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Trust matters: Patients' and providers' accounts of the role of trust in hypertension care in rural Tanzania

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Abstract

Background: Recent research indicates that biomedical response to the growing burden of non-communicable diseases in low income African countries is impacted by poor health care seeking, non-adherence to medication and poor continuation with hospital care. One of the potential entry points to addressing these challenges is improving patient trust in doctors. The objective of this study is to investigate whether trust matters to patients and doctors/providers within the context of hypertension care in rural Tanzania as a case study.

Methods: The research employed a qualitative approach. In-depth interviews with patients and providers engaged in either western care or traditional healing systems were conducted in two predominantly rural districts of Shinyanga. The interview transcripts were coded and analyzed thematically.

Results: A total of 36 patients and 8 providers were interviewed**.** There was a consensus among patients and providers in both western and traditional healing systems that patient trust in doctors matters for NCDs response in rural Tanzania. Benefits of trust in doctors were cited by participants as extending beyond patients to doctors, hospitals and health sector. Trust in doctors was described to facilitate patient's health care seeking behaviours, participation in care and disclosure, adherence to medication, return for follow up, reduced financial burden and relief, healing or cure. Trust in doctors was also described as increasing doctor/provider's societal reputation, work morale and income. Further, trust in doctors was described as increasing hospitals' and health sector's societal reputation, income and drive healthcare resource increment. Despite the benefits, disadvantages of patient trust in doctors were also raised. Some participants indicated that trust in doctors may increase patient's vulnerability to malpractice when doctors misuse the trust vested in them. Also, trust was considered as potentially contributing to behaviour changes amongst doctors such as excessive self-pride, faking being busy and sluggishness in care provision as well as increasing their work load.

Conclusion: The findings suggest that trust in patient-doctor relationship matters for hypertension care in rural Tanzania. Improving trust in the patient - doctor relationship may be one of the important lenses in addressing some of the challenges of NCDs response in low income African countries

Keywords: doctor, provider, patient, trust, hypertension, non-communicable diseases, healthcare, Tanzania

Introduction

In recent years, the rapidly growing burden of non- communicable diseases (NCDs) has received much scholarly attention. Research indicates that NCDs deaths in low-income Africa (LIA) are rapidly soaring with cardiovascular diseases (CVDs) and hypertension as the largest contributors (Dalal *et al.,* 2011; Adeloye & Basquill, 2014; Ataklte *et al.,* 2015; Cappuccio & Miller, 2016; Adeloye, 2014). Previous reviews in LIA have documented the prevalence of hypertension to range between 6 and 48% in community surveys of NCDs and their risk factors in 2011 (Dalal *et al.,* 2011) and between 15 and 70% in 33 surveys involving 110414 participants with an average age of 40 years in 2015 (Ataklte *et al.,* 2015). The growing burden of NCDs/Hypertension in LIA is

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characterized by poor health service uptake, non-adherence to medications and poor continuity with hospital care (Ataklte *et al.,* 2015; Cappuccio & Miller, 2016; Dalal *et al.,* 2011; Adeloye, 2014; Mueke, 2013; Dewhurst & Walker, 2016; Zack *et al.,* 2016; Marshall *et al.,* 2012; Mshana *et al.,* 2008). Various entry points to addressing some of these challenges have been proposed in different contexts, for instance, prioritising patient preferences, improving service features and tackling the institutional barriers (Cappuccio *et al*., 2014; Leon *et al.*, 2015; Michael *et al.*, 2016; Ovbiagele, 2015). However, their success has been largely unsatisfactory.

At the heart of the current discussion on NCDs response, the concept of improving patient trust in doctors has been acknowledged in other contexts as a promising strategy. The literature on the topic of trust in patient-doctor relationships, predominantly originating in high income countries, suggests the benefits of improving patient trust in doctors include increasing primary health care (PHC) service uptake, adherence to medications and continuity with hospital care**.** Patients who trust doctors are more likely to: (i) have increased willingness to seek and utilize health care (Boulware *et al.,* 2013; O'Malley *et al.,* 2004; Russell, 2005); (ii) accept doctors' recommendations/medical advice and (iii) adhere to prescribed medications. Patient trust has also been linked to behavioral changes for secondary prevention (Abel & Efird, 2013; Altice *et al.,* 2001; Elder *et al.,* 2012; Piette *et al.,* 2005; Safran *et al.,* 1998; Thom & Campbell, 1997). Some authors have reported high patient trust to be associated with increased medication adherence in irritable bowel syndrome therapy, diabetes and antiretroviral therapy (Nguyen *et al.*, 2009; Piette *et al.*, 2005; Altice *et al.*, 2001). On the contrary, low level of patient trust in doctors is associated with declines in medication adherence amongst diabetics (Elder *et al.,* 2012) and patients undergoing care for hypertension (Cuffee *et al.,* 2013).

