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## Reducing albinism related stigma in Tanzania: an exploration of the impact of radio drama and radio interview

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### ABSTRACT

Reducing stigma is key to improving the wellbeing of people with albinism in Tanzania. This study aimed to obtain more insight into the effects of two radio interventions with regard to albinism-related stigma: a radio drama and a radio interview. Assessment of the radio interventions was based on two attitude measurement instruments (The Albinism Explanatory Model Interview Catalogue Community Stigma Scale and the Albinism Social Distance Scale), an entertainment scale, and two informal (group) interviews. In total, 111 community members participated in the assessment prior to the radio drama, and 65 after. In the case of the radio interview, 123 community members participated in the assessment prior to the radio show, and 77 after. Following the radio drama, a significant reduction was found in terms of community stigma, and a reduction in social distance was found after both interventions. The entertainment score for both interventions was high, but significantly higher for the radio drama. The respondents indicated that they had gained more understanding of albinism as a result of the interventions, and were positive about this type of education. The current study shows that a radio show in which the listener interacts with someone with albinism can contribute to a reduction in stigma, and demonstrates that different types of radio intervention can have different outcomes.

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### KEYWORDS

Stigma reduction  
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radio; albinism;  
contact strategy

### Points of interest

- Reducing discrimination is key to improving the wellbeing of people with albinism in Tanzania.

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- This research investigated the use of radio shows to change attitudes towards people with albinism within the community; two types of radio show were tested: a radio drama and a radio interview.
- Through the shows the respondents got into contact with someone with albinism.
- The shows were valued by the community members as an attractive means of education.
- The shows proved to be effective in terms of improving peoples' knowledge about, and attitude towards people with albinism.
- People enjoyed the radio drama more than the radio interview. The radio drama was also more effective than the radio interview in improving peoples' attitudes towards people with albinism.
- This research offers recommendations for organisations that are working to raise awareness with regard to albinism.

## Introduction

The most recent national census concluded that the prevalence of people with albinism in Tanzania is 1 in 2,673 people, meaning that more than 16,000 people in the country have this condition (The United Republic of Tanzania 2014). However, in reality, numbers could be even higher because people might have been afraid to acknowledge the presence of someone with albinism in their household due to the, sometimes violent, discrimination and stigmatization of people with albinism (Lund and Roberts 2018).

The disability, entitled oculocutaneous albinism (OCA), is a genetic disorder causing a lack of melanin. Consequently, the skin of people with albinism lacks protection against UV rays (Hong, Zeeb, and Repacholi 2006; Kromberg 2018; McBride 2014). People with albinism have limited vision. Due to a shortage of melanin in the eyes, the visual acuity of people with albinism is reduced due to foveal hypoplasia and a misrouting of the optic nerves (Grønskov, Ek, and Brøndum-Nielsen 2007). However, it is often wrongly assumed that they will become blind (Lynch, Lund, and Massah 2014). The main problems persons with albinism experience physically are the high risk of developing skin cancer (Hong, Zeeb, and Repacholi 2006; McBride 2014) and low vision, the latter of which causes difficulties for people with albinism on a day-to-day basis, for example in attending school (de Groot, Meurs, and Jacquet 2019). Besides the medical implications of albinism, the lack of melanin causes people with albinism to have a light skin, hair and eyes. The skin colour of someone with albinism can range from a pale to a raw redness, and often the skin has dark marks (keratosis). The hair of someone with albinism can be straw-coloured and the eyes can be blue, green or light-brown (Kromberg 2018).

### ***Stigma related to albinism***

Stigmatization results due to people being labelled as ‘different’ and linking ‘the other’ to stereotypical beliefs, leading to separation, status loss and discrimination (Link and Phelan 2001). In Tanzania, the light-coloured appearance of people with albinism stands out in a society in which the majority of the population is darker-coloured. Therefore, those with albinism are labelled as ‘different’. The label of being different, and therefore stigmatization, is also experienced by people with other health conditions such as HIV/AIDS, tuberculosis, leprosy and mental health conditions. The results of stigmatization related to albinism can be name-calling, being laughed at, avoidance and exclusion (de Groot, Meurs, and Jacquet 2019). This stigmatization can also influence the lives of family members of people with albinism (Brocco 2016).

The attitude of the populace towards people with albinism is also fuelled by a variety of local myths and superstitions. For example, in Tanzania, it is frequently believed that people with albinism are not human, as expressed by an often-used term: *zeruzeru* (ghost) (Brocco 2015). Furthermore, *waganga* (traditional healers) spread the belief that the body parts of someone with albinism bring good fortune. Some authors point out that this has caused an outbreak of killings of people with albinism (Bryceson, Jønsson, and Sherrington 2010; Cruz-Inigo, Ladizinski, and Sethi 2011). Other authors noticed that these beliefs have also spread to other countries such as Malawi (Lynch, Lund, and Massah 2014). According to a report by Under The Same Sun (UTSS) 76 people with albinism were killed in Tanzania and 182 people with albinism were attacked between 2000 and January 2019 (Under The Same Sun 2019). Additionally, there is the belief that people with albinism are too weak to work in the fields, and therefore it is said that many of them are killed after birth (Bryceson, Jønsson, and Sherrington 2010).

