INTRODUCTION

Previously, Traditional Medicine (TM) was presumably consumed by those steeped in traditional beliefs, like the elderly, the rural poor and the illiterate. However, the past few decades have witnessed an overwhelming patronage for TM from the young, urban dwellers, educated and religiously inclined people; all turning to TM as an acceptable treatment option. The tendency has become a global paradigm shift with increased evidence of TM usage among people in both developed and developing nations.

In Africa, TM usage is highest since most communities have well-established cultural beliefs and traditions around TM. Over 80% of Africans depend on TM for their primary health care. African countries,
including Benin, Congo, Ivory Coast, Gabon, and Mali, have about 80-99% of their populations using TM. In Uganda, about 60–79% of the population uses the indigenous TM. Notably, Uganda has a rich tradition of TM, and its usage is substantial despite advancements and wide acceptance of modern medicine. Overwhelming usage of TM, particularly in rural Africa, is attributable to the limited accessibility and affordability of modern medicine; poverty among most African communities and the proliferation of life-threatening diseases such as hypertension, diabetes, asthma, infertility and cancer among others. Other contributory factors for sustained increased use of TM include the various claims on its efficacy, cultural acceptability of TM and the general belief of its safety because of its natural sources.

The prevalence of use of TM is high since most TM currently available in the market lack scientific evidence of safety and efficacy. Research shows that TM can be toxic due to pollutants such as pesticides, microbes, heavy metals and chemical toxins. Additionally, TM can be misidentified by Traditional Health Practitioners 'THPs' and can also become toxic when used concomitantly alongside conventional medicines. Moreover, TM can be deliberately adulterated by THPs to enhance its therapeutic effects. Regardless, its widespread safety misconception is constantly promoted by TM proponents, yet incidences of toxicity and adverse effects are increasingly being reported. Studies in the Ugandan context, such as Auerbach et al., disclose an existing association between TM usage and the development of liver fibrosis. Likewise, Ssempijja et al. reported that Vernonia amygdalina (Omuluuluza) contains significantly high levels of carcinogenic compounds, predisposing one to cancer over one’s lifespan. Similarly, Lacroix et al. posit that one-third of the herbs for malaria treatment in Uganda had a significant anti-plasmodial activity with some level of toxicity. Moreover, there is often imprecise dosage from THPs, and most rural Ugandans use medicines, including TM, without a diagnosis.

The safety and quality of TM are largely unverified, yet the consumers' understanding of this is generally low. Notwithstanding, there is a need for more clarity on the mechanisms meant to control TM or THPs, mainly in Africa. This has led to abuse of significant magnitude of the use and the sale of TM products without instructions. Uganda needs a transparent system to license and track THPs or their products. The country's policy on TM is integrated into the National Policy on Public-Private Partnership Policy for Health. The policy was created to regulate TM practice, focusing on research and development while emphasizing the propagation, protection, and sustainable use of medicinal plant resources. Nonetheless, regulations for the safety assessment of TM are partly the same as those for conventional pharmaceuticals and no specific regulatory status is given to TM.

Unfortunately, due to these loopholes in TM regulation, 'quacks' join the practice, especially in urban areas and take advantage of desperate patients. Moreover, sources of raw materials for TM are cheap, TM is easy to prepare and TM requires minimal government approvals and regulations. So, amidst the concomitant unemployment and the poorly regulated TM environment, the TM trade has become quite trendy and highly lucrative in the African market. Ultimately, there is an influx of THPs joining the TM practice; who not only set a stage for manipulation and compromise of the safety, quality and efficacy of TM but also make the market very competitive.

In that regard, TM promotions like advertisements (on TV/Radio, Newspapers and posters), sales promotions (price reductions, gifts and free trials), public relations (media tours/relations, sponsorships) and personal selling (on streets, buses, burial grounds), have become common. Therefore in order to withstand the fierce competition, some THPs employ unethical advertising practices to lure unsuspecting persons to their establishments. More THPs buy airtime on TV or radio stations and make unverifiable claims about how they have cured different ailments. Some THPs advertise that they can treat all known health conditions and ailments. However, a richer conceptualization of the TM adverts/promotional influence on consumer behaviour towards TM usage is yet to be documented.

