [6], further opined that, it is time to look at new ways of approaching healthcare such as employing complementary alternative medicines into our primary healthcare delivery system. Postmodernists also believe that conventional views on health are not supreme and can be contested. For instance, [3], agrees that the role of the medical practitioner is already changing. They note: "Medical Practitioners are now "healthcare providers" who administer "health

services". Patients are now "clients". It is likely that the medicine we know will become just one part of a holistic health service which includes other practitioners currently regarded as "alternative". Hence, we need a new medical system and complementary alternative medicines need recognition. Besides, the ageist thinking must change; including perceptions like, "are natural medicines scientific"? People have diverse opinions and conflicting ideas on health and this needs to be addressed. As advocates of postmodernist theory, with interest in healthcare policy change, we examine the role of complementary alternative medicines in primary healthcare delivery in Ghana for possible integration.

## 2. METHODOLOGY

This research embraced both quantitative (closed-ended) and qualitative (open-ended) questionnaires to evaluate the status of complementary alternative medicines in primary healthcare in Ghana. Respondents were selected from practitioners of complementary alternative medicines as primary healthcare givers. A sample size of 30 were administered with questionnaires, with 28 respondents out of the total. The study concentrated on three thematic areas for this research:

- i. The challenges that complementary alternative medicine practitioners encounter in their practice as primary healthcare givers in Ghana.
- ii. It further assessed the opinion of practitioners on pull factors that drive consumers to complementary alternative remedies.

- iii. Finally, the study evaluated the opinions of practitioners on the consumers' push factors to complementary alternative medicine using Ghana as a case model.

Data collected was analyzed quantitatively and qualitatively using descriptive analysis presented with pie charts, bar charts and tables for quantitative data. Qualitative, data was analyzed thematically in the form of respondents' narratives (Creswell, 2014) in line with the research questions formulated.

### 2.1 Data Collection Procedures

Data collection was obtained by seeking permission from the respondents through their association president using their WhatsApp platform. The respondents were schooled on the need to collect the data to win their support in filling the drafted questionnaire. The drafted questionnaire employed close-ended (quantitative) and open-ended (qualitative) questions. The questions were sent to the respondents through WhatsApp and e-mails. The close-ended questions were multiple choice and the open-ended questions required the respondents to elaborate further. The study was carried out in the month of January, 2021.

## 3. FINDINGS

### 3.1 Data Presentation and Analysis

The findings of this study are divided into two sections namely;

- i. Quantitative (addressed the close-ended questions) questionnaires. The data was analyzed into descriptive metrics on the graphs, charts and tables.

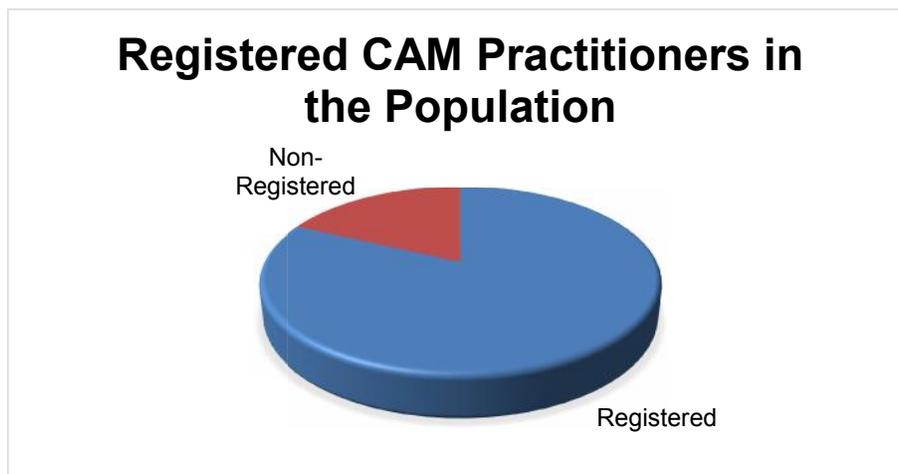
- ii. Qualitative (addressed the open-ended questions). The narrative response from the respondents were analyzed here.

### Section I: Case Study Results

Out of a total number of thirty (30) questionnaires which were procured, 28 were responded to. This shows that the response rate was 93%. This goes to show that 7% declined answering the questions.

