

Reaching the hearts and minds of illiterate women in the Amhara highland of Ethiopia: Development and pre-testing of oral HIV/AIDS prevention messages

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Abstract

In the style of radio programmes, we developed three episodes of audio HIV prevention education for illiterate women in Ethiopia. We used social-oriented presentation formats, such as discussion between women on HIV prevention, and expert-oriented presentation formats, such as an interview with a male doctor. The aim of this study was to assess the relation between evaluation of presentation formats and overall liking of episodes, which is important for persuasive effects. Thirty women from rural Amhara listened to the episodes and, after listening, female data collectors interviewed the women on evaluation of presentation formats, overall liking of episodes, identification with the characters and convincingness. Evaluation of social-oriented presentation formats was strongly related to overall liking of episodes, but evaluation of expert-oriented presentation formats was not. This relation was mediated through convincingness and not through identification. We conclude that social-oriented presentation formats make messages more convincing and, consequently, improve overall liking and persuasive impact.

Keywords: Messages, formats, HIV/AIDS, illiterate, women, Amhara, Ethiopia.

Résumé

Dans le style des programmes radio, nous avons développé trois épisodes d'éducation audio dans le domaine de la prévention du VIH pour les femmes analphabètes en Ethiopie. Nous avons utilisé des formats de présentations d'aspect social, tels que des discussions entre femmes sur la prévention du VIH, et des formats de présentations de style expert, tels qu'un entretien avec un médecin. L'objectif de cette étude consistait à évaluer la relation entre l'évaluation des formats de présentation et l'appréciation générale des épisodes, qui est important pour obtenir des effets de persuasion. Trente femmes vivant dans la région rurale d'Amhara ont écouté les épisodes, après quoi elles ont été interrogées par des personnes chargées de la collecte des données auprès des femmes sur l'évaluation des formats de présentation, leur appréciation générale, l'identification avec les personnages et le caractère convaincant des épisodes. L'évaluation des formats de présentation d'aspect social était fortement liée à l'appréciation générale des épisodes, mais l'évaluation des formats de présentation de style expert ne l'était pas. Cette relation passait par le caractère convaincant et non par l'identification. Nous concluons que les formats de présentation d'aspect social rendent les messages plus convaincants et qu'ils améliorent en conséquence l'appréciation générale et l'impact en termes de persuasion.

Mots clés: Messages, formats, VIH/SIDA, analphabète, femmes, Amhara, Ethiopie.

Introduction

Of the 33 million HIV-positive people worldwide, about 68% live in sub-Saharan Africa, where 72% of the AIDS deaths occurred in 2007 (UNAIDS, 2008). In sub-Saharan Africa, HIV prevalence is higher among women than among men (Hilhorst, van Liere, Ode & De Koning, 2006; Shisana *et al.*, 2005). In Ethiopia, HIV prevalence in 2005 among women aged 15 - 49 was about 2%, and among men it was less than 1% (Central Statistical Agency, 2006). This difference in HIV infection rate is related to factors such as gender power imbalance, early marriage, socio-economic status and rape (Boer & Mashamba, 2005; Ethiopian Federal Ministry of Health, 2006; Pathfinder International, 2006; Seeley, Grellier & Barnett, 2004; Tladi, 2006). HIV prevalence in rural areas in Ethiopia is

lower than in urban areas (Central Statistical Agency, 2006), and an HIV infection spread from urban to rural communities has been observed through unsafe sexual contacts of visitors to urban areas (Hladik *et al.*, 2006; Shabir & Larson, 1995).

HIV prevention in rural areas in Ethiopia is severely limited by geographical characteristics, poverty and illiteracy (Berhane, Högberg, Byass & Wall, 2002). In Ethiopia, 85% of the estimated 73 million inhabitants live in rural areas, with severe infrastructural barriers, like lack of tarred roads. Most farmers in rural areas live far from the main roads, are very poor (per capita income in 1998: US\$ 100), and lack access to mass communication such as television (Central Statistical Agency, 2006). A high level of illiteracy among

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inhabitants of rural areas is another important barrier to the development of effective HIV prevention programmes (Central Statistical Agency, 2006). In Ethiopia, the literacy rate among persons aged 15 and older is low (35.9%), and the literacy rate ranks 132 out of 177 countries in the Human Development Index 2007/2008 (United Nations Development Programme, 2008).