When wanting to put a halt to these human rights violations, action is necessary to change peoples’ attitudes towards people with albinism through so-called stigma reduction interventions. Stigma reduction interventions are intended to reduce the incidence and burden of stigma (Hartog et al. 2020). Stigma reduction interventions often take the form of awareness raising campaigns that aim to reduce discrimination through a variety of activities. Research is lacking on efficient stigma reduction interventions in general (Bos et al. 2013) and is very limited regarding albinism-related stigma. This paper aims to explore the possible impact of radio interventions on albinism-related stigma.

### ***Contact through community radio as a stigma reduction intervention***

Getting people in contact with a person with a stigmatizing condition appears to be a promising strategy to address health-related stigma. Such a

contact can be made through radio broadcasts. Instead of direct contact, radio entails para-social contact, which is the interaction between an audience and the representative of a medium, such as actors and presentors, who can generate a social relationship which can reduce prejudice (Giles 2002; Schiappa, Gregg, and Hewes 2005). Contact can challenge peoples' attitude towards persons with a stigmatizing condition (Corrigan and Penn 1999; Corrigan et al. 2001). Building a personal relationship with someone with a stigmatizing condition through a contact intervention can generate empathy for the stigmatized, and can correct misinformation (Allport 1954; Brown, Macintyre, and Trujillo 2003). Additionally, contact can reduce out-group homogeneity and anxiety (Herek and Capitanio 1997; Pettigrew 1998).

Community radio can be (and has been) used as a means of development and education around the world. Community radio differs from mainstream commercial radio in that community radio is small-scale and community-based (Bosch 2014). The advantages of community radio are that broadcasting is relatively cheap, includes populations with low levels of literacy, and can reach an audience that is not often reached by other media. Therefore, it is a popular mass-medium for two-thirds of the people on the African continent (da Costa 2012). A large number (61.6%) of households in Tanzania own and listen to the radio (58.1% in rural areas, 68.5% in urban areas) (The United Republic of Tanzania 2014), which makes it possible to reach the majority of the population through radio. Additionally, radio was also considered a reliable source of health information by respondents in a research study carried out in Tanzania (Mboera et al. 2007).

### ***Radio as entertainment-education***

Radio interventions can often be classified as entertainment-education, which is the combination of an entertaining intervention with educational content (Singhal and Rogers 1999). To that aim, radio broadcasts can provide listeners with examples of role models leading to a desired change. In the past, radio has been used as a para-social contact strategy with positive outcomes, e.g. a soap opera on HIV/AIDS in Tanzania resulted in behavioural improvement (Vaughan et al. 2000), while identification with the characters in a radio serial drama was associated with testing for HIV during pregnancy in Botswana (Kuhlmann et al. 2008). In addition, a radio drama succeeded in the promotion of family planning in Gambia (Valente et al. 1994). HIV/AIDS stigma in Malawi was reduced through the broadcast of radio 'diaries' in which people with HIV told their personal stories of everyday life (Creel et al. 2011; Rimal and Creel 2008). Creel et al. used a variety of indicators to measure changes in attitude: scales measuring fear of casual contact, shame, blame, and willingness to disclose (Creel et al. 2011), and questions aiming

to determine people's attitudes towards the disclosure of HIV-positive status, greater medical expenditure to take care of people with HIV/AIDS, and interaction with people with HIV/AIDS (Rimal and Creel 2008).

Critics however, question the use of entertainment-education. Obregon and Tufte (2014) argue that entertainment-education focuses mostly on creating change at an individual level instead of addressing aspects of health or other developmental issues, often due to the short-term goals of donors. They emphasize the importance of entertainment-education looking at both individual and societal change. Additionally, Dutta (2006) emphasises the critique that entertainment-education is often a one-way flow, often coming from (foreign) organizations who lay their values upon the respondents in the intervention (Obregon and Tufte 2014). These types of critic recognize themselves in Singhal and Rogers (1999) who indicate the importance of participation of the audience in an intervention, an aspect which is hard to realize in a radio intervention. In addition, audience feedback and the outcomes of the intervention in the community easily goes unnoticed in the case of a radio intervention.

### ***Radio to reduce albinism related stigma***

More specifically in terms of albinism, Baker and Lund (2017) point to the role of media such as radio for people with albinism and advocacy groups to counter myths and discrimination. In the past, radio has already been used as a means of education on albinism in Tanzania. Commercial radio (such as Radio1Stereo, TBC and Radio1Africa) pleaded against the killings of people with albinism and promoted their acceptance (Brocco 2015). Lund, Massah, and Dart (2014) reported the positive effect of a radio drama with regard to educating teachers and the community about albinism in Malawi. Also, UNESCO implemented an awareness raising campaign on albinism in Tanzania, with community radio being one of the means used to change peoples' perceptions and practices (UNESCO, 2016). Unfortunately, they do not specifically report on the outcomes of the radio intervention.