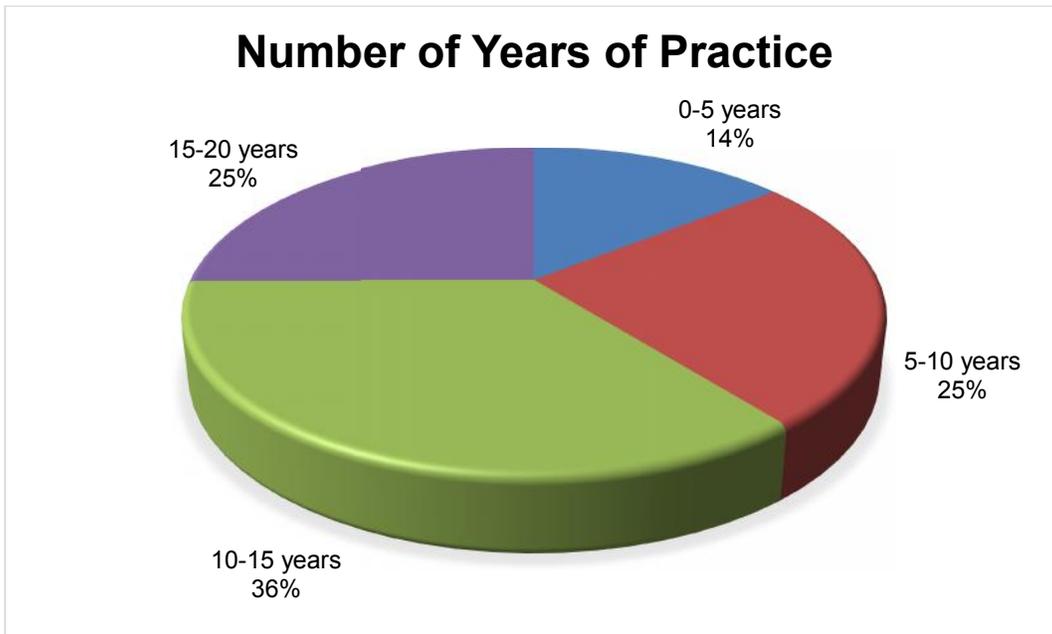
Out the 28 respondents, 5 of the respondents representing 18% were not licensed and 23 (82%) were registered by the licensing council (Fig 1). The interesting thing was that, most of them got their licenses from the council without attending any accredited naturopathic medical school. Others had just workshop certificates in complementary alternative medicine that helped them secure their licenses. Also, most of them claimed they held academic certificates from the council to aid their practice. Meanwhile, the council is not an academic training institution but only a regulatory body. They assumed and considered that the professional development programs administered annually by the council awarded them academic certificates in the field.

About 60% of the respondents had been practicing CAM for a minimum of 10 years (Fig. 2).