Not only the high levels of illiteracy, but also the oral tradition in many parts of rural sub-Saharan Africa, indicate that it is likely that culturally adapted oral messages are effective means for HIV prevention education (Agha & Van Rossem, 2002; Farr, Witte & Jarato, 2005; Kalichman & Simbayi, 2004; Karlyn, 2001; Ntshebe, Pitso & Segobye, 2006; Panford, Nyaney, Amoah & Aidoo, 2001). In African societies, history, stories, folktales and religious beliefs are passed orally from generation to generation (Mhando, 2008). Narrative approaches, such as discussion, role play, testimonials and interviews with experts like doctors and nurses, may provide good alternatives to conventional educational materials (Braverman, 2008; Brosius & Bathelt, 1994; Hinyard & Kreuter, 2007; Slater, Buller, Water, Archibeque & Leblanc, 2003). In audio health education approaches these oral messages usually consist of a number of tape-recorded episodes, which can be broadcast on radio or presented to listening groups through audio cassette players. These audio messages are particularly suitable for reaching populations with low literacy rates, where shared values, norms, symbols and traditions are important. Specifically in African societies, cultural beliefs play a major role in the lives of people (Airhihenbuwa & Webster, 2004). For effective health communication it is important to understand the specific cultural values and norms of the target group. In rural Amhara, for example, it is common practice that people use proverbial poems and songs to exchange important information.

For effective behaviour change, audio narratives should have a number of characteristics (Green & Brock, 2000). Becoming engaged in the world of a story, sometimes called transportation into a narrative world (Green & Brock, 2000), promotes careful listening and persuasive effects. With transportation, oral narratives reach the hearts of the listeners and draw them into the message (Bae, 2008; Green & Brock, 2000). Since the story is perceived as real, it becomes a powerful persuasive tool. Transportation is also a pleasurable state that is related to a positive evaluation of a narrative (Green, 2006). Audio health education programmes usually consist of a number of audio narratives, using several presentation formats, such as an interview, a role play and a discussion. A specific presentation format can be viewed as a specific type of narrative. Therefore, type of presentation format may be an important factor in the persuasive impact of messages, since presentation formats may vary in degree of transportation and the resulting positive evaluation of a presentation format. Pre-testing allows discovering which presentation formats are most positively evaluated by intended audiences (Hong *et al.*, 2005; Nuncio *et al.*, 1999; Whittingham, Ruiters, Zimbile & Kok, 2008).

Transportation into the narrative has a number of meta-communication effects that promote persuasive impact. Transportation is closely related to identification: the extent in which the audience recognises themselves in the situation of the characters and the storyline. With identification, the audience perceives the message as relevant for people like them. Especially in

the case of transportation, individuals may identify with particular persons in a narrative (Moyer-Gusé, 2008; Slater & Rouner, 2002; Wang & Calder, 2006). Research indicates that another meta-communication effect of transportation (termed 'presence' in this case of visual communication) makes the story more credible (Bracken, 2006). For effective communication, reaching the mind is important, since credibility and believability of messages are crucial for the convincingness of health education (Chaiken & Maheswaran, 1994; Tormala & Clarkson, 2008).

Not only the evaluation of specific presentation formats, but also the overall liking of episodes is an important factor for effective health education (McKenzie, Lutz, & Belch, 1986; Nan, 2008; Slater, 2006; Whittingham, Ruiters, Zimbile & Kok, 2008). For persuasive effects, it is vital to create messages that as a whole are likable to audiences (Slater, 2006; Smith *et al.*, 2009). Overall liking of episodes may also be related to more frequent exposure, e.g. the desire to listen to the episode again.

