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Stakeholders' Assessment of Face-to-Face and Remote Consultations in Herbal Medication

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Abstract:- Remote consultation is a computer mediated telediagnosis that make use of telecommunication infrastructures to aid medical diagnosis and patient care on a real-time based possible. As modes of medication with technologies have changed the organizations modes of diagnosing patients needs to change with technology advancement. To know the important of this technology, it is good to examine the impact it in the workplace to know how it affects the patients and practitioners diagnosing process whether the technology has replaced the traditional face-to-face medium of treatment or prescription. The study is to explore practitioner's perspectives on the mode of diagnosing and treatment of patient channels compare with face-to-face and remote (computer-mediated) prescription. A questionnaire was setup to conduct the assessment view among the herbal practitioners in Nigeria to know their perception on the modes of giving health care services to patients. The study compared satisfaction between face-to-face and remotely diagnosis from the report received from the patient about the herbal practitioners. Though, some herbal practitioners perceived face-to-face to be more effective in terms of diagnosising compared to computer-mediated t. The result obtained from herbal practitioners view shows that in terms of cost majority prefer face-to-face 57.5% to Remote 43.5%; Ease of use 65.3% prefer face-to-face because lack of knowledge about the modern technology while 34.7% prefer Remote; Mobility, 21% prefer face-to-face while 79% prefer Remote; Privacy 29.6% prefer face-to-face while 70.4% prefer Remote; Security 26% prefer face-to-face while 74% prefer Remote and on User friendliness 41% prefer face-to-face while 59% prefer Remote role of herbal prescription. The overall result shows that 65% of herbal practitioners prefer remotely platform to face-to-face of prescription. Teleconsultation of patient through computer mediated medium provides similar degree of diagnostic accuracy as that of face-to-face diagnosis.

***Keywords*:-** *E-Health; Face-To-Face; Herbal Medication; Patients; Practitioners; Remote; Stakeholders' Assessment; Telemedicine.*

I. INTRODUCTION

As technology has changes most aspect of our lives, it has changes healthcare services which have influenced the most organizations approaches in healthcare delivery. Though, some still prefer face to face healthcare delivery to remote services. Face-to-face prescriptions (treatments) are consider "more natural" and "free-flowing" than computer mediated treatments [1]. It was argued that the use of e-home care technology may scare patients that can result to limit participation during the virtual visit. Patient participation is potentially significant because patients tend to value the opportunity to express their concerns, questions, and opinions when seeking medical care [2]. Recently, technology advancement and availability of Internet infrastructures has been radically emerged and introduced to many organization centres to enhance performance. Technological change is one major aspect that has influenced the teleconsultation in herbal medicine especially in remotely diagnosis and prescription [3].

In this era of information and communication technologies (ICTs), computer-mediated (remote) diagnosis and prescription is a basic infrastructure needed by the organizational centres to be equipped with. This will enhance the centres in the flow of teleconsultation among the practitioners. The use of computer-mediated technology for prescription and diagnosis has significantly changed the mode that organizations communicate with each other to give herbal medical care to the patients [3]. In Nigeria, almost all herbal medical care is delivered with the provider and patient proximity; this model is called as face-to-face care [4]. Years back, medical practitioners and patients has been interested in giving some medical care from the traditional face-to-face care to remote care that is made possible with the help of ICTs infrastructures. Though, remote care uses advanced digital technologies, such as telephone, internet, video consultation etc [5] and [6].

Many researches have been done on remote herbal medical care to know the perception of both practitioners and patients on modern technology application in herbal healthcare delivery. Though practitioners and patients have reservations in terms of cost, privacy, and time compare to

face-to-face consultation [5] and [6]. However, remote consultation is not a 'lesser' form of a consultation, although it is different from what patients have previously assumed. Nevertheless, electronic consulting and remote consultation are not less valuable as the face-to-face consultation, as it provide care at distant places [7] and [8]. A remote consultation enhances accessibility and other benefits to the patient in terms of reduced travelling, avoid waiting in the room, seeing patients in their own environment and greater flexibility. Conversely, face-to-face consultation allows greater assessment of non-verbal cues, a richer information exchange and as well as the ability to physically examine a patient.