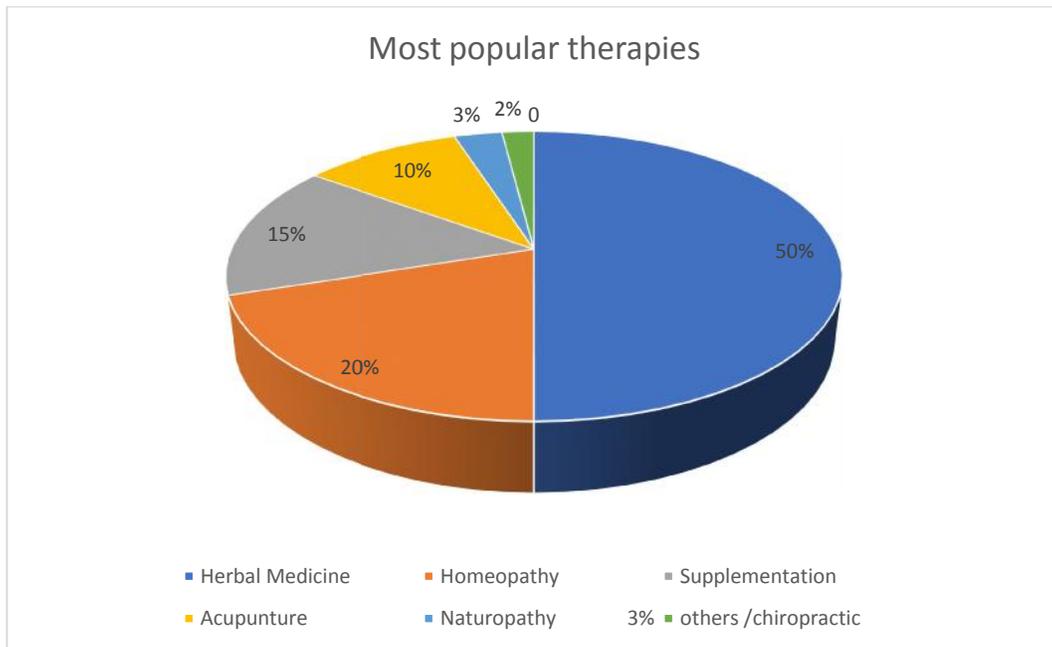


**Fig. 1. Registered respondents**

Source: Field data, February, 2021



**Fig. 2. Number of years of practice as complementary alternative medicine practitioners**  
 Source: Field data, February, 2021



**Fig. 3. Popular complementary alternative medicines in Ghana**  
 Source: Field data, February, 2021

The most popular complementary alternative medicine practice is herbal medicine where (50%) of the respondents confirmed as the most popular in Ghana followed by homeopathy (20%), supplementation (15%) and acupuncture

(10%), (fig 3). However, when questioned on the types of CAM practice the respondents are engaged in, 10 respondents representing 35.7% practiced Herbal medicine; 9 respondents representing 32.1% practiced homeopathy.

**Table 1. Daily patients attendance at facilities**

Daily Attendance	Number of Respondents	Percentage (%)
5-10	04	14.2
10-15	06	21.4
15-20	08	28.6
20-25	07	25.0
25-30	03	10.8
Totals	28	100

Source: Field data, February, 2021

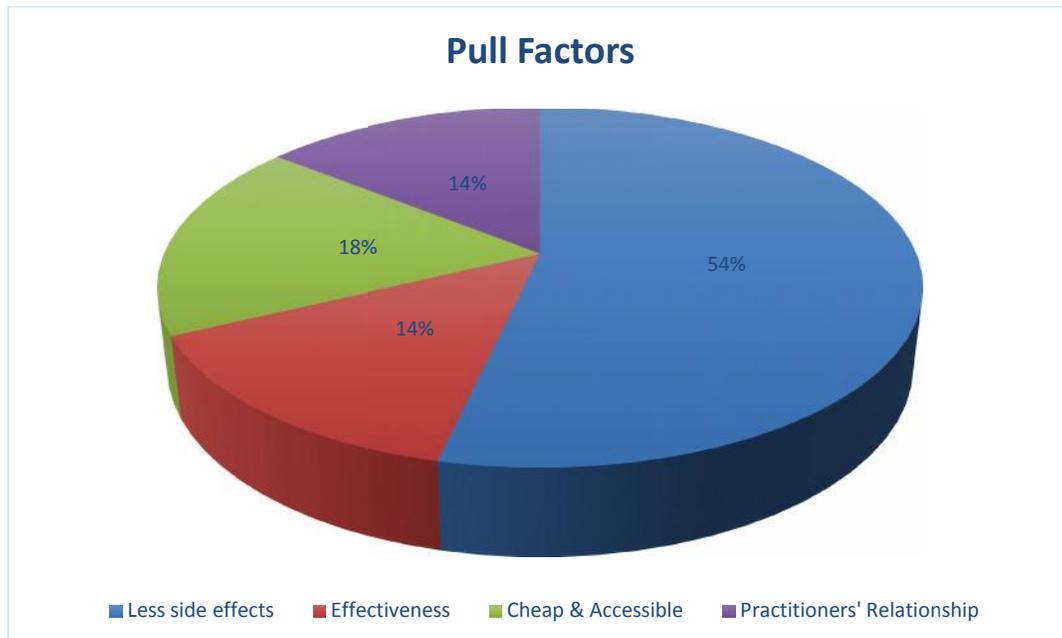
Table 1 above shows the patients attendance at the various practitioners' facilities. 8 respondents attend to 15-20 patients representing 28.6% of the sample size, while 7 respondents (25%) attend to 20-25 patients.