In this study we developed and evaluated three audio episodes, each about 15 minutes long, on HIV/AIDS prevention. The aim of the study was to identify which presentation formats are positively evaluated by rural women, and to investigate to which extent characters and messages that are designed to be recognisable by the intended audience do indeed promote identification and convincingness. In each audio episode we used specific presentation formats to emphasise specific characteristics of the episode. We investigated whether evaluation of presentation formats in episodes was directly related to overall liking of these episodes, or whether the relation was indirect through mediation (Donaldson, 2001). We specifically investigated the importance of identification and convincingness as intermediate constructs between evaluation of specific presentation formats and overall liking of episodes.

Methods

Development of messages

Initial research among low literate and illiterate women from this region indicated a low level of HIV/AIDS knowledge and a need for HIV/AIDS prevention education (Bogale, Boer & Seydel, 2009). We developed oral narratives on HIV/AIDS prevention in the form of short radio programmes, which were to be played on audio cassette recorders in listening groups. We briefed local radio producers on specific contents and we stressed the use of a wide variety of presentation formats. On the basis of the briefing, local radio producers wrote scripts for three episodes.

Episode 1

1. An interview with a male doctor, Dr Yared, primarily focusing on knowledge about HIV/AIDS prevention, to improve credibility:

Interviewer: First, can you explain to us what a condom is.

Dr Yared: Good, basically a condom is made from thin and strong plastic and used during sexual intercourse. There are two type of condoms; male and female condoms.

2. A role play between two women (on secret sexual relations with married men and the importance of using condoms) to improve identification and overall liking of the episode

through immersion into the dialogue:

Tsehay: Ah Condom is for prostitutes.

Ayal: NO, not only for prostitutes, it is for us all. Condoms prevent unwanted pregnancy, HIV/AIDS and other sexually transmitted diseases. It is better to use a condom whenever you have sexual intercourse.

3. A discussion between women on the importance of safe sex, also to improve identification and overall liking of the episode:

Birkie: But how do I carry a condom being a female? I feel shy to carry a condom. People may be suspicious of me doing adultery (worry).

Zinash: I don't think it is good to worry. There is nothing to worry you. Don't be foolish, buying condoms from the shop should not make you shy. It is a sign of being wise and intelligent...

Episode 2

1. A poem on the danger of unsafe sex. In rural Ethiopia, poems are culturally appropriate message formats to bring forward an important subject:

Doing sex in secret and not being suspicious

You have to be careful, the century is dangerous

You will be exposed to HIV/AIDS

To accomplish your plan and desire

And to get the chance to live longer

It is necessary to use a condom and say your prayer (part of the poem)

2. An interview with a male local opinion leader, Ato Alemu, who was one of the elders and the social organisation leader in the community, well respected and with high acceptance by the community:

Ato Alemu: We have to buy condoms and keep it in our pocket ... We have to discuss condoms openly and we have to exchange ideas and experience about it. We should not be shy to discuss sexual matters, which is taboo in our area. It should not be a secret.

3. A discussion between women on the importance of safe sex, comparable to the discussion in episode 1, also to improve identification and overall liking of the episode.

Episode 3

1. An interview with a female nurse, primarily focusing on knowledge about HIV/AIDS prevention, to improve credibility:

Interviewer: Finally, let me give you a chance if you have something to say to the community.

Sister Ainidis: Yes I have. Thank you for giving me this opportunity. A condom is effective for preventing HIV/AIDS, sexually transmitted diseases and unwanted pregnancy, when used correctly ...

2. A poem on safe sexual behaviour:

You feel shy to buy condoms

You feel shy to discuss about condoms

You feel guilty to talk about condoms

You feel proud to enjoy sex in secret

If you enjoy sex with different partners

You have to know that you expose yourself to HIV/AIDS (part of the poem)

3. A discussion between women on the importance of safe sex, comparable to the discussion in episode 1, also to improve identification and overall liking of the episode.

Episodes were presented in Amharic by two women in the form of a radio programme. For the presentation formats, a talented Amharic cast was recruited from the region to keep the accents and voices related to the target audience. The three episodes were recorded at the radio studio of Educational Media Center in Debre Markos, which is located in Amhara.