Improving trust in patient-doctor relationships seems to offer an opportunity to address some of the challenges in NCDs response in LIA. However, what we know about patient trust in doctors heavily originates from high income and urban contexts. Little is known on the topic of patient trust in doctors in rural LIA. To date there have been no previous studies undertaken to examine how trust is experienced and perceived in this setting. The objective of this study is to investigate whether trust matters to patients and doctors/providers within the context of hypertension care in rural Tanzania as a case study of LIA.

Materials and Methods

Design, context and participants

This study is part of a larger study that sought to investigate three research questions in hypertension care in rural Tanzania: *what is the perceived meaning of trust, what are the factors shaping trust* and *what are the perceived benefits of trust*. The study was conducted in 12 health facilities in western practice and in the traditional healing system in two predominantly rural districts (Shinyanga MC and Shinyanga DC) of the Shinyanga region of Tanzania (>95% rural occupancy in each district). Tanzania was chosen as a case study for two reasons. Firstly, it lies within a low-income category with a GDP per capita of USD $955.1 (World Bank, 2015). Secondly, literature in the country suggests a rapidly growing burden of NCDs/Hypertension. A recent review shows that the prevalence of hypertension in both urban and rural populations of Tanzania increased from 2-10% in 1960's to 13-79% in 2016 (Isangula & Meda, 2017). Concerns related to poor hospital healthcare seeking, poor adherence to medications and consequently poor control, widespread medical pluralism and poor continuity with hospital care are widespread (Zack *et al.,* 2016; Marshall *et al.,* 2012; Dewhurst *et al.,* 2013). The target population were patients receiving hypertension care during the study period as well as clinicians and traditional healers offering hypertension care.

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Sampling strategy

Patients and providers in both western care and traditional healing system were purposefully selected to participate in the study. Purposeful sampling was embraced because statistical representation was not a primary goal (Pope & Mays, 1995). No strict criteria were applied other than a consideration of patients and doctors/providers who were seeking and offering hypertension care respectively at the time that this study was conducted. Participants were invited through verbal advertisements during health education sessions, institutional meetings and peer referrals. In the traditional healing system, patients and healers in a village surrounding targeted health facilities were enrolled through village health workers and peer referral. Recruitment continued as data were being gathered and analyzed and terminated when the research team reached a consensus that no additional valuable information could be generated from the interviews.

Data collection instrument and procedure

The audio-taped interviews were conducted using a semi-structured interview guide between October 2015 and March 2016. The initial guide was generated following a review to identify gaps in existing practical literature on the topic. A consultative process involving experts in Tanzania and Australia was then employed to review and translate the interview guide into Swahili, applying a unicentered (asymmetrical) forward translation strategy (Vreeman *et al.,* 2013). The guide was revised as data collection progressed to reflect on emerging issues from participants. Topics covered in the interviews included: *patients and providers' trust experiences in hypertension care, the perceived benefits of trust, the perceived factors shaping trust and the perceived meaning of trust*. During interviews, each participant was given an information sheet, a verbal description of the project in Kiswahili and a verbal consent audio-taped. Each interview lasted for 45 minutes on average (excluding consent session). The decision to terminate the interview phase was made when the research team reached a consensus that no additional valuable data could be gathered.

Data management and analysis

Data translation, transcription and inductive thematic analysis began after a couple of first interviews had been conducted and continued as more data was gathered. The interviews were simultaneously translated and transcribed verbatim. English transcripts were checked for accuracy against audio recordings in Kiswahili, pseudonyms applied and identifying information removed. NVivo 11 software (QSR International, Victoria, Australia) was utilized for data management and analysis. Inductive thematic analysis embraced Braun & Clarke's (2006) approach. More specifically, an initial list of codes was generated from a couple of the first interviews. Then, codes were subjected to review by the research team generating a consensus list. Coding of the rest of transcripts continued, refining and generating more codes upon coming across the new segment of data that could not fit into initial codes. Codes were then sorted into potential subthemes and themes, followed by collation of all relevant coded data extracts within identified subthemes and themes. Throughout coding and refinement, peer consultation was maintained to reflect on the themes generated. Of all the themes that emerged, we only use the data relating to the benefits and disadvantages of patient trust in doctors.

Ethical considerations

The study received ethical approval from the University of New South Wales (HC15535, Sydney, Australia) and the National Institute for Medical Research (NIMR/HQ/R.8a/Vol.IX/2024, Dar Es Salaam, Tanzania). Also, permission was granted by local health authorities and verbal consent obtained from all participants prior to participation.

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Results

A total of 44 participants were interviewed, including 36 patients being treated for hypertension (34 receiving care in a hospital and 2 patients receiving traditional care). The remaining participants were 5 clinicians in western care and 3 traditional healers. There were 34 adult females and 10 adult males with age ranging from 28 to 75 years (Table 1).