In exploring the adoption of conventional protocols by practitioners in their holistic facilities, 80% of the respondents confirmed that they adopt conventional standards to aid their natural medicine deliveries. Conventional standards such laboratory investigations and medical imaging techniques such sonography. 20% also affirmed that they do not accept conventional standards in their services. Further, majority of the practitioners (70%) were of the view that government efforts to integrate complementary alternative medicine are not enough and 30% were also of the view that government efforts are enough.

Practitioners position on consumers pull factors towards complementary alternative medicines showed that 15 (54%) respondents had the pull factor towards less side effect, 5 (18%) Cheap & Accessibility and 4 (14%) Practitioners' relationship (Fig. 4).

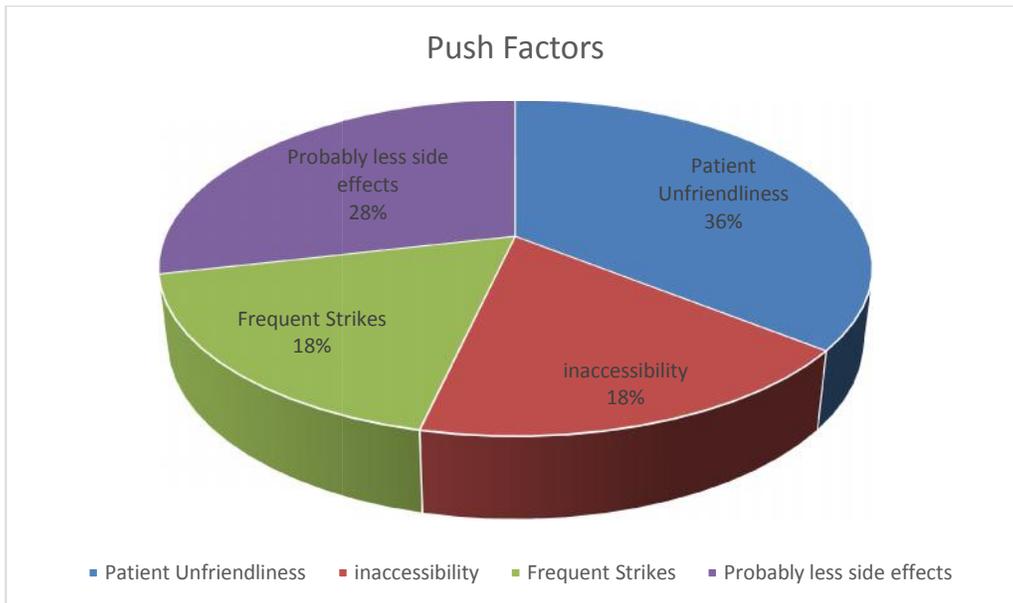
Practitioners position on consumers' push factors from mainstream medicines showed that 10 (36%) were of the opinion that the practice is patient unfriendly, 5 (18%) inaccessible and 5 (18%) attributed to frequent Strikes.

The question on whether complementary alternative practitioners have been given the needed recognition had 95% of the practitioners saying very little attention have been given to them in this industry while a poultry 5% said they were receiving recognition for their profession.