Participants and procedure

The required sample size for detecting differences in evaluation of presentation formats in pre-tests depends on the variation of characteristics in the sample and the required precision (Grembowski, 2001). In this study, the sample of rural women was highly homogeneous with little cultural and social variation. The required precision was relatively low, since in the case of pre-tests the main interest is to identify presentation formats that, in comparison to other presentation formats, are appreciated much less by the audience. In statistical terms, we required a minimal detectable effect size of 0.5 on a 5-point scale. Given an effect size of 0.5, an alpha error level of 5% and a standard deviation of 0.6, power calculation indicated that a sample of $N=30$ would yield a power of 95%. With $N=30$, the smallest detectable correlation coefficient is $r=0.37$ (explained variance of 14%) (Grembowski, 2001).

This study was conducted in the *Kebele* Koncher Sasaberai in the Dejen Woreda (district), in the Amhara highland of Ethiopia, 250 km north-west of Addis Ababa. The *Kebele* (the smallest administrative unit in the country) is situated in a remote rural area 5 – 10 km away from the main road and the small town of Dejen. In the *Kebele* were ten *sub-Kebeles*, each located at different places in the area. To ensure a good distribution in age and marital status, we randomly selected three women from each *sub-Kebele* in co-operation with the *Kebele* women's co-ordinator ($N=30$; response rate: 100%). The mean age of the women was 27.7 years (range 18 - 50). Of the participants, 97% were Ethiopian Orthodox Christians. Three women were unmarried, 12 women were married, 11 women were widows and 4 women were divorced. Among the women, 10 could not read or write, and 20 had completed some primary education, on average up to grade level 5. Ethical clearance and permission for the research was obtained from officials and from parents, spouses and the participants. It was stressed that participation was voluntary.

The three episodes were pre-tested on three consecutive days from 26 to 29 February 2008 in a rural school class in the community of the participants. On the first day, the female co-ordinator explained to the participants that they would listen to one episode each day, and then would be questioned by a data collector on their opinion of the episode. The episodes were played to the women using a battery-operated radio cassette recorder.

Since rural people in Ethiopia are not inclined to tell their opinion to someone they do not know, 10 literate women from the same community acted as data collectors. Since school classrooms are appropriate places for listening, we conducted the study in a school building in a rural part of Ethiopia. Permission was obtained from the school principal to use the classrooms in the absence of students, before 7:30 in the morning or after 5:30 in the afternoon. To visit the listening site, the participants sometimes had to walk long distances and time for the research was limited, since the women were farmers and had to work in the fields. The participants listened to the audio messages for 15 minutes and then started to fill in the questionnaire with the assistance of the data collectors on an individual basis. To shorten the waiting time for the participants, one data collector was assigned to three participants, who were interviewed one after the other. Data collectors were selected based on their experience and education levels. We gave the data collectors one day's training on how to collect data and on how to communicate with illiterate or low literate rural women, who were inexperienced in responding to questionnaires.

Measurements

The questionnaire was developed in English and translated into Amharic. All questions could be answered on a 5-point scale (1= very much disagree ... 5 = very much agree).

Evaluation of a presentation format was assessed with six items: 'I believe what [person name] said is right'; 'I could easily understand what [person name] said'; 'I think [person name] explained the subject very well'; 'The [name person in the format] had a clear voice'; 'The [person name] had an attractive voice'; and 'The [name person] helped me to understand the message' (α ranged between 0.81 and 0.93).

Identification with an episode was assessed with five items: 'This message was talking to someone like me'; 'This message is about people who live in a community like me'; 'The message is most suitable for me'; 'People of my own age enjoy this message'; and 'The message is most suitable for rural women' ($\alpha=0.77$).

Convincingness of the episode was assessed by five items: 'The episode was convincing to me'; 'The content of the episode was believable'; 'The content of the episode made sense to me'; 'The content of the episode was right'; and 'The message of the episode is important' ($\alpha=0.86$).

Overall liking of an episode was assessed with seven items: 'The message in this episode was: (1) believable, (2) very good, (3) nice to listen to, (4) convincing, (5) made its point, (6) interesting, (7) attractive. ($\alpha = 0.91$). We also asked whether they would like to listen to the episode again, and whether they would recommend friends to listen to the episode.