Table 1: Participants' characteristics (N=44)

Characteristics	# (%)	Characteristics	# (%)
Category/Location		**Tribe**	
Patients/western care	34 (77.2)	Sukuma	30 (68.2)
Providers/western care	5 (11.4)	Undisclosed	14 (31.8)
Patients/traditional care	2 (4.6)		
Providers/traditional care	3 (6.8)		
Marital Status		**Level of health facility for interview**	
Married	30 (68.2)	Dispensary	3 (6.8)
Widow	11 (25.0)	Health Centre	20 (45.5)
Single	2 (4.5)	Hospital	15 (34.1)
Divorced	1 (2.3)	None/Traditional	6 (13.6)
Sex		**Ownership of health facility**	
Male	10 (22.7)	Government	28 (63.6)
Female	34 (77.3)	Faith Based/ Private	10 (22.8)
		None/Traditional	6 (13.6)
Patients biography (n=36)			
Age (years)		**Level of education**	
30-40	4(11.1)	None	3 (8.3)
41-50	13(36.1)	Primary incomplete	2 (5.6)
51-60	10(27.8)	Primary Complete	13 (36.1)
61-70	6(16.7)	Secondary Incomplete	5 (13.9)
>70	3(8.3)	Secondary Complete	13 (36.1)
Religion		**Average daily expenditure (TShs)**	
Christian	28 (77.8)	<4000/=	7 (19.4)
Muslim	7 (19.4)	4000-7999/=	8 (22.2)
None	1 (2.8)	8000-11999/=	20 (55.6)
		>12,000/=	1 (2.8)
Occupation		**Years since hypertension diagnosis**	
Farmer	10(27.8)	<5	14(38.9)
Nurses	6(16.7)	5-10	6(16.7)
Teacher	5(13.9)	11-20	7(19.4)
Housewife	3(8.3)	>20	1(2.8)
Small Business	3(8.3)	Undisclosed	8(22.2)
Medical Assistant	2(5.6)		
Others*	7(19.4)		
Insurance Ownership		**Distance to health facility (km)**	
National Health Insurance Fund	20 (55.6)	<1	12(33.3)
National Social Security Fund	1(2.8)	1-2	13(36.1)
Community Health Fund	1(2.8)	3-5	9(25.0)
No insurance	14(38.8)	>5	2(5.6)
Providers' biography (n=8)			
Age		**Religion**	
20-30	2(25.0)	Christian	5(62.5)
31-40	2(25.0)	None	3(37.5)
>50	4(50.0)		
Cadre		**Average # of patients per day**	
Clinical Officer	1(12.5)	Government Facilities	54 (75.0)
A/Medical Officer	3(37.5)	Faith Based Facilities	14 (19.4)
Medical Officer	1(12.5)	Traditional Healers	4 (5.6)
Traditional Healers	3(37.5)		

*Other occupations include Laboratory assistant, records assistant, radio technician, retired officers (2), office attendant and a clinical officer interviewed as a patient.

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Overview of findings

Broadly, many themes emerged in this study following inductive thematic coding. Themes related to the question of what patient trust means to research participants were: *(i) trust as meaning expectations on a doctor before the encounter, (ii) trust as meaning patient satisfaction with doctors' actions during encounter and (iii) trust as meaning satisfaction with doctors' treatment outcomes after medical encounter*. Similarly, themes related to the factors shaping trust were: (*i) patients' factors, (ii) providers' factors* and *(iii) health facility/institutional factors*. Themes related to what trust means and factors shaping trust are described elsewhere. Forming the focus of this study, two main themes emerged in relation to the question of whether trust matters in rural Tanzania: *(i) the benefits of trust* and (ii) *the disadvantages of trust.*

On the one hand, there was a consensus among patients and providers in both western care and traditional healing system that trust matters for hypertension care. What varied were participants' feelings regarding the impact of trust and the point along the spectrum of care where trust matters. The benefits of trust were coded into 3 subthemes: the benefits of trust to patients, the benefits of trust to doctors/providers and the benefits of trust to health facility/health sectors. The benefits of trust to patients were coded into 6 categories: facilitating health care seeking behaviours, enhancing engagement in care and disclosure, improving adherence to medications, facilitating relief, healing and cure, enhancing satisfaction with care and contributing to reduced financial burden. Furthermore, the benefits of trust to doctors/providers were coded into 3 categories: improved reputation within the community, elevated work morale and increased income. Finally, the benefits of patient trust to health care institutions and health sector were coded into 2 categories: improved reputation and income. On the other hand, a common theme resonating among participants that trust in doctors has disadvantages with an emphasis placed in western care. What varied were the descriptions of a person and the circumstances facing such disadvantages. Participants limited their descriptions of disadvantages of trust to patients and doctors and not to the health care institution/ health sector. Disadvantages of trust to patients were coded into 2 categories: increasing patients' vulnerability and contributing to poorer health outcomes. Relatedly, disadvantages of trust to doctors were coded into 2 categories: trusted doctors' behavioural changes and increased workload. Each of these will be explored below and illustrated with quotes from the interview transcripts.