The possibilities for radio as a means of stigma reduction in relation to albinism, sounds promising. However, structurally generated data on its effect is lacking. The reports by Lund, Massah, and Dart (2014) and UNESCO (2016) were primarily issued as a project evaluation and not as an academic research project. We used a different approach in this research. The aim of this study was to gather structured quantitative and qualitative data to obtain more insight into the effects of two radio interventions - a radio drama and a radio interview - on albinism related stigma. Both types of intervention have been used for awareness-raising in the past. The purpose of using different forms of interventions was to start exploring which types

of radio intervention can be used to change peoples' attitudes towards people with albinism, and if a difference could be noticed.

## Methods

### *Study area and population selection*

This study used qualitative and quantitative research methods in order to assess the effect of albinism-related radio interventions. This study was conducted in 14 villages, with a population size varying between 10,000 and 20,000, surrounding the town and lake port of Kigoma in North West Tanzania. These villages were chosen in cooperation with community radio 'Kigoma Community College by Radio' (KICORA). The people in these villages had little access to information through educative sources or media, other than radio. This type of population was expected to be receptive to a radio intervention regarding albinism. The population of the 14 selected villages functions as a relevant test case for radio interventions with the aim of reducing stigmatizing attitudes with respect to albinism. The respondents in the villages were found by going 'door to door' and were selected based on; i) their availability, ii) their willingness to participate in the research, and iii) the likelihood of retrieving the respondent (e.g. if the people in the house were temporary visitors from far away, the household was not selected), resulting in a convenience sample. Respondents had to be 18 years of age or older. For reasons of efficiency, respondents were only selected if more than one person was available in the household. This could also include neighbours, friends or customers in the event that the household was engaged in some kind of business venture. The research took place at the house or venture of at least one of the respondents, so that the respondents were more likely to feel comfortable in their own setting and, because this reflects the 'real' situation of listening to a radio.

### *Sample*

In total, the sample of the baseline study which took part in the assessment prior to the radio show broadcast, consisted of 234 respondents. The radio drama was played 35 times, with a total of 111 respondents listening (45% men, 55% women). All participated in the 35 informal (group) interviews that followed the radio drama. Ages varied between 18 and 94 years, with an average age of 41.79 years. The level of education among the respondents varied largely, 33.7% of the sample could not read or write and 41.6% completed primary school as the highest level of education. Most people in the sample had their own business or were farmers (94.2%). In terms of religion 37.6% of the respondents stated to be Christian, and 62.4% was Muslim.

Among the respondents 11.4% had a family member with albinism. Of the respondents, 92.8% belonged to the Muha tribe, which is the most commonly-represented tribe in the Kigoma locality where the research took place. The remaining eight respondents belonged to seven other tribes. For the post-test, the assessment after the radio show, 65 respondents were involved (47.7% men, 52.3% women), with whom 30 informal (group) interviews were conducted. The average age in the post-test was 41.14 years (varying between 18 and 94 years). The composition of the post-test sample did not differ significantly from that of the baseline sample ( $p < 0.05$ ).

Prior to the radio interview, 123 respondents (48% men, 52% women) participated in the baseline study. In total the radio interview was played 31 times, with an average group of four listeners per show. Ages varied between 18 and 84 years with an average age of 41.19. Also, in this sample the level of education varied largely, 19.4% of the sample could not read or write and 50.9% completed primary school as the highest level of education. Again, most people in the sample had their own business or were farmers (88.3%). The majority of the respondents was Muslim (70.7%) and 29.3% was Christian. Among the respondents, 17.1% had a family member with albinism. Of these respondents, 84.6% belonged to the Muha tribe, and the others to 12 different tribes. In total, 77 respondents participated in the post-test (39% men, 61% women), all of whom participated in the 30 informal (group) interviews. The average age in the post-test was 42.2 years, with ages varying between 22 and 84 years. The composition of the post-test sample did not differ significantly from that of the baseline sample ( $p < 0.05$ ).

### **Interventions**

A **radio drama** about albinism was developed and recorded in cooperation with Baraka FM in Mbeya. The 10-minute radio drama told the story of Sara, a young woman with albinism. During the first part of the radio drama, Sara chatted with a classmate about the nursing training that they attend in the South of Tanzania, and the difficulties Sara faced in her studies because of her condition. In the second part Sara and a classmate tried to help an injured boy who was afraid to be touched by someone with albinism until a doctor came in to provide an explanation about albinism. At the end, the radio presenter announced that Sara was getting married to her classmate.

A **radio interview** with Sijajali, a person with albinism was recorded with the help of Radio KICORA and the Tanzanian Albinism Society branch in Kigoma. During a nine-minute radio interview the man with albinism explained about albinism and the problems people with albinism face. The interviewee also answered questions about his personal life: he talked about



the education he had received to become a teacher, his family (his wife and five children without albinism) and that he enjoys spending his free time singing.