Statistical analysis

For each scale, we computed reliability and mean scale scores. We used *t*-test to investigate difference in evaluation between presentation formats. We computed correlations between evaluation of presentation formats, identification, convincingness, and overall

liking of episodes. To investigate the possible intermediate role of identification and convincingness in the relation between evaluation of presentation formats and overall liking of episodes, we used hierarchical regression analysis, where identification and convincingness were entered in the second block.

Results

Table 1 shows that the mean evaluation of the presentation formats was high. With regard to episode 1, paired sample *t*-tests indicated that the interview with the doctor was more positively evaluated than the role play ($t=2.2$, $df= 9$, $p=0.035$). The evaluation of the discussion and the interview with the doctor did not differ significantly ($t=0.85$, $df=28$, $p=0.40$), but the evaluation of the discussion was significantly higher than the evaluation of the role play ($t=3.67$, $df=28$, $p=0.001$). With regard to episode 2, the evaluation of the discussion was significantly higher than the evaluation of the opinion leader ($t=-2.29$, $df=28$, $p=0.03$). With regard to episode 3, no significant differences were found in the evaluation of the three presentation formats. Mean scores on identification, convincingness and overall liking of episodes were high, as were scores on desire to listen again and recommendation of the episodes to a friend.

A more positive evaluation of presentation formats in episode 1 and episode 2 was significantly correlated with more identification with the characters (Table 2). Evaluation of the presentation formats in episode 3 did not significantly correlate with identification. After listening to episode 1, identification was also significantly positively related to desire to listen again and recommendation to listen to a friend. The evaluation of all presentation formats was significantly positively related to convincingness.

Convincingness was also significantly positively related to the desire to listen again and to the recommendation of the episode to a friend. The same pattern of high positive correlations was found for overall liking of the episodes. Evaluation of presentation formats was highly positively correlated with overall liking of each episode, and overall liking was strongly positively related to re-exposure to the message.

Evaluation of presentation formats was strongly related to overall liking of episodes. To disentangle the role of identification and convincingness in this relation, we calculated hierarchical regression analyses separately for each episode (Table 3).

Overall liking of episode 1 was significantly related to the evaluation of presentation formats ($F(3, 25)=37.5$, $p=0.001$, $R^2=0.82$), with a significant contribution for evaluation of the discussion ($\beta=0.54$, $p=0.009$), and a marginally significant value for evaluation of the role play ($\beta=0.34$, $p=0.07$). Addition of identification and convincingness marginally increased the explained variance ($F(2, 23)=3.3$, $p=0.06$, $\Delta R^2=0.03$) with a significant contribution of convincingness ($\beta=0.40$, $p=0.05$), while it made the beta weights of evaluation of the discussion ($\beta=0.34$, $p=0.10$) and role play insignificant ($\beta=0.15$, $p=0.45$). This pattern of beta weights indicates that convincingness mediates the relation between evaluation of presentation formats and overall liking of episode 1.

Table 1. Mean (standard deviation) scores on evaluation of the presentation formats in the three episodes and the judgment on the episodes (1=minimum, 5=maximum)

	Episode 1	Episode 2	Episode 3
Evaluation of interview doctor	4.5 (0.60)		
Evaluation of role play	4.3 (0.52)		
Evaluation of discussion	4.5 (0.43)		
Evaluation of poem 1		4.5 (0.53)	
Evaluation of opinion leader		4.3 (0.65)	
Evaluation of discussion		4.5 (0.41)	
Evaluation of interview nurse			4.7 (0.37)
Evaluation of poem 2			4.6 (0.45)
Evaluation of discussion			4.6 (0.40)
Identification with episode	4.3 (0.54)	4.0 (0.86)	4.1 (0.92)
Convincingness of episode	4.5 (0.48)	4.6 (0.41)	4.7 (0.37)
Overall liking of episode	4.7 (0.39)	4.5 (0.45)	4.7 (0.37)
Like to listen again to episode	4.6 (0.59)	4.5 (0.62)	4.6 (0.47)
Recommend friend to listen episode	4.6 (0.67)	4.5 (0.68)	4.7 (0.48)

Table 2. Correlation between the evaluation of the presentation formats, desire to listen again, recommendation and identification, convincingness and overall liking of each episode among illiterate and low literate women in Amhara