The benefits of trust to patients

Trust in doctors was described by some patients in western care as especially important in facilitating service uptake for disease diagnosis. A good example was a small business owner who suggested that "a patient who distrusts doctors and just stays at home" risks her medical problems not being diagnosed. Facilitating patients' active participation in care and disclosure was highly valued as an important benefit of trust in doctors. Patients in western care suggested that trust enhances learning about the disease from doctors, participation and cooperation leading to disclosure of sensitive information that may facilitate correct diagnosis and shared decisions. For instance, one retired government officer described trust in doctors to enable patients to propose additional investigations for correct diagnosis or recommend modifications in the medicines. Likewise, doctors in the western care regarded trust to benefit patients in terms of facilitating correct diagnosis through disclosure. One of the medical doctors said: *The first benefit [of trust] is that, the patient will get the right medical treatment because the doctor was able to get the right diagnosis. How did a doctor arrive to the right diagnosis? It is because the patient gave you a thorough medical history- the patient did not hide anything. The good thing is, for a patient who trusts you, since you will have an engaging conversation, when making the management plan, you will work cooperatively. The patient can tell you the medications that cause side effects to her and you reach a consensus on the treatment options.*

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In contrary, participants within the traditional healing system did not acknowledge the value of trust in patients' participation in care. This is described as rooted in the limited patient participation in care in this channel. For instance, during disease diagnosis, patient participation is described as 'not needed' as the healers 'foretells' patient' problems without undertaking medical history. Similarly, during treatment, patient participation is reported to 'not being needed' as patients are expected to accept treatment without questions due to the seclusion of traditional healing systems where healing powers are said to be inherited from elders' spirits.

Facilitating adherence to medications and acceptance of doctors' advice emerged as another important benefit of trust in doctors in the accounts of participants in both western and traditional care. An HIV positive hypertensive farmer approached this question differently by describing the disadvantages of patient 'distrust' in a doctor by suggesting: "*A patient who distrusts a doctor does not adhere to medications. Those who do not trust doctors, some of them don't care about the medications given, they may discontinue using the hospital medications and go to traditional medicine".* Another important benefit described by participants in both western and traditional care was linking trust in doctors to being healed or cured of hypertension. Even patients and doctors in western care expected to have a fair knowledge on the non-curability of NCDs, described trust to facilitate hypertension healing or cure. For instance, Rose, a nurse interviewed as a patient suggests that a patient who trusts a doctor "becomes healed" linking this to adherence to medications. In support, Vanesa, a clinical officer suggested that a patient without trust in a doctor "will not get healed even after taking (hypertension) medications".

Compared to those strictly on western medications, the concept of NCDs/hypertension cure as a benefit of trust in doctors was more prevalent among participants strictly on traditional medicine and those in western care who have previously used traditional care or are currently practicing medical pluralism. This is because NCDs "cure" was described by participants as both a focus of usage of traditional medicine and a reason for seeking traditional care. Also, NCDs "cure" was described by patients as always a central message in traditional practitioners' self-promotion adverts through the media. Traditional healers proposed a bidirectional relationship between trust and care, that is, patient trust facilitates cure and cure leads to more trust in a healer:

[Because of trust], the patient becomes cured. The patient trusts you because you restored her health to normal after you helped solve the problem which was disturbing her and now she is fine...

Issues of satisfaction and continuity with care as the benefit of trust were also prevalent. Some patients in western practice who reported satisfaction with care also described other related benefits of trust such as increased patient's positivity towards doctors leading to reduced tensions between the two. Interestingly, a clinician interviewed as a patient, extended the benefits of trust beyond facilitating satisfaction with care to the likelihood of a patient to return for care and returning to the same doctor in subsequent visits. A few patients described the benefits of trusting doctors as reducing their financial burden. This was described to result from the reduced time and unnecessary cost resulting from a tendency of unsatisfied patients to shop for different doctors. These views were also offered by a clinical officer who further considered trust as a factor which pulls patients from "the private sector where the cost of medical care is very expensive" to "government hospitals" where the cost of care is more affordable. Collectively, participants' accounts suggest that trust in doctors/providers matters to patients and it impacts their health care seeking choices, participation in care, adherence to medications, continuity with care decisions and health outcomes. The need for partnership in the patient - doctor relationship for realization of these benefits, raise the question of how doctors benefit from patient trust. This question is addressed next.