### *Measuring the effects of the interventions*

The effect of the interventions was measured through a self-administered quantitative questionnaire and through qualitative methods.

#### *Quantitative measurement*

The questionnaire drew on three scales. The first two were developed and validated by de Groot et al. (2020). Up to the time of writing, these are the only validated measurement tools that exist in terms of measuring peoples' attitude towards people with albinism in Tanzania. The questionnaires were conducted in Swahili.

- **The Albinism Explanatory Model Interview Catalogue Community Stigma Scale (A-EMIC-CSS)** measured community stigma through the use of 16 items about aspects of stigma that people with albinism and the people around them can face in life (e.g. E-04. Would people think less of a person with albinism?). There were five response options: (1) it never happens, (2) it rarely happens, (3) it happens sometimes, (4) it happens often, (5) it happens always (Cronbach's  $\alpha = .884$  in baseline with all the respondents).
- **The Albinism Social Distance Scale (A-SDS)** asked about personal attitudes towards people with albinism. The A-SDS was introduced by a vignette about a man (John) or woman (Joyce) with albinism, followed by 10 items asking about the respondents' feelings if they were in certain social situations with John or Joyce (e.g. S-09. How would you feel to have John/Joyce as a friend?). One choice was available out of four possible answers: (1) I do not have a big problem, (2) I do not have a problem, (3) I do have a problem, (4) I do have a big problem (Cronbach's  $\alpha = .975$  in baseline with all the respondents).
- **Entertainment items** (only post-test) were used to assess the level of entertainment of the intervention through six items, which were based on items used by Ritterfeld and Jin (2006): 1. The show was very entertaining, 2. I had the sense of being pulled right into the show, 3. The show did not interest me (recoded), 4. I wasn't involved in the show (recoded), 5. I very much enjoyed the show, and 6. The show was very involving. The answer possibilities were: (1) I completely disagree, (2) I disagree, (3) I neither disagree nor agree, (4) I agree, (5) I completely agree. Cronbach's alpha for this scale was low ( $\alpha = .426$ ). Therefore, the scale

was used pragmatically as an indication of the level of entertainment. However, one should be careful with interpreting these results.

### *Qualitative measurement*

The qualitative assessment consisted of:

- **Informal (group) interview 1 (directly following the radio show):** To obtain insight into respondents' experiences and feelings directly following the radio intervention, the research assistant aimed to discuss the following themes in an informal conversation: 1. opinions about the intervention, 2. lessons learned from the intervention, 3. the cause of albinism, and 4. the most important message delivered in the intervention.
- **Informal (group) interview 2 (two to three weeks after the radio show):** to assess possible impact of the interventions and what the respondents remembered, several topics were discussed with the respondents, such as: 1. memories of the intervention, 2. lessons remembered from the intervention, 3. if the respondents talked about the intervention with others.

### *Procedure*

A baseline test, prior to the radio show, and a post-test, after the radio show, was set up to measure differences in attitude after the intervention and to exclude influence from previous campaigns as much as possible. Prior to the intervention the respondents filled out the self-completion questionnaires (baseline study: A-EMIC-CSS & A-SDS). Some demographic items were added, asking the respondents about their age, level of education, religion, profession and familiarity with people with albinism. In the event that the respondents were not able to read ( $n = 51$ , 25.8% of the respondents in the baseline) the survey questions were read to them by the research assistant.

Because KICORA was not yet broadcasting any radio program, it was decided to conduct research using the recorded versions of the radio drama and the radio interview. These recordings were played to the respondents through a speaker in the household chosen for the purposes of the research. To reduce the possibility of respondents influencing their neighbours with information with regard to the other intervention, only one of the two interventions was played in the same neighbourhood. The baseline for the radio drama intervention was carried out prior to the baseline for the radio interview intervention, and data was gathered until a sufficient sample size ( $n > 100$ ) was achieved. The intervention was followed by a survey on the

level of entertainment and with the informal (group) interview 1 with all respondents that participated in the survey.

After two to three weeks the respondents that could be retrieved filled out the survey (post-test: A-EMIC-CSS, A-SDS, Entertainment items) (for one respondent after 4.5 weeks and another after 6 weeks), and with all the respondents that were retrieved the informal (group) interview 2 (1–6 respondents in each interview) was conducted with regard to the intervention. Retrieving respondents was hard since the researchers depended on the presence of the respondents in, or close to, the household in which the baseline had taken place. To guarantee anonymity, the names of the respondents were not recorded. The research assistant administrated the tests in those households in which the baseline study had taken place and the people in the household or neighbours helped gather the respondents. To match the baseline and post-test, respondents' dates of birth were recorded. The national language – Swahili – was used throughout the research. The data was gathered by a female master student from the Netherlands (...), under the supervision of the main researcher who is a female PhD student from the Netherlands (...). They were assisted by a female research assistant from the region who spoke Swahili.