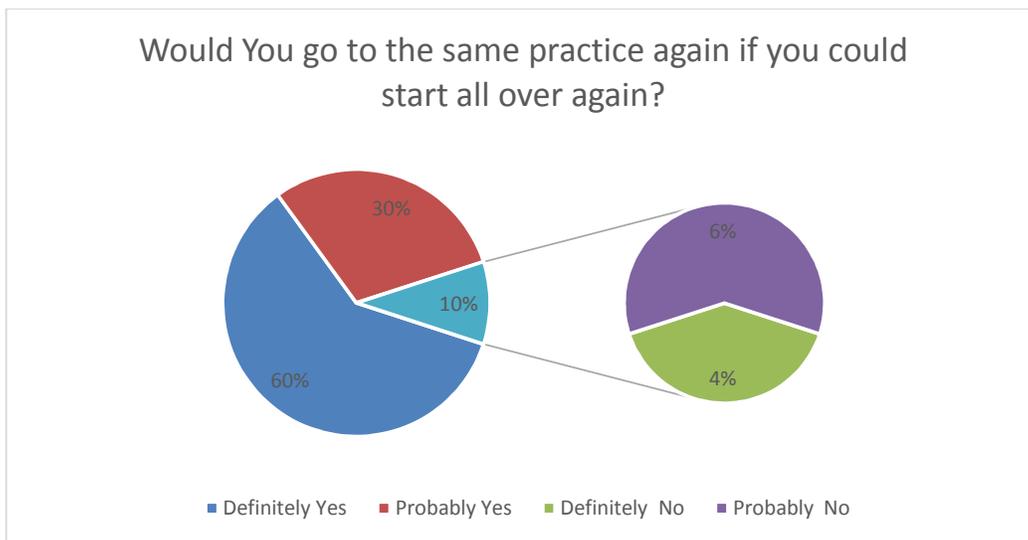


**Fig. 4. Practitioners position on consumers' pull factors towards CAM**

Source: Field data, February, 2021



**Fig. 5. CAM practitioners' position on consumers' push factors from mainstream medicines**  
 Source: Field data, February, 2021



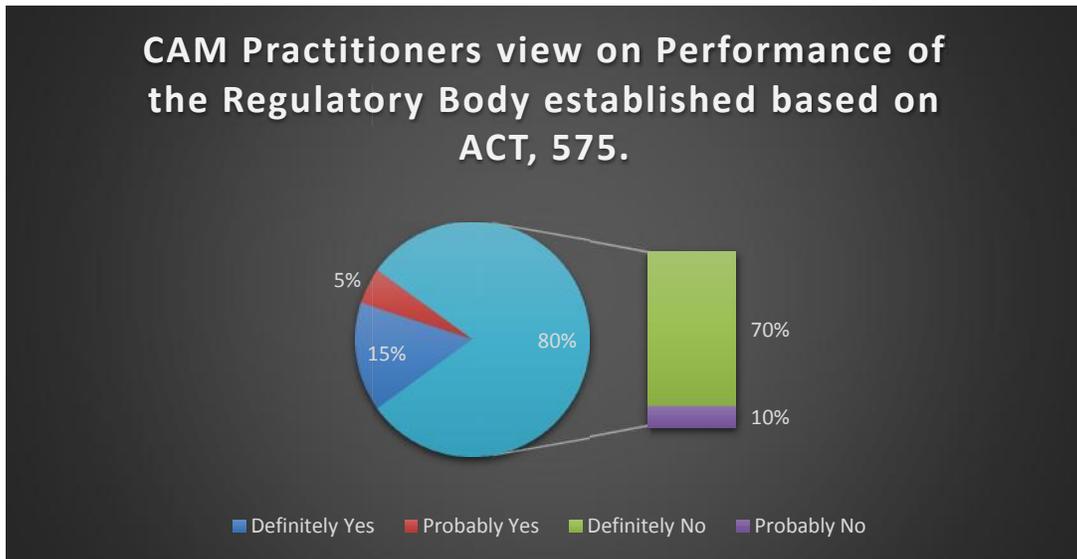
**Fig. 6. Would you go to the same practice again?**  
 Source: Field data, February, 2021

Due to many challenges, a question asked here was that if they could start all over again, would they choose the same profession? Interestingly, 60% maintained that they would still practice complementary alternative medicine over again (Fig. 6).

The question on regulatory body performance in its duties to satisfaction interestingly had 15%