**Information asymmetry**

Previous studies reveal that advertising of medicines, TM inclusive, is often associated with quackery and information asymmetry; which is a knowledge imbalance between two parties, giving the party with more information/knowledge a competitive advantage. The extent of information asymmetry often varies with product/service characteristics which can be categorized concerning 'experience', 'credence', and 'search'. Credence products such as TM, are more prone to information asymmetries because of the intangible attributes consumers may need to evaluate even after purchasing and consuming. Consequently, pre-purchase information is scarce for these products, in which the consumer is incapacitated to access or interpret the product's quality attributes before making a purchase. The asymmetries in information between THPs and TM
consumers will almost certainly emerge because of the wide variations of TM attributes, particularly on safety and effectiveness. Besides, there is scarcity of information concerning TM’s production techniques yet most TM consumers lack a clear understanding of TM chemistry or its contraindications. A study by Feucht and Patel revealed that complementary and alternative medicine (CAM)/TM providers hardly disclose any known, suspected, unknown, short-term and long-term health implications related to the usage of their therapies. These asymmetries persist partially because of health systems’ idiosyncrasies, which often relate to the user’s inability to accurately assess the need for care. Hence this becomes a fundamental barrier to rational and informed decision-making for the user.

From the preceding perspective, THPs presumably exploit informational asymmetry by inducing demand, primarily through promotions. However, empirical evidence needs to be provided, particularly in the Ugandan context. Besides, only a few studies have qualitatively explored the impacts of information asymmetry on credence goods such as traditional medicine. This study therefore investigates the THP’s manipulation of TM information to persuade TM consumers. Additionally, it is possible that the information shared during advertising only increases the information asymmetry because it could be biased, wherein the benefits may be exaggerated beyond their actual value.

**METHODOLOGY**

**Sample design and sampling description**

The National Council for Traditional Healers and Herbalists’ Association (NACOTHA) helped the authors to construct the sampling frame. From the 26 districts of Central Uganda, the districts of Kampala (Salaama, Luwafu, Bakuli), Wakiso (M pela, Namulanda), Mukono (Mwanyangire), Mpigi (Nakirebe-kuyeyitabba) and Luwero (Gembe), were purposively selected because of their closeness to the Capital City. According to NACOTHA, there were more registered THPs in Kampala and surrounding areas. Moreover, the Baganda, the indigenous habitats of Central Uganda, are culturally known for their strong beliefs in TM. Besides, most ‘promoting’ THPs are concentrated in the capital city; hence there was more viewership, readership and listenership of TM promotions in Kampala and surrounding districts.

NACOTHA secretariat introduced the authors to the Community Development Officers (CDOs) with whom they had worked in registering THPs. The CDOs introduced the authors to the herbalists renowned for their large clientele and longevity in their respective practices. The participants were drawn from these THP clinics. Participants were recruited as they collected TM from the selected THP clinics. Participant eligibility was determined by: (a) they must have been active consumers of TM, (b) they should have used TM for more than five years and (c) they must have been widely exposed to TM promotions. Our saturation point was reached after respondents, at which point, no new information was collected from the informants. A semi-structured interview guide pre-conceived and designed from an earlier quantitative study was employed. Probes were used to elicit more in-depth information from respondents. The interviews lasted between 1 – 1.5 hours and were audio-recorded. The interviews were held at the THPs clinics (often outside the clinics) and were carried out by the researchers (a moderator and a note taker).

**Data analysis**

The audio recordings were transcribed verbatim and then analyzed using the content analysis technique. Related codes were generated, categorized and reduced into analyzable units to gain more qualitative insights into information asymmetry. Codes were subsequently linked to form cohesive themes and patterns.

**Ethical Considerations**

This study was approved by the Research Ethics Committee of Mbarara University of Science and Technology (MUST-2018-248). Further approval was sought from the Uganda National Council for Science and Technology. Permission and consent were also got from the National Council of Traditional Healers and Herbalists Associations ‘NACOTHA’, who were the gatekeepers to the THPs. Written consent was got from each of the study participants.