## ***Analysis***

### ***Quantitative analysis***

For the quantitative data analysis IBM SPSS statistics v25.0 (SPSS Inc., Armonk, NY.) was used. Both interventions and samples were described and analysed separately, followed by a comparison of the impact of the two interventions. The demographic items were analysed item-wise. Descriptive statistics were obtained for all items. For the A-EMIC-CSS and A-SDS, differences between baseline and post-test were analysed item and scale-wise through Wilcoxon Signed Rank for non-parametric data, with the exception of a paired t-test that was carried out between the A-EMIC-CSS baseline and the post-test due to low kurtosis of the sum-scale. A difference-variable was computed for each item (post-test score minus the base-line score) in order to compare the effects of the interventions.

The sum scales (including the entertainment scale) and the difference-variables were used to compute differences between interventions through One-way ANOVA for parametric data (A-EMIC-CSS baseline, post-test and difference-variable and entertainment scale) and the Mann-Whitney U test for non-parametric data (A-SDS baseline, post-test and difference-variable).

### ***Qualitative analysis***

Notes were taken during the informal interviews. The answers were not recorded because it was believed this would distract the respondents too

much and would make them less free to talk. First the notes were categorized, followed by a thematic ordering, by making use of NVivo 12 and Excel 2016. When analysing the data, it was decided to refer to the number of informal interviews, in which a certain theme was discussed instead of the exact number of respondents who spoke about this theme.

### ***Ethical consideration***

This study was part of a larger research study that has been approved by the Tanzanian Commission for Science and Technology (COSTECH), from whom a research permit has been obtained (Permit Number: 2018-237-NA-2017-40). The respondents of the research were informed about the procedure and goals of the research, and were made aware that participation was voluntary, that the data gathered from them was confidential, and that it would be used anonymously. Anonymity was guaranteed by not recording respondents' names or other contact information. Only their dates of birth were recorded so that the baseline and post-test could be matched. They were asked for verbal consent by the research assistant. People who did not want to participate refrained from doing so.

## **Results**

### ***Radio drama***

#### ***Quantitative findings after the radio drama***

A post-test was conducted two to three weeks after the intervention, providing the researchers with the following quantitative results with regard to the radio drama: firstly, the mean of the sum-scale in the baseline was 1.85 ( $n=59$ ) and of the post-test 1.67 ( $n=65$ ), which was significantly different ( $t(58)=3.275$ ;  $p=0.002$ ). A significant reduced score was found after the radio drama on the A-EMIC-CSS in terms of four items: E-02. Would the family of someone with albinism feel less worth? ( $Z = -2.627$ ,  $p=0.009$ ), E-05. Would people in your community avoid a person with albinism? ( $Z = -2.493$ ,  $p=0.013$ ), E-06. Would others refuse to visit the home of a person with albinism? ( $Z = -2.108$ ,  $p=0.035$ ), E-07. Would people in your community think less about the family of a person with albinism? ( $Z = -2.744$ ,  $p=0.006$ ). Secondly, when the researchers computed the A-SDS, the baseline mean was 1.50 ( $n=61$ ) while in the post-test it was 1.26 ( $n=65$ ). The Wilcoxon signed-rank test showed that the intervention caused a significant reduction in personal stigmatizing attitude ( $Z = -1.974$ ;  $p=0.048$ ). The intervention significantly changed participants' attitude on the social distance scale on six items: S-01. How would you feel to visit a house of someone like John/Joyce? ( $Z = -2.483$ ;  $p=0.013$ ), S-03. How would you feel having someone like John/Joyce as a neighbour? ( $Z = -2.013$ ;  $p=0.044$ ), S-04. How

about having someone like John/Joyce taking care of your children for a couple of hours? ( $Z = -2.036$ ;  $p = 0.042$ ), S-06. How would you feel about introducing John/Joyce to a young woman you are friendly with? ( $Z = -2.072$ ;  $p = 0.038$ ), S-09. How would you feel to have John/Joyce as a friend? ( $Z = -2.364$ ;  $p = 0.018$ ), S-10 How would you feel shaking hands with someone like John/Joyce? ( $Z = -2.335$ ;  $p = 0.02$ ). Thirdly, on a 1 to 5 scale (1 meaning low level of entertainment, 5 meaning high level of entertainment) the average entertainment score was 4.3.

### *Qualitative findings after the radio drama*

Most respondents expressed in the informal (group) interviews that they were positive about the intervention; they thought it was educative, interesting and nice. The respondents thought it was a good way to educate individuals, e.g. someone mentioned that people mostly do not listen to the radio but if they hear that there is a radio drama even the less-educated will be excited enough to listen to such a drama (note from informal interview 20, radio drama). Surprisingly, in two informal interviews, the respondents recommended that the drama should be on tv instead of on the radio, even though they did not own a tv.