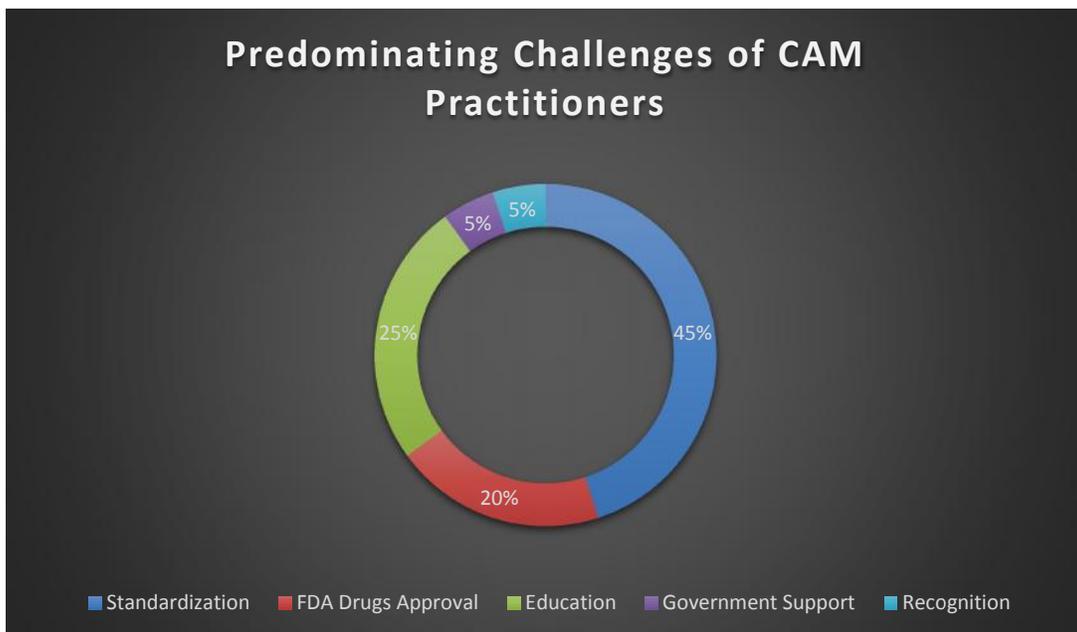
response as Definitely Yes, Probably Yes (5%) (Fig. 7).

Practitioners were asked to choose the predominating challenges that they faced in their practice. 45% of the respondents said, standardization is a major challenge in their practice, while 25% indicated education of practitioners, (Fig. 8).



**Fig. 7. CAM practitioners view on performance of the regulatory body established based on ACT, 575**

Source: Field data, February 2021



**Fig. 8. Predominating challenges of CAM practitioners**

Source: Field data, February, 2021

## Section II: Case Study Results on Open Ended-Questions

We adopted Pseudonyms to help protect respondents' anonymity. Survey questions in this section asked and addressed were:

- i. Tell us a little about yourself.
- ii. Tell us a little bit about your professional journey in Complementary Alternative Medicine practice.

- iii. Why do consumers opt (Pull factors) for Complementary alternative medicines over conventional medicine?
- iv. What are some of the general challenges faced by practitioners?
- v. What are some of the consumers' challenges with complementary alternative therapies?
- vi. What are some of the push factors from consumers with regards to Mainstream Medicine? Is the Regulatory body performing its duties to your satisfaction?

## 4. RESULTS

### 4.1 Nana Yaa

Nana Yaa is a registered Herbal Medicine Practitioner and operates a private facility in the Ashaiman Municipality. She has been practicing for more than five years. She entered into the practice through apprenticeship system. She received no medical education in natural medicine but holds a first degree in education and a Master's degree as well from Russia. She is currently a second year, second semester Naturopathic Medical Student at Nyarkotey College of Holistic Medicine and a member of the Ghana Naturopathic Physicians Association. She is pursuing a Diploma in Naturopathic Medicine.

Nana Yaa, believes that, the practice of Naturopathic Medicine is totally different as being perceived after entering the Naturopathic Medical School. She thinks that, practicing Naturopathic Medicine without first going to the Naturopathic Medical School should be abolished in Ghana especially those practicing alternative medicine, as they are doing disservice to the public. On her assertion on the pull factors to Complementary alternative medicines from the views of the consumers, she explained: "The goal of naturopathic practice is to treat underlying disorders and to restore normal body function by enhancing the body's own healing abilities. Therefore, naturopathic physicians focus their efforts on understanding the unique needs of each patient. Also, Naturopathic doctors assist the body's healing powers by using safe, effective non-pharmaceutical approaches with patients. As a result, naturopathic treatments are highly individualized. Additionally, patients are involved in their treatment programs and learn to

make effective, educated self-care decisions, which can prevent future health problems".