**RESULTS**

**Profile of participants**

Differences in demographic characteristics such as age, education, gender, and income contribute to the way customers form attitudes toward the promotion of TM hence its usage. The study results show that more females (62%) visit and use TM as opposed to males in Central Uganda. According to Keshet and Simchai, women are more likely to buy and use TM given their
traditional family roles of caring for infants, children, husbands, the sick and the elderly dependents than men. We have the traditional responsibility for the family’s health and emotional well-being. The study also revealed that the elderly above 45 years (43%) and those who had not completed high school (81%) are more inclined to use TM. Our study suggests that TM users who have used TM for longer tend to build stronger cognitive attitudes and affection towards TM. This can be attributed to their experiences in using TM and dealing with THPs. Likewise, the study suggests that people with limited formal education are more likely to use TM compared with those with more levels of education.

Emerging themes included the overwhelming TM usage, attitudes towards TM and the promoting THPs, and information biases. Other themes included the perceived effectiveness, and the THPs’ persuasiveness. Other themes included the perceptions of the various TM promotional strategies such as advertising, public relations, enticing sales promotions, and THPs’ personal selling. These are detailed below.

1. TM's Overwhelming Usage

Several reasons account for the usage of traditional medicine in Central Uganda. These include (a) personal factors such as poverty, desperation, illiteracy, naivety and the need for a holistic approach. (b) Health systems factors include healthcare costs, poor hospital infrastructures, side effects of modern medicine and a lack of better alternatives. (c) Cultural factors include the THPs’ persuasive advertisements, TM being cheap, readily available and getting popular. Of these, Poverty and desperation were repetitive among respondents. 

Whereas I would have preferred the hospital, I cannot raise transport fare, pay the doctor’s consultation fee, and buy drugs. R1, female.

The healthcare system is largely lacking, yet we are faced with a multitude of diseases. We have become desperate, and we will try anything to survive. R6, male.

In Uganda today, our healthcare choices are limited. It’s no wonder TM con artists are taking advantage of the situation. R22, female.

There is a strong belief in the healing power of TM, and respondents confidently confirmed their continuous usage of TM to treat disease. The inclination towards TM can be attributed to the long history and experience in TM usage by Ugandans, who can attest to its effectiveness.

I believe in the healing power of TM. Our forefathers have used it for generations, and it has proven effective. R34, female.

Some respondents believe that certain horrible diseases can only be cured with traditional medicines. [...] There are terrible diseases that modern medicine cannot cure. Diseases like jaundice in children and germs - 'Eettaalo’ can only be cured by TM. R14, female.

However, a few participants were still skeptical of TM's effectiveness even though they often use it. They believe that some diseases have become too complex to be easily treated by TM.

TM has its limits. Lately, some diseases have become too complex for TM to cure. After drinking several TM concoctions for a few weeks, I recently lost a friend to cancer, who died in excruciating pain. R13, male.

Some participants expressed a desire to use TM but were distrustful of the overwhelming number of THPs joining the trade. Hence, they opt to use homegrown TM or visit THPs that come highly recommended. [...] I believe in the effectiveness of TM, and I prefer it to modern medicine. However, 'fake' THPs have infiltrated the trade for the sake of doing business. These THP ‘quarks’ have confused the whole trade. R11, female.

2. Beliefs Towards TM Promotions

TM promotions offer certain advantages to TM users, including making customers more knowledgeable about the available options, enlightening customers about drug combinations and narrowing consumers' search for specialized THPs. Furthermore, TM promotions enable TM users to reduce search time in finding the suitable THP, increase customers' choices and can be intriguing. Besides, the salespersons bring the TM medications to customers' homes.

TM adverts have increased our understanding of TM, and I have grown to like TM because of the adverts. R3, male.

From the adverts, we know the THPs' whereabouts and the latest available medicines on the market. Besides, these guys save us on transport because they bring the medicine closer to us. R5, female.

However, most of the participants expressed negative attitudes toward TM promotions. They particularly note that TM commercial adverts have become irritating, they are annoyingly repetitive and are disruptive of people’s TV programs. The adverts have also become confusing, misleading, and overly exaggerated. Moreover, some TM ads are obscene and coercive to listeners.
[...] TM adverts are all over the media platforms. They have become too many and are now getting irritating. Besides, these advertising THPs overly exaggerate and have started confusing the listeners. R22, female, 42.