II. REVIEW OF RELATED WORKS

Remote consultation is an alternative means to compliment face-to-face healthcare delivery to patient at remote distance using ICTs infrastructure. Though, the desire of patients for herbal medication may be due to accessibility, affordability, availability and acceptability of herbal medicines by majority of rural population especially in Nigeria [9] and remotely services is more or less as alternative to face-to-face medical diagnosis and treatment. The services are usually on real-time, practitioner -patient interactions that conventionally would require face-to-face [10]. It was reported that about 80% of people living in African use herbs for the management and prevention of disease [11]. When there is spiritual problem with the patients, the practitioners prefers to solve the problems by consulting herbalists (using oracle) that is done face-to-face [12].

Telemedicine is made use of ICTs infrastructure for medical diagnosis and patient care. It uses these infrastructures as a medium for the provision of medical services to remote sites that are far from medical practitioner. The effective accessibility of telemedicine to patient with chronic ailment within short period of time can be rate high to face-to-face patient care [13]. The introduction of telemedicine is not to replace face-to-face medication rather than to improve people's health in certain well defined situations. It is because of its effectiveness, safety, feasibility, acceptability, mobility, cost and sustainability [14].

Herbal practitioners must recognize the application of modern technologies may require different skills, for example, the use of computer system skills, the manner of approaches to information given and relationship between the practitioner and the patient [15]. Advances in ICTs infrastructures has led to the emergence of a revolutionary new paradigm for healthcare that some refer to as e-health in modern medicine [16]. Currently, the alternative or complementary (herbal) medicine is trying to use this modern technology in giving health care delivery to patient at remote distance [5].

As there is growing demands in primary healthcare services led the policymakers to promote video consultations (remote) to replace routine face-to-face consultations in medical services. With the emerging trends, fast-growing technology and effective tool to meet day-to-day healthcare needs ICT play a major role in prescription and dispensing medications to improve the quality, safety, and healthcare efficiency [6] and [17]. Remote telediagnosis (vide consultation) may be suitable for simple problems that does not require physical examination and information about patient can be shared online unlike face-to-face consultation [1] and [17].

Virtually, all medical care in the United States is delivered with proximity of the provider and patient; this model is referred to as face-to-face care. The provider formulates an assessment and plan after obtaining the necessary information from the patient's record [18]. It appears globally that video consultations have higher support as a result of its effectiveness, accessibility, acceptability and cost-effectiveness of service delivery compare to face-to-face consultation. Organisations willing to use the modern technology must ensure to acquire software that is simple, effective, reliable and safe with high level of security for patient confidentiality. Although video (remote) consultations cannot fully replace face-to-face, but it can drastically reduce the need for face-to-face and the risk of Covid-19 spread during that period to maintain high standards of care and limit viral spread [19] and [20].

The best way practitioners can diagnosis efficiently is to see the patient face-to-face previously before providing telehealth medical care. Seeing patient without an initial face-to-face visit, provided the patient has received an in-person evaluation by another practitioner (provider) who has referred the patient for additional care, and the referral is documented in the medical record. A distant site provider may treat an established patient's new symptoms which are not related to the patient's pre-existing condition, provided that the patient is recommended to consult a provider in a face-to-face visit. Therefore, the distant site provider may not provide continuing medical services for these new symptoms to a patient who has never been seen by a provider in a face-to-face visit [21].