Nana Yaa also believes that, though complementary Alternative Medicine is beneficial to consumers, the practice is not without challenges. She writes: "Few naturopathic treatments have known side effects and risks. Also, supplements (vitamin and herbal) may interfere with prescription medications. In large doses, certain vitamins may raise risk of a disease like cancer. Besides, Spinal adjustments such as naturopathic manipulative treatment to the spine can damage arteries, nerves, bones, and spinal discs. In rare cases, it may lead to a stroke" She also agrees that, Detox diets meant to rid of your body of toxins which involve cutting out certain foods or fasting; which mean going for periods without eating; can be dangerous for people with some chronic conditions, like diabetes. "If you're on the diet for a long time, you run the risk of not getting enough vital nutrients".

Nana Yaa, also asserts that, apart from practitioners' challenges, consumers also raised challenges as well. So, in answering the question of the consumers' challenges with complementary alternative therapies, she narrates that though Consumers have much trust in the practice, conventional medicine doctors have found means to relate naturopathic practice to quackery. She is also of the view that, low levels formal education of the Practitioners impact this practice negatively it is claimed to be unscientific in treating any condition.

Nana Yaa, Finally, on what is also driving the consumers from the mainstream sector or the push factors, narrates: "But with the medical doctors, patients are to revisit the hospital for treatment and they are not allowed to take any medications without the doctor's consent. Therefore, they are not part or involved in their treatment programs".

### 4.2 Combined Data Analysis: Attaining Multiple Mixed Methods Purposes

Our combined data analysis afforded us the chance to evaluate the level to which quantitative and qualitative results agreed with each other (triangulation). This additionally examines why these results disagreed with others (initiation). The appearance of these mixed methods is evident in the integration of data;

For instance, from the qualitative responses, it is evident that, most of the respondents' narratives were focused on less side effects and complementary alternative medicine addressing the root cause of disease and not symptoms as the major reason why consumers are pulling towards to these remedies which Nana Yaa elaborated. Besides, this was also corroborated with the quantitative study which represent about 62.5%. Also, 70% explained that, government efforts were not enough in the quantitative study survey questionnaire. This was also captured in the narratives of the respondents as they dwell on it. The most interesting thing is that, the respondents in the quantitative study attest to the fact that, the regulator of the profession is non performing leading to standardization concerns from both the practitioners and the consumers. This accounts for 80% in the quantitative study.

## 5. DISCUSSION

The argument for primary healthcare in Ghana became a hotly contested one in the just ended 2020 elections. The Primary Healthcare discussion was re-ignited by the Flagbearer of the National Democratic Congress (NDC), John Dramani Mahama as a campaign mantra. The main issue for complementary alternative medicine industry is whether there is a policy direction in the primary healthcare system for total integration into the national healthcare sector [7]. We support the idea by [3], which asserts that, Medicine is continually changing. COVID 19 pandemic further resurrected the discussions for complementary alternative medicine into the healthcare system. Preventive medicine became the promotional subject in 2020, led by the President, Nana Akufo Addo in his Ninth Speech to the Nation on measures to fight the virus. The President, encouraged Ghanaians to consume Kontomire (Taro leaves), Dawadawa (African locust bean), Millet, Cashew nuts, Crabs, Plantain, Okra, Brown rice and mushrooms to help build the immune system in the fight against the pandemic. The President notes: "For instance, we're told that the key vitamins that fortify our immune system are vitamins A, B6 and C and E. Fortunately for us in Ghana, all of these can be found in many of our foods, such as oranges, kontomire, millet, cashew nuts, crabs, plantain, okra, dawadawa, brown rice and mushrooms [8]. Following a good diet, patronizing our healthy foods, exercising regularly, ensuring our personal hygiene, and improving our lifestyles, habits, should become part and parcel of our daily routine, it will help

boost our immune systems and help us in the fight against the pandemic," His speech further sparked natural medicines promotion, research and advocacy. The President's call was further cemented by the former President, John Dramani Mahama, who also called advocates for traditional medicine to fight COVID-19. He notes: "It is time to explore the role of alternative medicine and traditional remedies in the fight against the Coronavirus. Some traditional medicines are known to boost the immune system and can help both in the prevention of people succumbing to the disease and also play a role, a palliative function in the management of persons suffering from COVID-19".