[...] Of late, I have become overwhelmed and confused by these many THPs. I do not know exactly where to go. Besides, these TM adverts have misguided us even from taking our ARVs (antiretroviral medicines). R4, female, 46.

[...] If you have genuine medicine, why would you advertise? True herbalists do not advertise. I know where to find the real TM doctors; they do not need to hawk medicine. R7, male, 61.

Other concerns relate to a lack of censorship and vetting of the message content before it is aired to the public.

[...] Some TV TM commercials, especially on female/male sexual dysfunctions...are horrible! The obscenity is getting out of hand. I often get ashamed before my children whenever these Ads get aired. Moreover, they pop up anyhow. R22, female, 42.

[...] THPs have taken advantage of the unknowledgeable and illiterate Ugandans who hardly verify the information they hear from TM adverts. There are still many ignorant and vulnerable Ugandans who fall for anything. R17, male, 66.

3. Consumers' Perceptions of the Various TM Promotional Strategies

Participants expressed mixed responses towards TM adverts (on TV, Radio, and Newspapers) and TM Public relations (Media relations, media tours, and sponsorships). Some respondents enjoyed both or either form of TM promotions, as cited in the quotes below.

[...] I have visited a couple of THPs I see on TV...and I often find them helpful. I trust and believe in the information they give. R5, female, 40.

[...] I find the TM programs on radio and TV very elaborate and educative. Unlike city dwellers, we who stay on the outskirts of town can easily access the herbs often mentioned in these programs. One can cure without visiting the TM clinics or the hospital if one follows the instructions. R19, female, 43.

However, others felt weary and manipulated by the flowery language used in some TM adverts and public relations programs. They noted that most 'advertising' THPs are con artists who infiltrated the trade for quick money and have since taken to media platforms to lie to the public.

[...] TM advertisers say 'naked' lies. I have known all medications to have some form of side effects. However, THPs will convince you that there is none in TM. Much as TM may present limited side effects, THPs should be truthful to tell whatever side effects there are. R7, male, 61.

Besides, some THPs claim their TM is drawn from famous mountains, sacred areas and distant places. This creates a perception of specialty with some TM.

[...] I often hear THPs claim that their herbs are drawn from special tree species from around the world such as from Germany, Congo, Zanzibar, or that they get their herbs from certain animal skins, like leopards. I find these assertions very absurd. R23, female, 32.

Some THPs offer promotional guarantees, which are warranties designed to reduce TM performance risks that TM users may perceive while buying TM. Some THPs encourage their clients to make half payments before TM usage and pay the other half once the ailment is cured. The above two strategies are persuasive techniques to induce confidence in potential TM users. Most respondents feel assured with such promotional strategies and are willing to try the TM.

[...] I always make a payment schedule with my THP...I pay him in installments. If the full dosage costs 500,000 shillings, my THP receives whatever amount I give him until I get all the money to pay. R32, female, 43.

Of all TM promotional strategies, sales promotions were the least respected. Most TM users distrust THPs that give incentives such as price reductions and free samples. These are interpreted as deceptive hence are less attractive and motivating enough to get consumers to buy TM.

[...] I would never buy TM because of price reductions. How do I believe that a bottle previously sold at 150,000 shillings now sells for 50,000 shillings? My perception of that is that the medicine is expired. R23, female, 32.

[...] I suspect that THPs run promotional price reductions for expired drugs. Who still believes in those lousy lies? R27, female, 38.

Respondents were not enthusiastic and very trusting of personal selling as a form of TM promotions. TM salespersons are known to sell TM on the streets, at burial grounds, in marketplaces, on buses/cars, or move door to door with loudspeakers. Emerging quotes under the credibility of salespersons include over-exaggeration of TM’s efficacious attributes and the THPs’ skills.

[...] TM hawkers can present one concoction as a cure for 100 ailments...i.e. back pain, dog bite, headache, candida, malaria and stomach pains, etc. This TM hawking business is a new trend in my village, and I still find it odd. R21, male, 40.