Quality control of herbal medicines has a serious impact on its safety and efficacy. Therefore, the practitioners need to give face-to-face medication to patients directly rather remote consultation [22] and [23]. There is a common belief that herbs is natural products that is naturally safe without side effects and that efficacy can be obtained over a wide range of doses. There can be side effect if proper dose is not taking [24]. During the COVID-19, many patients were unable to obtain optimal care because of inability to travel to a healthcare provider, as a result of illness, excessive distance, or social barriers. Remote care is needed when easily accessible specialty expertise is lacking, especially on an emergency basis. Patients living away from practitioners are exacerbated by poor access to transportation and poor mobility [20] and [25].

Remote consultation was made possible through the aid of computer networks to share electronic medical records about patient to deliver medical expertise. Roughly all herbal practitioners offers distance consultation with the aid of computer network to find the most effective program to make sure that it is a sufficient replacement to that of traditional face-to-face consultation. Its effectiveness will depend on how interactive the process is and how it overcomes the communication barriers among the consultants involved. Though, this new ideas and innovations frighten herbal practitioner that may cause frustration when there is technical problem. The fear of using the modern technology may fail during remote consultation could hinder the treatment of patient at the remote site. Similarly, in the case of practitioner who are changing consulting and prescribing process from the traditional face-to-face to a technologically mediated consultation encounter these difficulties [6] and [25].

With this modern technology, patients are exposed to a more flexible consultation opportunity without travelling at distance for medical consultation. On the other hand, lack of face-to-face contact with herbal consultants may result in a loss of motivation. Accommodating multi-location patients requires ingenuity in using available technology, like computer-supported to face-to-face consultation [5].

Telemedicine for remote or medically underserved areas is an increasingly frequent viable alternative to traditional face-to-face patients specialty care for this vulnerable population. Any healthcare providers that want to make use telemedicine technology must be sufficiently ready to provide the same information to that one performed on face-to-face. The difference between face-to-face and remote consultation is one cannot see each other but there is personal contact. Another difference could be related to the body language looking from patient's emotions. Research shows that utilizing telemedicine acceptability does not pose any adverse risk to traditional face-to-face care [26]; [27] and [28]. In United States, virtually all medical care is delivered with the provider and patient proximity. This model is referred to as face-to-face care. Providing a medical opinion and plan using the telephone or computer connected with internet as the technology that links the provider and the patient is an example of a remote diagnostic service. Currently, American medicine is gradually moving to develop healthcare model that will include remote services in case of any pandemic [18]. [28].

The significance of remote diagnosing with application of modern technology cannot be overemphasized, because herbal practitioners does not need have face-to-face interactions with patient but could conduct diagnosis and prescription completely through an interface media. Though there are challenges in e-health herbal implementation and evaluation. Therefore, it is interwoven with other factors, such as integration of quality planning, quality control, and quality improvement processes to evolve a secure, well-managed, and quality-focused e-herbal healthcare environment and the integration of network technology management, organization technological management, and that of user-interface technology management to build efficient, enterprise wide system infrastructures and interfaces. These challenges need to be addressed and integrated with environmental, technological, and administrative components in order to successfully drive and direct the implementation and evaluation of the various technologies and applications within the larger context of Web services and the internet, intranets, and extranets [5] and [29].

Remote consultation may enhance access and bring other important benefits to the patient in terms of reduced travelling, avoid waiting for so long in room, seeing patients in their own environment is a greater flexibility. Though, face-to-face consultation may allow for greater assessment of non-verbal cues, a richer information exchange as well as the ability to physically examine a patient (taking into consideration the impact of wearing a mask and the consultation setting). For patients who are distressed, concerns, questions, and opinions when seeking care, the use of touch can be a supportive gesture [30]

III. MATERIALS AND METHOD

The review of this study considered only English language publications. It was searched online ranged from health informatics, herbal medical care, telecommunications, DSS, application of computer in health sectors literature, general reviews and research centres (past and present) dealing with aspect of telemedicine on orthodox (Modern) and herbal (traditional or alternative) medicine that were identified. In this section, the factors and challenges that could hinder remote consultation is discussed, personnel involved in using the remote mode of giving herbal healthcare was discussed, the research questions, area and the sample size, data collection instrument, method and tools used for data analysis to get the user-preferred platforms to access electronic herbal prescription application were discussed in this section.