	Identification	Convincingness	Overall liking
Episode 1			
Evaluation of interview with doctor	0.58***	0.80***	0.79***
Evaluation of role play	0.78***	0.82***	0.79***
Evaluation of discussion	0.72***	0.87***	0.89***
Desire to listen again to episode	0.41*	0.56**	0.51**
Recommend friend to listen episode	0.41*	0.54**	0.55**
Episode 2			
Evaluation of poem 1	0.24	0.83***	0.88***
Evaluation of opinion leader	0.39*	0.65***	0.65***
Evaluation of discussion	0.46**	0.89***	0.88***
Desire to listen again to episode	0.21	0.66***	0.78***
Recommend friend to listen episode	0.25	0.71***	0.75***
Episode 3			
Evaluation of interview nurse	0.03	0.89***	0.85***
Evaluation of poem 2	-0.01	0.73***	0.68***
Evaluation of discussion	0.03	0.84***	0.77***
Desire to listen again to episode	0.10	0.75***	0.76***
Recommend friend to listen episode	0.19	0.81***	0.88***
* $p < 0.05$			
** $p < 0.01$			
*** $p < 0.001$			

Overall liking of episode 2 was also significantly related to the evaluation of the presentation formats ($F(3, 25)=38.6, p=0.001, R^2=0.83$), with a significant contribution for the evaluation of the discussion ($\beta=0.58, p=0.04$) and a marginally significant contribution for poem 1 ($\beta=0.41, p=0.07$). Addition of identification and convincingness increased the explained variance ($F(2, 22)=9.4, p=0.001, \Delta R^2=0.08$) with a significant positive contribution of convincingness ($\beta=0.60, p=0.001$) and a significant negative contribution for identification ($\beta=-0.25,$

$p=0.01$). Addition of identification and convincingness made the beta weights of poem 1 and of the discussion insignificant, a pattern that indicates that the relation between evaluation of the formats and overall liking of episode is mediated by convincingness.

Overall liking of episode 3 was significantly related to evaluation of the presentation formats ($F(3, 25)=23.8, p=0.001, R^2=0.74$), with a significant beta value for the evaluation of the interview with the nurse ($\beta=0.63, p=0.03$). Addition of identification

Table 3. Hierarchical multiple regression analyses of overall liking of episodes on evaluation of the presentation formats in the episodes, identification and convincingness

	Overall liking of episode 1		Overall liking of episode 2		Overall liking of episode 3	
	β	β	β	β	β	β
Evaluation of interview doctor	0.06	0.01				
Evaluation of role play	0.34#	0.15				
Evaluation of discussion	0.54**	0.34				
Evaluation of poem 1			0.40#	0.20		
Evaluation of opinion leader			-0.07	0.04		
Evaluation of discussion			0.58*	0.28		
Evaluation of interview nurse					0.62*	-0.05
Evaluation of poem 2					-0.58	0.04
Evaluation of discussion					0.77	-0.17
Identification with episode		0.09		-0.24		-0.03
Convincingness of episode		0.40*		0.60**		1.14***

$p < 0.10$ * $p < 0.05$ ** $p < 0.01$ *** $p < 0.001$

and convincingness increased the explained variance ($F(2, 23)=9.4$, $p=0.001$, $\Delta R^2=0.23$), with a positive contribution of convincingness ($\beta=1.14$, $p=0.001$), while it eliminated the beta value for the evaluation of the interview with the nurse ($\beta=-0.05$, $p=0.61$), indicating mediation. Women listened to the episode on three consecutive days. Table 3 shows that in the course of the three episodes the relation between convincingness and overall liking of episodes became stronger.

Discussion

In Ethiopia, communicating about HIV prevention with illiterate women in rural areas presents a challenging task to health educators, since these groups tend to be skeptical of communication by people who do not belong to their community. To reach these illiterate women, it is crucial to develop culturally sensitive and linguistically appropriate oral messages that motivate them to listen to the message and encourage communication about HIV prevention with their partners, families and community members. We investigated the appropriateness of three oral episodes on HIV prevention, using a number of presentation formats, like interviews with a male doctor and a nurse and social-oriented presentation formats, such as role play between women and discussion on HIV prevention between women. Results of this study indicated that all presentation formats were positively evaluated by the women. This indicates that both expert-related presentation formats and social-oriented presentation formats are suitable for the audience.