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The benefits of trust to health providers

Improving doctors' reputation within a community was especially important because of the cited referral tendency among patients towards a trustworthy doctor. Patients in both western and traditional healing systems described relying on information from friends, family and peers in choosing where to seek care. For instance, a traditional healer indicated the reason for not putting "a signboard for [his] services" as when a patient who has been 'cured' "meets another person with a similar problem, she will refer them to [him]". In support, a medical assistant, referring to western practice said: *The doctor benefits because his services become recognized. This is because if I received good services it won't end with me, I will tell others and refer them to you..." Go and see a certain doctor, he is a real doctor". So, his services become reputable.*

Participants also described trust to impact doctors/providers' work morale. Trust in doctors was described to increase their confidence, pride and love for work. Some patients in western care suggested that trust fuels doctor's realization of the benefits of his education, motivating the doctor to invest more efforts in his work or work harder, becoming more positive toward patients and more likely to offer care without hesitation. Supporting this, one small business owner and a teacher, suggested that patient trust in doctor makes them feel comforted, happiness and solace: *When the patient comes back and tells a doctor that, "the medications you gave me have healed me or I am experiencing a relief". The doctor benefits by realizing the medications he prescribed to his patients or a patient has healed her. The doctor gets comfort and solace in his mind because he has healed patients.*

Patients' views were substantiated by doctors in western care who felt that trust impacted not only their reputation and respect within the society, but also joy, comfort and peace of mind, pride in their work, confidence, competency and realizing benefits of their education. One of the doctors asserted: *The biggest benefit to a doctor when is trusted by patients, the doctor's builds confidence that 'I can do something'. That, this patient was healed because I treated him/ her, therefore, I can heal other patients as well. The second benefit is that the doctor's reputation and respect increases. A patient respects the doctor that has healed her.*

Issues of trust in doctors enhancing the closeness and friendship between patients and doctors also emerged in some participants. The consequence of which is described to not only reduce tensions between the two, but also increase the likelihood of the doctor/providers to receive material gifts from patients as a way of expressing appreciation. While gifts to doctors/providers may be questioned as crossing the ethics of care, it appeared a customary practice in both western and traditional care in the study settings. For instance, a housewife, asserted: *Another benefit is, the doctor may establish close relationship with patients; they become like his friends or relatives. A doctor may visit the patient's home and they would offer him food, maize or other things... the doctor becomes like one of the family members.*

Finally, trust in doctors was described by participants in both western and traditional healing systems to impact providers' income. This benefit was more prevalent in the transcripts of patients and providers, referring to providers in western private and traditional care where 'influx of patients' due to the perceived trustworthiness of providers translates to more income. For instance, one traditional healer suggested that trust increases healer's reputation and number of clients, consequently, increasing healer's income. Some providers in traditional care considered trust as a guarantee of patient payment for the cost of care. Two traditional healers described the cost of medicines (such as cash, cereals or livestock) as often paid after a patient has perceived healing or complete cure. Interestingly, one patient in western practice held a different perspective on the benefits of patient trust to a doctor; and said: "*treating a patient is a doctor's obligation… and patients are his customers*". This raises a question as to whether some patients may be seeing doctors as robotic vehicles of healthcare service delivery. These participants' accounts indicate that trust matters to providers in both western and traditional care and impact their reputation, morale and income. The need for a healthcare institution

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where both patients and providers interact for realization of these benefits, raises the question of how trust in doctors' benefits health institution/sector.

The benefits of trust to health care institutions/health sector

Both patients and providers in western and traditional healing systems acknowledged the impact trust could have on health care institution's reputation. The positive hospital reputation is described to increase the number of clients seeking care. One of the nurses, insisted: "*In the hospital, when there are many doctors who are trusted by patients, many patients will come for treatment. Its reputation will increase; and hence many patients will come. Even if it is a government hospital, the reputation will increases….*" Related to this is a view among doctors in western care that trust in doctors may reduce patient negativity, complaints, and legal claims and promote their positivity towards hospitals and the health sector. For instance, one of the medical doctors suggested that since trust facilitates correct diagnosis through patient disclosure tendencies, it contributes to "avoidance of medical complications, medical errors and deaths at the facility" leading to reduced legal claims. Also, one clinical officer suggested that trust reduces tensions between patients and doctors, negativity and complaints towards providers in public facilities, consequently increasing "acknowledgment and positivity towards health workers".

Compared to those referring to public institutions, the description of benefits of trust on health care institutions' income was prevalent in participants' accounts referring to private institutions. Related to this, a few participants considered trust in doctors to drive healthcare resource increment. According one retired government officer, this happens in two ways. Foremost, the influx of patients towards a hospital with many trustworthy doctors may drive resource increment to meet the growing demand. Secondly, when the health sector is saturated with patients who trust doctors, it will earn a "good image and will be acknowledged for protecting people's health". He further suggested that because of this, people are more likely to "advocate for the national parliament to increase the health sector budget so that the services could be improved". Trust in doctors was also characterized as 'pull factor' in health sector in three ways. Firstly, trust in doctors was described to draw patients from untrustworthy doctors/ hospitals towards trustworthy doctors/hospitals and from rural areas towards urban facilities. Secondly, trust in doctors was described to draw patients from traditional care towards western care, facilitating early diagnosis. One laboratory staff asserted: *… if the patient doesn't trust doctors, she will end up going to traditional healers and consequently the disease may become chronic or she may even die because a patient may think that she has been bewitched. So, trust in doctors reduces a tendency of patients to go to traditional healers.* Lastly, trust in doctors was described to deter patients from seeking care outside the country specifically India, a common trend in the country. In general, trust in doctors was considered to benefit not only patients, but also doctors and health care institutions/ sector (Table 2).