A. Participants Involved in the Study

- *In this study, there different type of participants involved during the field work of whom the questionnaire were administered to. Those that are involved who give their perceptions about the remote telemedicine and face-to-face medical consultations are:*

- Qualified healthcare practitioners from any discipline;
- Patients who received care from any qualified healthcare practitioner through the medium of telemedicine compared with those receiving the equivalent face-to-face care.
- Governments and Policy makers that enacts policies, rules and regulations guiding the formation telecommunication industry and medical centres;
- ICT Providers are those that provides internet services to an intending industries and medical centres involving in telemedicine.

B. Factors that could Affect Remote Consultation in Electronic Herbal Medication

➢ *As there is Advance in Technology, there are Challenges that can Affect New Technology Implementation, which Sometimes Ends in Failure. there are Four Critical Factors that can Affect of Remote Consultation in Electronic Herbal Medication. these Factors and Challenges Include:*

- National ICT Policies: The National ICT policies reflect the aspirations of government policymakers in prioritizing ICT for national development. These reflect those specified healthcare organization to undergo remote consultation.
- ICTs Infrastructures: ICT infrastructures include computers, telephones, wireless networks, electrical power, internet and telecommunication infrastructures that facilitate communications and data collection and storage.
- Implementation Factors: These are set of antecedents, such as training; healthcare policies; selection of e-prescription application based on accessible technologies and needs; e-awareness; e-acceptance; e-readiness; and e-management support.
- Cultural beliefs, values and technological culturation: These are the effects of practitioner and patient attitudes toward e-medication implementation on religious affiliation, while technological culturation has to do with the influence of cultures on an individual's attitude towards modern technology.

C. Personnel Involved In Face-To-Face And Remote Consultation

➢ These are herbal health workers that involved in treatment decisions and providing qualitative and safety care to patient.

D. Research Questions

➢ *Practitioners Wishes to Choose the Right Consultation Method(S). the Following Questions were Addressed in this Study:*

- Remote versus face-to-face: which one is better to be use and when?
- Can the patient's concerns be managed satisfactorily remotely? Would seeing the patient face-to-face change what the practitioner do?
- Can the information needed to form a diagnosis and/or inform decision making be gathered using this method?
- Can a satisfactory relationship with the patient be built?
- Can continuity for those that need it be enabled?
- Can a two-way dialogue with the patient be established and information is provided in a way the patient can understand?
- What is the patient's preference in diagnosing scenario, taking into consideration the patient's level of confidence with the consultation mode, ability to communicate using this method (and to do so confidentially) and access to the technology? What reasonable adjustments can practitioner make to support patients?
- Does the patient require an examination and, if so, can practitioner examine the patient using this method?
- Are there concerns about the patient's safety, capacity or safeguarding and confidential place to access care remotely? (For example, consider the possibility of domestic abuse). Is practitioner concerned that the patient is unable to make a decision freely because they are under pressure from others?
- Has the patient been consulted about the same problem repeatedly remotely? Are patient needs being met using this method or can continuity of care be enabled?
- Are there steps the practitioner can arrange remotely before having a face-to-face consultation?
- Are practitioners confident in using this modern technology to deliver a remote consultation? Does practitioner need any training or support?
- Are there any other considerations, such as medico-legal, which may make a face-to-face consultation the preferred method?
- Is it necessary to provide face-to-face options for patients OR When NOT to provide remote consultations?
- Is there any measurable difference in the outcomes of care for patients treated remotely to those treated on face-to-face?
- Is there any measurable difference in the economic consequences of care delivered remotely compared to face to face care?
- Is there a difference for patients in the acceptability of care provided remotely compared to those of face-to-face?
- Is there any measurable difference in professional practice during the healthcare delivery through the remote medium compared to those through face-to-face?
- Is there any measurable difference in skills transfer among the practitioners through the medium of remote consultation compared to those provided through face-to-face?