But there were some challenges with regards to central government recognition of these remedies to fight the disease. What are the challenges, and is there a role of complementary alternative medicine in our primary healthcare delivery?

We believe that, COVID-19 pandemic has exposed the lacuna in our healthcare system in Ghana and Africa in entirety, and further presents the best opportunity to having a national dialogue on complementary alternative medicines as part of our primary healthcare industry. For instance, some studies attribute the containment of the COVID- 19 pandemic in China to the adoption of an integrative medical practice model. Integrative medical practice model involves the use of Traditional Chinese medicine and allopathic medicine as primary healthcare practices [9-11].

The major challenge in Ghana with regards to the practice and education of alternative and traditional medicines is the limited educational opportunities available juxtapose to India, [12]. Besides, there is huge economic potential in this industry. For instance, the Grand View Research (2021), postulates the market size of the global complementary and alternative medicine to reach USD 404.66 billion by 2028 [13].

There is a growing need for Africa to achieve universal health coverage but the inequality and lack of adequate facilities make that dream farfetched. In other words, we are seeking to achieve universal health coverage without first addressing quality health delivery issues which are making many people want to seek health care abroad regardless of the cost.

In 2016, Africa spent US\$6 billion on healthcare in foreign countries especially India, China, UK, US and Canada. This expenditure was occasioned as a result of the poor health facilities across the continent [14].

Another significant question to tackle is whether there is a role for these remedies in dealing with public health menace such as COVID-19 as well. COVID-19 is just one aspect of the public health menace Ghana is struggling to deal with. For instance, [15], asserts that, cancers such as prostate, breast, cervical cancer have skyrocketed with basically no policy on intervention such as screening, awareness and advocacy as compared to the developed countries. The author further opined that, the disease accounts for about 80% mortality in men.

Hence, the ultimate goal of primary healthcare is to give healthcare services to all manner of people and families in any locality or Country. As a result, [15], argues that, medicine is not competition and Mainstream and alternative medical system can coexist. A previous study by [16], recognizes the disunity in the medical sector in Ghana to the high patients' death.

This notwithstanding, [16], argues that, there is a role of complementary alternative medicine in primary healthcare delivery in improving quality of life care (QOL) in prostate cancer patients if incorporated. Interestingly, the researchers can affirm that, public health concept and complementary alternative medicine principles are analogous. Hence, there is the need for intersection for effective primary healthcare delivery. We believe that, any national discussion on primary and public healthcare policies should include complementary alternative medicines.

## 6. CONCLUSIONS

One interesting thing we observed from the narratives in the qualitative case study is that, complementary alternative medicine and Conventional Medical Practitioners both behave like the politicians in the New Patriotic Party (NPP) and National Democratic Congress (NDC) group in Ghana. They seem not to agree on anything even if it will benefit humanity. Besides, natural medicines are used by these two practitioners in their daily lives. From their kitchen filled with spices to the air we breathe are all nature oriented. So no one is immune from natural remedies. So why do conventional doctors kick against complementary alternative

medicines in our healthcare delivery when they are not immune from them? We therefore postulate the following as recommendations to aid national policy in this area.

## 7. RECOMMENDATIONS

We recommend that, standardization should be developed in practice, education and advertisement using India, North America, Europe and China as models. There should be a National Policy on standard treatment guidelines to help the practitioners in their field coupled with clear pathway for referrals to specialists. We further recommend collaboration between complementary alternative and conventional medical practitioners to help improve the quality of life of consumers and in prospective public health crisis. There has to be a long-term national policy which should include natural medicines as well.

## CONSENT

As per international and university standards, respondents' written consent have been obtained and preserved by the authors.

## ETHICAL APPROVAL

Ethical consideration for this case study research was obtained from the President of Ghana Association of Naturopathic Physicians (GANP), the umbrella body of graduate Naturopathic doctors and Naturopaths in Ghana.

## LIMITATIONS

The study centered on practitioners of Naturopathic Medicine in Ghana. Consumers were not involved in the study. Besides, all included studies were conducted in Tema, Ghana, whether this evidence is equally applicable to other countries outside Ghana needs further international study.

## COMPETING INTERESTS

Authors have declared that no competing interests exist.

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