Table 2: The participants' accounts of the benefits of trust in healthcare settings

Perceived benefits of trust to patients	Perceived benefits of trust to providers
• Increase health care seeking behaviours • Increase interest in learning about diseases • Increase the likelihood of receiving detailed instructions from doctors • Increase the likelihood of the correct diagnosis • Increase disclosure tendency • Increase engagement and participation in care by providing medical history and freely expressing desires and needs • Increased cooperation in developing a treatment plan	• Increase praises and love from patients • Makes a doctor feel good • Increase comfort, solace, happiness and joy • A doctor becomes proud of his work • Increases doctor's positivity towards patients • Motivates doctors to work harder without hesitations and invest more efforts in patient care • Increase doctor's confidence and competency

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• Increase acceptance and adherence to the doctor's advice, instructions & medications • Increases faith in medication • Facilitates and speeds relief, healing and cure • Contributes to reducing pain and stress and consequently blood pressure • Increases positivity towards doctors • Increase satisfaction with care • Increase likelihood of looking for the same doctor in subsequent visits • Reduces possibility of side effects through disclosure • Reduces time and cost of shopping for doctors • Increase likelihood of offering gifts to the providers • Increase likelihood of promoting the provider's reputation • Increase referral tendency within one's social networks • Reduces the likelihood of a defaulting western to traditional care	• Offers an opportunity for effective utilization of one's skills • Increase doctors' reputation, respect and recognition in a society • Increase number of patients looking for the doctor/provider through patient referrals • Strengthen doctor's relationship with patients • Enhance doctor's closeness with patients • Increase likelihood of receiving gifts from patients • Increase likelihood of being considered as part of the patient's family • Increase actualization and realization of the benefits of one's education • Increase provider's income (private, traditional care)
Perceived benefits of trust to a health sector	**Perceived benefits of trust to a hospital**
• Increased early health care seeking and early disease diagnosis therefore contributes to reducing mortality related to late care seeking • Pull patients from private to public practice • Increase acceptance of medical advice and health education consequently contributing to reducing the disease prevalence and mortality • Increase adherence to medications and doctor's advice • Reduce tension between doctors and patients, especially in public practice • Reduce negativity and complaints towards health workers • Increase acknowledgment and positivity towards health workers in public practice • Increase people's advocacy tendency towards health sector budget increment	• Increase reputation within the community • Increase praises from patients • Increases positivity towards a facility • Pull patients from private to public facilities • Pull patients from traditional to public facilities • Increase referral tendency within patient's social networks • Increase in the number of patients seeking care • Contribute to an increase in hospital income • Contributes to reducing mortality at the hospital by facilitating correct diagnosis • Contributes to reduction in medical errors • Reduces legal claims towards a facility • Drive quality of care

Looking at the benefits of trust cited by participants, a reader may suppose that trust in doctors is perceived as only a 'good thing' for patients, doctors and healthcare institutions/ sector. However, participants of this study cited several disadvantages of patient trust in doctors.

Disadvantages of trust to patients

Compared to doctors, concerns that trust in doctors may increase patient's vulnerability in the patient- doctor relationship were more prevalent among patients. Some patients felt that trust in doctors increases their vulnerability to malpractices when doctors misuse the trust invested in them. For instance, a small business owner suggested that, in excessive trust situations, a patient is more likely to accept anything a doctor does/gives. A trusting patient may therefore suffer in the long run because of *-trust induced blindness-* towards doctor's medical errors or when a doctor offers interventions or medications which may affect her health. She asserted: *Negative consequences may happen. This is because you already trust him, so, even if he does something*

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outside his expertise, you will just accept it. He may one day make a mistake or gives you something different, which may affect your health, so, you just suffer without knowing.

Trust was also described to increase patients' vulnerability to both monetary and sexual bribes in therapeutic relationships. According to one of the nurses, inter-patient competitions for fewer trustworthy doctors in a hospital may compel some patients to "offer money" to maximize chances of encountering the highly-demanded doctor. Similarly, while some patients considered an increase in closeness between patients and doctors as a benefit, one records assistant was of the view that immoral doctors may "take advantage of [an emotionally vulnerable] patient" to want to establish "sexual relationship" on the one hand. She further suggested that a patient may "decide to offer herself sexually as a means of acknowledging the doctor for his goodness and niceness", on the other hand.