➢ *When NOT to Provide Remote Consultations?*

- When assessing patients with potentially serious and high-risk conditions requiring a physical examination with chronic disease who are unable to have self-monitor.
- When undergoing physical checking or examination of patient, remote consultation cannot be used in decision making.
- Where a patient's ability to communicate through remote consultation
- When there are critical situations where there is doubt in the appropriateness of a remote consultation (in these instances, face-to-face consultation is preferable).

➢ *What have practitioners learnt?*

- Quality personal communication matters most to patients regardless of the modality
- Guideline on skills and experience to conduct consultations and apply it when consulting remotely
- Practitioner need to develop and refine what works best for patients, staff and patient feedback. For example appointment book templates for patient appointment
- Ensure there are means to support patient that cannot or choose not to use digital channels and those patients who want to use digital means.
- Avoid unnecessary assumptions about who is able to use or wants to use digital channels.
- Where staffs are working remotely, experience shows focused effort is required to maintain effective team working, particularly where teams are less well developed. Staff needs to be supported personally and professionally in order to avoid isolation, exclusion and to maintain team cohesion.
- It's a continuous learning curve process – proactively get feedback from patients and staffs in order to improve the design of the experience. Let patients know about practice feedback mechanisms
- Implementation resources and hands-on capacity are available to ensure practices and primary care networks are fully supported to deliver the changes required for service and quality improvement.
- Legislation and policies needs to be adhere before implementing promoting e-health practices. When proper legislations and policies are followed and implemented, e-health delivery can yield the following benefits:
- Availability and accessibility of healthcare knowledge and expertise to remote site
- Availability and accessibility of quality healthcare evenly distributed on equitable basis to underserved rural and urban areas
- Comprehensive availability of e-examination services, regardless of time, specialty, and geographical location
- Availability of e-health services for new and alternative (non-invasive) medical procedures
- Savings cost for e-providers and e-patients in procedural, travel, and claims processing costs
- Educational service networks for isolated health professionals, residents, and non-experts
- Empowerment of e-patients and e-providers with ICT infrastructures
- Reduced use of traditional emergency services
- Improved non-emergency services
- Decreased waiting time for non-emergency services
- Greater awareness of services among rural and remote residents and caregivers
- Availability and timely accessibility of critical information in the event of emergencies.

With the realization of the above benefits, gradual shifting from the traditional face-to-face herbal health care delivery system and environment to remote forms of healthcare delivery systems and arrangements need to be put in place. This evolution of e-herbal concepts, ICT infrastructures and strategies all contributed to the paradigm shift.

➢ *Herbal Practitioners are Expected to have a Complete Access to the Patient's Primary Care Medical Record when Choosing a Consultation Modality.*

- Safety first with the patient mode of consultation.
- Be vigilant in safeguarding, capacity and confidentiality issues concerning any stage converting the remote consultation assessment, unless there are compelling reasons why that cannot happen.
- Practitioners should consult not just triage in whatever mode of communication used.
- Practitioners should remain curious in the chosen mode of consultation especially the suited to gain sufficient understanding of the problem(s) from patient perspective.
- Practitioners should explore to reassure and find out what the patients are worried about on the inability to access non-verbal cues and emotion remotely, check and confirm with the patient understanding and the patient's expectations. If a patient has been consulted about the same problem remotely repeatedly then a low threshold to see the patient face-to-face or arrange an onward referral to an appropriate service. Where possible, the patient requires a face-to-face or further consultation, pass this to the patient's regular practitioner or the practitioner who originally dealt with the remote consultation.
- Practitioners should be flexible in changing the mode of consultation if necessary
- Practitioners need not to rush the patient, enough time with the patient, actively listening to complain and allow space for questions, information giving and explanation. Experience shows that a detailed remote consultation takes at least a longer to a face-to-face consultation.
- Heighten the senses to assess the patient's home environment and surroundings, check who else is in the room with the patient, can anyone overhear, do patient feel safe? Give the patient opportunity to talk any private concerns in a confidential space.
- Practitioners should jointly agree on an acceptable consultation method with the patient, taking into consideration the patient's needs.
- Practitioners should agree wording to support the reception and other staff with communicating with patients on how they can access services, and what to expect and explanation on how services are working to keep patients safe, especially during COVID-19 and the mode of consultation that is available.