The qualitative results showed that directly after the intervention, the respondents identified seven main lessons, these lessons were mentioned in four or more informal interviews. The respondents in 13 of the interviews mentioned that they learned that people with albinism are human beings or the same as anyone else. It was understood that people with albinism have the same abilities as others, this was expressed in 7 interviews. In 11 informal interviews the respondents mentioned that they learned about the cause of albinism and that people with albinism should not be mistreated (often expressed in terms such as loved/cooperated with/helped). Additionally, it was mentioned by respondents in four interviews that they learned that albinism is not contagious and that people from Europe can have albinism. In five interviews it was mentioned by respondents that they were no longer afraid of people with albinism.

In 13 informal interviews directly following the radio drama the respondents noted that they learned nothing from the radio drama. However, in five of these cases, later on in the interview the respondents mentioned something that they had learned. In only two informal interviews did the respondents mention that they had learned something about the skin of people with albinism, and likewise their low vision. Interestingly, only one respondent mentioned that he learned that some people think that albinism was contagious (informal interview 8, radio drama).

When discussing the cause of albinism, in seven of the informal interviews the respondents knew the correct explanation. However, incomplete

explanations were provided in six of the informal interviews (e.g. albinism comes from parents who have something missing in their body (note from informal interview 1, radio drama)) and in one informal interview an incorrect explanation was provided. In four informal interviews the respondents explained the cause of albinism through a religious discourse, i.e. albinism is caused by God. Respondents in eight informal interviews provided some suggestions about how to assist people with albinism. For example, it was suggested that people with albinism should be kept away from fire and flies.

When respondents were asked what they thought was the most important message of the intervention respondents in 12 of the informal interviews mentioned that the message was about not mistreating people with albinism. The second most common message was only mentioned in four interviews: people with albinism are like other human beings.

Two to three weeks after the intervention most of the respondents remembered that the intervention was about albinism. In only four of the informal (group) interviews did the respondents mention that they did not remember anything. In the longer term the respondents mainly remembered that the radio drama was about not mistreating people with albinism. This was mentioned in 13 of the informal (group) interviews, and that people with albinism are human beings or the same as anyone else, was mentioned in eight of the informal (group) interviews. In 11 of the informal (group) interviews the respondents remembered parts of the story line. One respondent mentioned that he started greeting a woman with albinism in his village and giving her a hand after the intervention (note from informal interview 25, radio drama).

In most of the second round of informal group interviews, 20 respondents mentioned that they had talked to someone else about the intervention. Respondents often spoke about it with people close to them, while in six of the informal (group) interviews the respondents discussed it with their spouse, in four interviews with their family, and in four with their friends. Respondents in one informal (group) interview mentioned that they did not talk to anyone, because the topic was very important to them and they were afraid that others would take it too lightly (note from informal interview 10, radio drama).

### ***Radio interview***

#### ***Quantitative findings after the radio interview***

In terms of the quantitative findings with regard to the radio interview, on the A-EMIC-CSS there was no item that changed significantly after the intervention. When the researchers computed the A-EMIC-CSS, the mean in the baseline was 1.93 ( $N = 71$ ), while in the post-test it was 1.92 ( $n = 74$ ). The t-

test shows that the intervention did not cause a significant reduction ( $t(68) = 0.565$ ;  $p = 0.574$ ). The mean of the baseline A-SDS was 1.3 ( $N = 76$ ) and in the post-test 1.16 ( $n = 74$ ), and the Wilcoxon signed-rank test showed that the intervention caused a significant reduction in personal stigmatizing attitudes ( $Z = -2.236$ ;  $p = 0.025$ ). Subsequently however, the intervention changed respondents' attitude significantly on four items on the social distance scale: S-02. How would you feel working together with someone like John/Joyce? ( $Z = -2.138$ ;  $p = 0.033$ ), S-07. How would you feel about recommending someone like John/Joyce for a job working for a friend of yours? ( $Z = -2.884$ ;  $p = 0.004$ ), S-08. How would you feel to sit next to John/Joyce in the bus? ( $Z = -2.202$ ;  $p = 0.028$ ), S-10. How would you feel shaking hands with someone like John/Joyce? ( $Z = -2.555$ ;  $p = 0.011$ ). Additionally, the average entertainment score was 4.11.

### *Qualitative findings after the radio interview*

The qualitative data showed that the respondents were enthusiastic about the radio interview; many positive terms such as interesting, educative and nice were used. However, in one informal interview it was not believed that the person interviewed was really a person with albinism because he was married to a woman without albinism and his children did not have albinism. This opinion was not shared in other informal interviews and was countered in, for example, interview 18, in which one respondent explained that the radio interview showed that people with albinism are the same as them, they can marry, have children and enjoy life.

Six main lessons can be identified after the radio interview, mentioned in five or more informal (group) interviews. The respondents mentioned in 14 of the informal interviews that they learned about the cause of albinism, and that people with albinism can have a baby without albinism. In eight interviews respondents mentioned that they learned that people with albinism are human beings and that people with albinism can marry someone without albinism. People also mentioned to have learned about the skin problems of people with albinism (in seven interviews) and that people without albinism can have a baby with albinism (in five interviews).