Concerns that trust in doctors may negatively impact patients' health outcomes were widely shared among participants. Some patients considered trust in doctors to lead to overreliance on a trustworthy doctor. This is because trusting a doctor was described to create loyalty in one doctor which "can affect trust in other doctors". Loyalty in one doctor was described to occur when a patient has "built that kind of trust in mind that if a certain doctor treat [her, she] get a relief and that if [she, is] treated by other doctors [she] doesn't get a relief". One of the nurses was of the opinion that distrust in other doctors creates uncertainties on care provided and medications prescribed when the continuity with a doctor a patient is loyal to be unexpectedly interrupted. In support, another nurse suggested that the inability to encounter one's trustworthy doctor due to unexpected absence on the scheduled visit forces a patient to "go home without treatment" to avoid encountering untrustworthy doctors. In her view, this may lead to interrupting therapy continuity if the patient is "out of medications" leading to 'distrust induced non-adherence' which may pose "some health risks".

Disadvantages of trust to doctors

Compared to doctors, concerns of doctor's behavioural change due to patient trust were more prevalent among patients. Behavioural changes were described to occur when a highly-trusted doctor develops too much pride in himself, fakes being busy to avoid treating patients and becomes sluggish in care provision. One nurse stated: *If a patient trusts a doctor too much it has negative consequences… when many patients want to see a certain doctor, the doctor may develop too much pride in himself. This is because a doctor may see his patients but acts as if he is not interested in treating them. He becomes slow in offering care and just walking around the hospital.* On the contrary, the concerns of increased doctors' workload due to patient trust were more prevalent among doctors compared to patients. One medical doctor suggested that health care providers in public facilities already have a high workload, often seeing inpatients and outpatients amounting to 150 to 200 patients or more per day. Therefore, being trustworthy may mean higher workload.

Discussion

The findings of this study draw from patients and providers to deliver a diverse set of considerations of why trust matters in health care delivery in rural Tanzania. Most participants of this study associated trust in doctors to facilitating patients' health care seeking, participation in care, adherence to medications and continuity with hospital care. Similar benefits have been noted in previous studies of trust in patient-doctor relationships in high income countries (Altice, 2001; Boulware *et al.,* 2003; O'Malley *et al.,* 2004; Abel & Efird, 2013; Elder *et al.,* 2012; Piette *et al.,* 2005). The other benefits of trust to patients valued by participants in this study, such as enhancing patient satisfaction with care and contributing to reduced financial burden to patients has received some albeit insufficient attention in existing literature. There is less written in the

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literature about these two benefits of trust in doctors. For instance, participants' perceptions of the role of trust on patient satisfactions with care in this study are consistent with that of Safran *et al.* (1998) who found patient trust to be the single strongest correlate associated with patient satisfaction with care. This suggests that improving patient trust in doctors may be a good entry point to reducing the persistent and widespread patient dissatisfactions with care in the study settings (Nabbuye-Sekandi *et al.,* 2011; Ojwang *et al.,* 2013; Van Rijsbergen & D'Exelle, 2013; Gourlay *et al.,* 2014; Khamis & Njau, 2014). Similarly, the trust benefits related to reducing the cost of care described by participants in this study are consistent with those discussed in a review of trust research by Rolfe *et al.* (2014) who reported trust to have some impact on medical cost by reducing costs associated with unnecessary medicalization and medical tests in western care. However, in traditional care, while patient trust results in satisfaction with care, there is limited evidence of its effect on costs. More research may be needed on these two benefits of trust: satisfaction with care and reducing cost of care.

There was a tendency of participants in this study to strongly associate patient trust in doctors with facilitating hypertension healing or cure. Some previous studies, mostly in urban settings have linked high trust to clinical symptom improvement and positive health outcomes such as disease control (Thom & Campbell, 1997; Safran *et al.,* 1998; Piette *et al.,* 2005; Nguyen *et al.,* 2009; Elder *et al.,* 2012; Coffee *et al.,* 2013) but not complete healing or cure. Participants of this study described trust to facilitate healing and cure amidst broader acceptance in the scholarly world that hypertension, a chronic disease used to elicit these descriptions, can only be controlled but not biomedically healed or cured (Chow *et al.,* 2013; Ataklte *et al.,* 2015; WHO, 2014). A possible explanation for this may be the language issues where the Kiswahili word '*kupona*' used by participants to indicate healing or cure, translate to both disappearance of chronic disease symptoms and complete cure or healing of acute diseases. Other possible explanations for this may be: (i) the weak knowledge on chronic diseases among patients in the country (Mshana *et al.,* 2008; Mbuya *et al.,* 2014), (ii) rurality where traditional and western care for chronic disease care appears in competition and patient expectation of complete 'healing' or 'cure' was described as a reason for seeking hypertension care from healers and (iii) persistent exposure to contradictory message of 'complete cure' for chronic diseases from self-promoting traditional healers in the country (Mshana *et al.,* 2008; Malebo & Mbwambo, 2011; Mbuya *et al.,* 2014; Thielman *et al.,* 2014).