➢ *What Considerations are there for Remote Consultation?*

➢ *To Implement a Remote (Synchronous) Model, the Practitioners Need to Consider the Following Points:*

- In most instances, the remotely technology dependent and reliant on an effective network connection.

- Patients have to be digitally literate and able to access the chosen platforms.
- Communication is paramount key for interacting and communicating with patients through hat requires different skills to traditional face-to-face scenarios.
- Practitioners consider patient consent, capacity and continuity of care?
- Safety netting considerations include understanding what systems need to be in place to provide safe monitoring and follow-up despite patients not being seen face-to-face.

E. Study Area And Sample Size

➢ *The research study was conducted in the Southwestern and North Central Nigeria have same medicinal plants for curing diseases. It was conducted among the populace in the society in the study areas. These comprises of Herbal practitioners, Patients, Governments & Policy Makers, and ICT Providers in the society. Adoption of this technique is to determine those that were given questionnaire to get the sample size needed from the population of the study area. This aids in data collection from the sample size. The selection of the respondents was based on identification made by the stakeholders in the studied areas of those who can serve the research purpose. 100 administered questionnaires was distributed among respondents from the herbal centres while 95 administered questionnaires was returned, representing the population signifying 95% rating as follows:*

- Practitioners = 20
- Patients = 32
- Governments & Policy Makers = 32
- ICT Providers = 31

Each of the respondents were asked to feel free in answering the question on the questionnaire sheet in accordance to how strong each feels, that can significantly how both face-to-face and remote consultation has helped greatly on herbal medication locally and at distance respectively.

F. Data Collection Instrument

Questionnaire was based on the attempt to compare between face-to-face and remote consultation as an effective channel to know the both practitioners and patients views. Though questionnaire was a non-random sample, it give details understanding of the phenomenon under investigation and collated data was a primary data [30].

G. Tools Used For Data Analysis

Data analysis obtained with aid of Microsoft Excel from frequency and percentage distributions of the data captured. A descriptive survey was adopted to obtain the opinion from practitioners and patients as in above to deduce the perception of the entire population.

IV. RESULTS AND DISCUSSIONS

Figure 2 show populations distribution according to their feeling of remote over usual face-to-face of medication. The assessment of the population's feelings concerning security, cost, ease of mode of medication, privacy and mobility of remote consultation over face-to-face method of herbal medication as shown in Figure 3. However, Figure 2 shows population distribution among practitioners, patients, governments and policy makers and ICT providers in the studied area. Table 1 shows population perception about face-to-face versus remote herbal medication in terms of security, cost, user friendliness, ease of use, mobility and privacy regarding their strong feeling between face-to-face and remote consultation.