Some other interesting but less frequently mentioned lessons were as follows. The respondents in three of the first informal interviews and in four of the second informal (group) interviews mentioned that they no longer believe that people with albinism do not die but disappear, and in three informal interviews the respondents mentioned that they do no longer believe that people with albinism can see in the dark (like cats). However, it was noted by respondents in four informal interviews that they learned nothing from the intervention.

After the radio interview the cause of albinism was explained correctly in 18 informal interviews, incompletely in five informal interviews and incorrectly in one informal interview. In five of the informal interviews, the respondents mentioned that they were unable to provide an explanation, and in one informal interview the respondents were convinced that albinism was caused by God. In 15 informal interviews, the respondents correctly explained that the albinism genes of the mother and father 'need to meet'.

Additionally, when asked what respondents thought was the most important message of the intervention, the respondents in fourteen informal interviews mentioned the message that people with albinism should not be mistreated. In 11 of the informal interviews the respondents mentioned that they thought the message that people with albinism are like other human beings was the most important.

After two to three weeks the respondents in 13 of the second informal (group) interviews remembered that people with albinism are human beings or the same as anyone else and in six of the second informal (group) interviews, the respondents remembered that people with albinism can marry. However, the other main lessons that were mentioned in the informal interviews were no longer mentioned. Instead, after two to three weeks the respondents indicated lessons that were not mentioned often directly after the intervention: that people with albinism should not be mistreated (in nine of the informal (group) interviews) and that they were no longer afraid of people with albinism (in eight of the informal (group) interviews).

A few weeks after hearing the radio interview, the respondents remembered that people with albinism are human beings or the same as anyone else (in 11 of the informal (group) interviews) and that people with albinism should not be mistreated (in six of the informal (group) interviews). The respondents also remembered, in seven of the informal (group) interviews, information about the skin problems of people with albinism and in eight of the informal (group) interviews the respondents mentioned that they remembered the cause of albinism. In five of the informal (group) interviews the respondents said that they only remember that the radio show was about albinism, but remembered nothing else.

In 18 of the informal interviews the respondents mentioned that they had spoken about the intervention to the people close to them (spouses in five interviews, family in three interviews and friends in six interviews).

***Comparison of the impact of interventions.*** No significant difference was found between the samples based on demographics, nor in the baseline on the A-EMIC-CSS ( $F(1,128) = .519, p = .473$ ) and A-SDS ( $Z = -.138, p = .890$ ).

Even though the radio drama showed a significant effect on the A-EMIC-CSS and the radio interview did not, there was no significant difference on



the change variable between the interventions ( $F(1,126) = 3.081, p = .082$ ). However, the post-test score of the A-EMIC-CSS showed a significantly higher score after the radio interview in comparison to the radio drama ( $F(1,137) = 6,750, p = .010$ ).

The radio drama and the radio interview were both effective in reducing A-SDS scores significantly. However, no difference was found on the difference-variable ( $Z = -.264, p: .792$ ), and scores after the radio drama were not significantly different ( $Z = -1.467, p: .142$ ).

In terms of entertainment the radio drama scored significantly higher than the interview ( $F(1,166) = 4.735, p = .031$ ).

## Discussion

This study showed the possibilities for using radio interventions to reduce stigma related to albinism in Tanzania. This is the first study of its kind in terms of exploring the outcomes of radio interventions in the form of a radio drama and a radio interview, as methods for stigma reduction with regard to albinism in Tanzania. In addition, this study aimed to enable the evaluation of content, form and impact on community stigma and social distance towards people with albinism. Quantitative methods (the A-EMIC-CSS, A-SDS and an entertainment scale) and qualitative methods (two rounds of informal interviews) were combined to generate insights with regard to the outcomes of the interventions. Data was generated at the time of the implementation of the intervention and two to three weeks after the intervention in order to obtain an insight into the longer-term outcomes.

The following findings were promising for the future use of radio interventions for stigma reduction. Firstly, both radio interventions were effective in reducing social distance, as portrayed by the A-SDS results and as was confirmed by the qualitative findings. Secondly, following both radio interventions, the respondents pointed out that as a main lesson they had learned about the cause of albinism. Therefore, the radio shows have been successful in spreading knowledge with regard to the cause of albinism, although for some respondents a religious explanation remains as the cause. Thirdly, respondents were very positive about the interventions and saw them as a good means of educating society. Fourthly, the qualitative findings endorse the view that many respondents discarded their past beliefs about albinism, such as the belief that people with albinism are not human (Brocco 2015), they do not die but disappear, albinism is contagious (Baker et al. 2010), they do not have the same abilities, albinism is caused by the mother (Cruz-Inigo, Ladizinski, and Sethi 2011) and people with albinism see better at night time (like cats). The correction of false beliefs about people with albinism might also add to the observed reduction of fear towards people with

albinism. Fifthly, after two to three weeks the respondents still remembered a large part of the intervention and the lessons learned from the intervention. This could point to the possible longer-term effects of such an intervention, although this would require confirmation. Lastly, many respondents spoke to others about the intervention, which can point to a wider dissemination of the intervention than just among the respondents who listened to the radio. More research would also be necessary to obtain more insight into what was told and the effect of this.