While existing literature has mainly restricted examination of the benefits of trust to the patients (Boulware *et al.,* 2003; O'Malley *et al.,* 2004; Abel & Efird, 2013; Altice, 2001; Elder *et al.,* 2012; Piette *et al.,* 2005), the rural participants of this study cited patient trust to benefit doctors as well. This benefit should be viewed in light of the persistent patient dissatisfaction with doctors' interpersonal care in Tanzania and other low-income countries (Khamis & Njau, 2014; Nabbuye-Sekandi *et al.,* 2011; Ojwang *et al.,* 2013; Van Rijsbergen & D'Exelle, 2013; Gourlay *et al.,* 2014). We know that a dissatisfied patient is more likely to share the negative interpersonal experiences with a doctor/provider through his/her social networks. This may worsen the doctors' reputation within the community, in turn, impacting on doctors' work morale and interpersonal quality of care when they feel their efforts are under acknowledged by community members. Sharing dissatisfactions through social networks may also impact on fellow patients' service uptake. We know that a multitude of complex interpersonal and institutional factors impacts the question of patient service uptake and quality of care (Nabbuye-Sekandi *et al.,* 2011; Ojwang *et al.,* 2013; Van Rijsbergen & D'Exelle, 2013; Gourlay *et al.,* 2014). Basically, a belief that patient trust elevates doctors' reputation and their work morale points to a suggestion that improving patient trust in doctors may positively impact on the doctors' interpersonal aspects of quality of care contributing to the decrease of the persistent patient dissatisfaction in LIA.

There was a feeling among some participants that trust in doctors may contribute to increased healthcare institutions' income among the private than public institutions. It is

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important to note that the primary goal of public healthcare institutions in Tanzania is considered as offering social services to the needy and mostly poor citizens, not profit making (Castro-Leal *et al.,* 2000; Ferry *et al.,* 2012). However, participants in this study emphasized that they incur out of pocket payments for medical care in cost-sharing scheme. Since this is a common phenomenon is low-income countries (Ferry *et al.,* 2012; Castro-Leal *et al.*, 2000; Van Rijsbergen & D' Exelle, 2013), the current scheme positions the public healthcare institutions to similarly benefit from the financial impacts of trust.

The disadvantages of trust have received less attention in the existing literature on the topic of trust in doctors. This has continued to raise a question as to whether trust in doctors is only a 'good thing' without negative consequences. Participants of this study were concerned that trust in doctors may have negative consequences to both patients and doctors. Participants suggested that trust may heighten patients' vulnerability to malpractices when doctors misuse the trust vested in them. Participants' concerns are consistent with the theoretical views of Thom *et al.* (2004) who hypothesize high patient trust to lead to acceptance of medical interventions without question. The result of such vulnerability may be poorer care because patients will be less likely to question the inappropriate medical advice or seek a second opinion. There was also a concern among participants that trust may incentivize both monetary and sexual bribes when inter-patient competition for a trustworthy doctor and provider's immorality clouds the therapeutic relationship. These statements were offered in the study setting where hypertension care was described to be centralized and characterized by overcrowding, prolonged waiting time, fewer doctors and almost impossible to encounter the same doctor in subsequent visits.

This study has not explored all the perceived benefits of trust valued by patients and providers. However, conducting a study in a rural setting where most participants are of the same ethnic group implies that the findings cannot be applied without criticism to patients and providers from diverse social, cultural and linguistic backgrounds. Also, conducting the study in a rural setting during farming season where males may have prioritized farming over the study and the sensitivity of the topic (patient trust in doctors) may have limited the number of male and provider participants respectively. Further, drawing from both western care and traditional healing system in a rural setting is not only a major strength of this study but may also be a disadvantage. The two practices differ in focus of NCDs management – control versus cure-, diagnostic methods-*modern technology* versus *foretelling* (Mshana *et al.,* 2008; Malebo & Mbwambo, 2011; Thielman *et al.,* 2014). This may contribute to different patient expectations, experiences and challenges and may have impacted the participants' descriptions.

In conclusion, our findings appear to bridge the gap in the scholarly literature between what is known on the topic in high income context and the unknown in rural low-income Africa. While we do not undermine other potential strategies, our findings suggest that strengthening trust in the patient - doctor relationship may be one of the key entry points for addressing some of the challenges of NCDs response in the African rural settings. This is a call for the interventionists to consider trust as a possible lens in NCD response. Nevertheless, should interventions into patient trust be considered, it is recommended to embrace activities that cushions against its negative consequences to both patients and doctors.

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Competing Interests

None

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