[...] TM hawkers come in my absence to take...
advantage of my elderly mom. She always buys TM concoctions, yet her pains never improve. These THPs target the vulnerable. R15, female, 35.

[...] TM hawkers communicate persuasively…and sometimes you find yourself buying impulsively. R18, female, 52.

Most participants approve of 'word-of-mouth' as the best TM promotional strategy.
[...] I would never trust a THP who advertises. Genuine THPs would never advertise to the media to advertise themselves. They generate repeat purchases through referrals or word of mouth. R6, female, 45.

4. TM Promotions and Information Asymmetry Participants revealed that TM promotions are often prejudiced, making the information difficult to authenticate. Given that TM is a credence product, the verification of its attributes is much harder and costly even after user experience.

[...] The only way to confirm the truthfulness of the adverts is by trying the TM. R4, R18 (both female, 46 and 52 years old respectively).

[...] Information verification can be the last thing on one's mind when in excruciating pain. In such circumstances, you find yourself desperate and are willing to try anything. R20, female, 50.

Some THPs deploy testimonies of 'patients' who claim to have been healed by the practitioners. The underlying motivation is to evoke emotional appeals, create legitimacy and credibility, and instill confidence in prospective customers. However, while some participants found the promotional technique appealing, others suspected that the 'so-called' cured patients are often staged to lure patients into going to the THPs clinics.

[...] Of late, I see TM testimonial adverts. Unfortunately, many ignorant and naïve Ugandans still easily believe these lies yet are incapacitated to verify the message content they get exposed to. R21, male, 40.

There were mixed responses on the adequacy of information received from 'promoting' THPs. Vital information necessary for TM users to make rational decisions is hardly disclosed. Information such as TM side-effects, expiry date, dosage intake, and diagnostic findings is either downplayed or inadequately explained during the TM promotions.

[...] THPs share only a little information…so as not to give away their trade. They keep a lot of information private for sustainability purposes and to maintain repeat purchases. R10, female, 33.

[...] When I go to the hospital, they tell me the side effects of the drug, but I have never heard any THP talking about side effects. R4, female, 46.

[...] How would you expect a THP to have government seals and all this other information on their medication? I carry my own containers where the THP puts my herbs. I cannot wait for government officials to authenticate its efficacy! R5, female, 40.

Participants' perceptions on why THPs keep information private were also vetted. Interestingly, most participants never inquiring about information related to diagnosis, side effects, expiry dates, dosage, drug composition, and government seals, among other considerations. Besides, some consumers have experience in dealing with the same THPs, hence they fully trust that their TM offerings are genuine.

[...] Unlike conventional medicine, which presents so many contraindications and side effects, I never hear the same from THPs. I believe TM is natural, fresh, original and has neither toxins nor side effects…even when taken in excess, it does not harm. R18, female, 52.

[...] I always visit the same THP, who treats me with the same concoction. I do not know its composition, and not that I want to know, but this concoction works on all my ailments. R28, female, 62.

[...] THPs use a lot of psychology in their diagnosis. They will only look at you and then determine your ailment. But again…they keep that psychology only to themselves. R20, female, 50.

Nonetheless, some participants understand that the majority of the THPs, whose trade has been passed on by their forefathers, are less researched, hence have a limited understanding of the plant compositions. They do not know whether or not the herbs are toxic.

[...] In their promotions at whichever level or form, THPs hide some information not because they want to…but sometimes they also do not know. This is a trade passed down from generation and the information is often passed on abstractly and vaguely. Besides, it is hardly documented. R17, male, 66.

[...] TM hawkers at burial grounds will sell you a drug without expiry dates. They also insist that TM does not expire nor have a dosage. Nevertheless, how do they extract it and keep it from going bad? How do the leaves turn to liquid and are kept fresh without preservatives? R29, female, 26.

Some participants perceived that the 'promoting' THPs want to signal quality to TM users, but they need to be more truthful and know their craft. Others perceive them as half-baked and lacking the necessary skills required for a THP.