The current findings on contact interventions through radio were in line with other research into the effectiveness of contact interventions on stigma reduction (Corrigan et al. 2012; Gronholm et al. 2017; Paluck, Green, and Green 2019; Peters et al. 2015; Van Brakel et al. 2019) and the effectiveness of radio interventions in conveying messages (Kuhlmann et al. 2008; Singhal et al. 2006; Vaughan et al. 2000). Para-social contact can have similar effects as real-life contact (Giles 2002; Schiappa, Gregg, and Hewes 2005). Through the radio intervention, the respondents had the opportunity to come into contact with someone with a stigmatizing condition, which challenged their former attitudes (Corrigan and Penn 1999; Corrigan et al. 2001). In our research the respondents came to understand that people with albinism were like them, as was often repeated in the qualitative interviews, for example by stating that people with albinism also go to school, can be a nurse, can get married and have children. Insights generated through contact interventions can correct misinformation and reduce anxiety (Allport 1954; Brown, Macintyre, and Trujillo 2003; Herek and Capitanio 1997; Pettigrew 1998) as can be seen in the things respondents learned from the intervention, with respondents even mentioning that they were no longer afraid of people with albinism.

Additionally, the fact that the stigmatized themselves can play an active role in stigma reduction is counteracting peoples' perceptions of people with a stigmatizing condition. People with a stigmatizing condition are often thought of as being passive victims. Consequently, having them involved in stigma reduction increases their agency, confidence and status. In addition, their input can improve the value of the intervention (Cook et al. 2014; Heijnders and van der Meij 2006).

However, the outcomes of the intervention were not always as intended. For example, the intervention strategy was not effective in the household in which respondents did not believe that the person interviewed on the radio was a person with albinism, exactly because he was countering their beliefs about albinism that it was impossible for the interviewee to be married to a woman without albinism and to have children without albinism. These unintended outcomes again prove the importance of proper stigma reduction development.

### ***Comparison of the impact of radio drama and radio interview***

Both the radio drama and the radio interview were effective in reducing social distance. Differences between the two radio shows were found in terms of community stigma and entertainment. The radio drama was effective in reducing community stigma as measured through the A-EMIC-CSS, though the radio interview was not significantly effective. All items showed a reduction in stigma. However, we need to be careful in drawing the conclusion that the radio drama was a more effective intervention in terms of stigma reduction at the level of the community because no difference on the difference-variable was found. Considering the level of entertainment, the entertainment score of the radio drama was significantly higher than that of the radio interview. The respondents enjoyed both interventions but liked the radio drama more, which also had slightly more effect on the respondents' attitudes.

### ***Limitations***

The fact that the (foreign) researcher(s) were in the household of the respondents might have influenced the respondents' attention to the radio show, and possibly the outcome of the measurements among others, in terms of socially desirable answering, and the intervention effect of the scales themselves. More research needs to be carried out to obtain insight into the long-term effects of such an intervention.

Another limitation of this study was the measurement tool in combination with the sample. The area of study consisted of a relatively low educated population, with many being unable to read or write. The self-completion surveys had to be read out to these respondents. Even though the scales have been validated in Tanzania before on an adult population, they might be too lengthy for a population with limited education.

Additionally, it is important to bear in mind that this research did not measure actual behavioural change. Instead, it only measured attitudinal change. However, some respondents did mention behavioural change, such as the respondent who started greeting a woman with albinism in his village.

The radio shows also had some unintended outcomes, which again shows the importance of proper follow-up and a validation of interventions, and raises an ethical difficulty of stigma reduction through media: 'Who is responsible for the intended/unintended outcomes of a programme?' (Brown and Singhal 1990). In attempts to reduce stigma through media, it is harder to control the response of each receiver of the intervention than might be the case in real-life. One has to be careful in using media. One should validate interventions and secure a proper follow-up.

## Conclusion

This study set out to explore the impact of radio interventions with regard to reducing albinism-related stigma in Tanzania. The research has shown that a radio contact intervention on albinism, through a radio drama or a radio interview, can cause a reduction in stigma and can improve the listener's knowledge of albinism. Interestingly, in a comparison between the two types of intervention the radio drama was perceived as being more entertaining and to have a larger effect on community stigma. The differences between the types of radio intervention and the aspects of contact interventions and entertainment education as pointed out in this research, would be a fruitful area for further work. The findings will be of interest to organizations in the field of stigma reduction, but also add to the understanding of stigma reduction in general, and with regard to albinism specifically. Radio shows are an effective and pleasant way to be educated about albinism. They are relatively easy and cheap to develop, and can reach many people in the community. Radio shows are a promising stigma reduction intervention, which can be a step on the way towards further improvement with regards to the wellbeing of people with albinism, but also for people with other stigmatizing conditions. The findings of this study support the importance of the evaluation of stigma reduction interventions as part of disability policy.

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