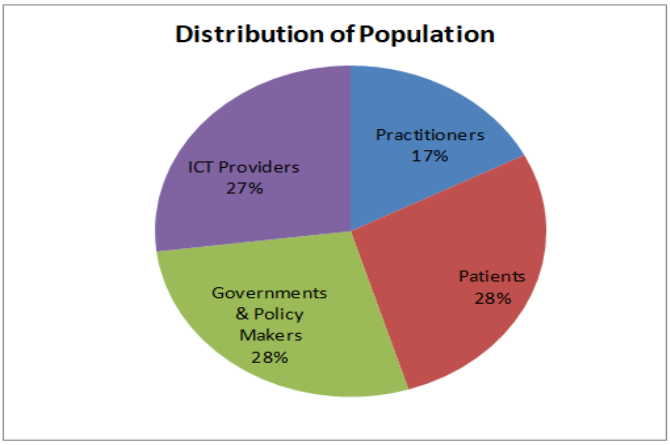

Fig 1: Distribution of Population's View

Table 1: Population Perception About Face-to-Face Versus Remote Consultation

Strength	Face – Face		Remote	
	Y	N	Y	N
Mobility	20	15	30	34
Ease of use	10	22	40	48
Cost	60	50	10	15
User friendliness	19	30	40	25
Security	10	35	25	20
Privacy	15	30	35	25

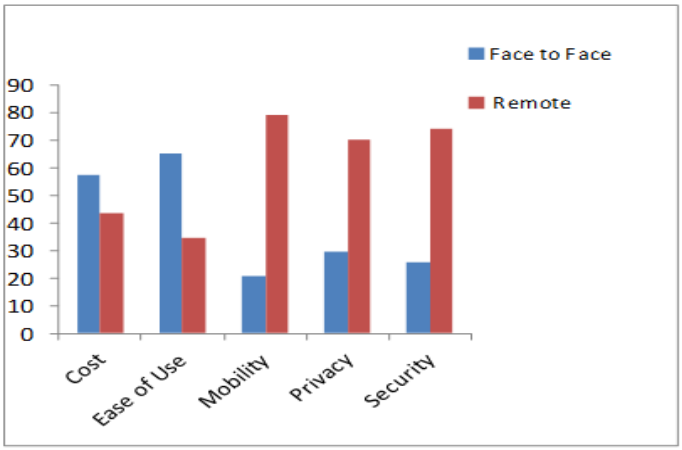

Fig 2: Stakeholders' Assessment on Face-to-Face to Remote Consultations

From the population distribution of questionnaire, the respondents constitutes of Practitioners 17%, Patients 28%, Governments and Policy makers 28% and ICT providers 27%. The result obtained from respondents' population data analyzed shows in term of cost majority prefer face-to-face 57.5% to Remote 43.5%; Ease of use 65.3% prefer face-to-face because of inability to use modern technology while 34.7% prefer Remote medication; In terms of mobility, 21% prefer face-to-face while 79% prefer Remote medication; Privacy 29.6% prefer face-to-face while 70.4% prefer Remote medication; Security 26% prefer face-to-face while 74% prefer Remote medication and user friendliness 41% prefer face-to-face while 59% prefer Remote medication medium of herbal medical care and consultation as shown in Figure 3. The result is influenced by the frequency of population distribution response with respect to the choice of the factors preferred mode of consultation. The result indicates that some of herbal practitioners prefer face-to-face consultation to remote medication terms of cost and ease of use while majorities prefer the use of remote consultation in condition regarding security, privacy and mobility from the studied areas where research questions was administered to. Certain reasons might have account to the results obtained. It could be lack of knowledge of the modern technology usage. Therefore, remote medication will enhance information sharing, safety of practitioners and patients in time of pandemic. Face-to-face consultation is needed when patient need urgent attention on condition that requires physical examination, especially patients with chronic disease who are unable have self-monitoring.

V. CONCLUSION

From the results obtained from the assessment conducted remote consultation cannot completely replace face-to-face consultation, but it will only reduce the patients' thinking of having face-to-face consultation. The remote consultations for palliative care will drastically change service delivery, the international evidence appears and ready to support its effectiveness, accessibility, acceptability and cost-effectiveness. From the patients report, remote consultation is highly acceptable and patient's wishes this method of consultation could come earlier. From the results obtained from the study, the use of remote medication was preferable compare with face-to-face in terms of safety, security and mobility especially during COVID-19 pandemic. Even with advancement in technology some herbal practitioners still prefer face-to-face consultation to remote consultation pertaining to the cost, privacy, and quality of healthcare services.

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