[...] TM advertising is pure drama. They advertise to raise standards or signal to unsuspecting clients about their abilities, hence attract more customers to their establishments. R21, male, 40.
DISCUSSION

Demographically, the study revealed that the majority of TM users are female, elderly and less educated. Extant literature shows that women are more invested in their healthcare and are traditionally responsible for their family’s health and emotional well-being. The elderly and less formally educated are also prone to using TM because of their experiences and cultural inclinations. Other reasons for TM usage include poverty and lack of better alternatives to the poor healthcare system in the country. This finding suggests that while in search for better healthcare alternatives, more consumers have been trapped into listening to deceptive and misleading TM adverts. Moreover, desperation and illiteracy make some TM users approach promotions with naivety and without the application of much logic. This study hence observes that some THPs have taken advantage of TM users’ vulnerability and have become craftier with their promotional rhetoric communications. While most users appreciate the benefits of TM and the majority have gotten experience dealing with some THPs, they find TM advertising and other promotional trends odd. The study highlights several TM promotional benefits including availing information on new drugs, locations of expert THPs and the widening of TM users’ choices.

Nonetheless, this study also reveals certain drawbacks to TM promotions which point to information asymmetry in the TM trade. According to some respondents, while more THPs use the media to share proprietary information about their TM, it is often obscure and can be misinforming to the Public. The information shared is often inadequate, incomplete, biased or manipulated. In reality, THPs overly exaggerate their abilities, yet no or less information on associated risks is shared. The findings point to a lack of critical or relevant pieces of information inherent in the TM promotions necessary for the listeners/viewers to make informed health-related decisions. Relevance and quality information particularly related to TM side effects, actual dosage and expiry dates are barely shared. Unlike conventional medicine which often indicates contraindications, TM is advertised as original and natural without side effects. Unfortunately, most consumers interpret this as product safety. TM consumers believe TM is efficacious and they would take it confidently without any worry for toxicity. Consequently, this belief could sway some consumers from going to hospitals or ingesting modern medicines, especially for complex ailments such as AIDS. Thus, the misguidance of some TM promotions makes consumers opt for TM. The study deduced that TM promotions and information asymmetry are contributory pull factors for TM usage in Central Uganda. The study also suggests that the majority of THPs that advertise their services continually communicate the same misinformation elusively passed down generations, and others deliberately withhold crucial information to sustain their trade.

Nevertheless, it is important to acknowledge a few THPs that genuinely share relevant information in their advertisements to educate the masses. Otherwise, due to TM conmen whom Arkelof et al describe as 'lemons', who make exaggerated claims, the good THPs could be getting silenced. According to Arkelof “In a market for a good with different qualities and where quality information is asymmetrical, better products may be driven out by worse ones”. Since TM is a credence good with varying qualities of safety and effectiveness, it particularly gets hard for TM users to vet the genuine THPs or TM. The good THPs thus get mistaken for bad THPs, which lowers their TM’s value and consequently discourages them from making continuous improvements for their trade. Therefore, it should become a concern for policymakers to vigorously enforce the protection of intellectual property rights of traditional knowledge holders in Uganda. Authentic platforms for advising TM customers about where, how and what TM to buy should be regulated and supported by the National Drug Authority (NDA) and the Uganda Communication Commission (UCC). This should be enforced through monitoring of non-substantive exaggeration of TM safety issues. The UCC should also supervise and address censorship issues of obscene TM adverts on various media platforms.

Conclusion and recommendations

TM usage among Ugandans will certainly continue to increase. Nevertheless, whilst its interest has often been fueled by ‘push’ factors such as poverty and insufficient healthcare, this study provides evidence of ‘pull’ factors which include promotions and information asymmetries that motivate consumers towards TM usage. TM promotions not only inform consumers’ attitudes towards wanting TM but also widen the information gaps. The study recommends empowerment and sufficient education of THPs and TM users about the potential consequences of TM information asymmetries. For
competitiveness, THPs must learn to furnish the general public on adequate information to facilitate a better understanding of the risks associated with using these TM products. Additionally, THPs are advised to truthfully deliver on their promise as pitched in their advertisements. This will consequently generate free word-of-mouth in the future.

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Authors' contribution

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Conflict of interest

The authors declare no conflict of interest.

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