In this study, each episode contained three presentation formats. We found that evaluation of specific presentation formats was strongly related to the overall liking of episodes. We used a positive evaluation of specific presentation formats as an indication of the amount of transportation into the story line that was induced by a specific presentation format. For all three episodes, the evaluation of the discussion between women, a social-oriented presentation format, was strongly related to the overall liking of each episode. The evaluation of some expert-related presentation formats, such

as an interview with a male doctor and a male opinion leader was not related to overall liking of an episode, while the interview with a female nurse, also an expert, was related to overall liking of an episode. This indicates that the gender of the interviewee may be important to achieve a positive effect on overall liking of an episode. This study also indicates that it is important to achieve overall liking of episodes in health education, since overall liking was highly correlated with repeat exposure and recommendation to others. Other studies also indicate that overall liking is related to the desired effects of communication (Nan, 2008; Ntshebe, Pitso, & Segobye, 2006; Slater, 2006).

Additional regression analyses indicated that the relation between evaluation of presentation formats and overall liking of episodes was mediated through convincingness of the episode, but not through identification with the episode. Social-oriented presentation formats seemingly lead to a feeling of convincingness among illiterate women, which leads to overall liking of an episode, probably because these formats promote social comparison processes on appropriate behaviour. The explanatory role of convincingness in transferring evaluation of a presentation format into overall liking of an episode was found separately for each of the three episodes, and became more important on consecutive days. This finding is in line with other studies, which indicate that transportation into a story (presence in this case of visual communication) improves credibility (Bracken, 2006).

Contrary to expectation, identification was less important as an explanatory variable in the relation between evaluation of presentation formats and overall liking. Although other studies found that transportation into the story line is related to identification with particular persons in a narrative (Moyer-Gusé, 2008; Slater & Rouner, 2002; Wang & Calder, 2006), in our study there were no significant correlations between evaluation of a presentation format and identification in episode 3. Since there was a relation in episode 1 and 2, it may well be that identification only is an important variable in the initial stage

of the health education. It may also be that, in the case of HIV/AIDS communication, identification with the characters may be hindered by the stigma of HIV/AIDS, which may make rural women more inclined to distance themselves from the characters. Further research is needed on the effect of existing stigma of HIV/AIDS on identification with characters in HIV/AIDS prevention messages.

There were some limitations to the study. First, the study investigated a limited number of presentation formats (poems, role plays, discussion, and interviews). We did not include many frequently used audio programme formats, such as soap operas, which are often used in entertainment education. Second, this study involved a small numbers of participants from a remote rural area of north-western Ethiopia. In future research it would be advisable to use larger and more divergent groups to study the relation between evaluation of formats and overall liking of episodes.

For the pre-testing of health education interventions aimed at low literate or illiterate target groups, this study has some important implications. First, the use of data collectors seems to be an appropriate approach to gather reliable data from this target group. Second, this study indicates that, although important, pre-tests that only focus on the understandability of messages may miss some important points. The mean target of pre-tests should be to establish whether participants like the message. Overall liking of the message is a key variable for effective health communication (Durkin & Wakefield, 2008; Slater & Rouner, 2002; Vaughan & Rogers, 2000). According to the results of this study, overall liking of episodes is strongly related to the use of social presentation formats, such as role play and discussion. Presentation formats which focus on enhancing credibility by using experts do not improve overall liking of messages, especially if the gender of the expert is not the same as that of the audience. Furthermore, this study indicates that social presentation formats make messages more convincing and improve overall liking of episodes. This finding is contrary to common belief in traditional persuasion models that experts make messages more convincing. This probably reflects the social importance of having specific opinions on e.g. condom use in the African context. Participants reduce their uncertainty on the social appropriateness of specific prevention behaviour by social comparison, in which communication with the direct social environment plays an important role (Boer & Westhoff, 2006). Among these illiterate women, enjoying social-oriented presentation formats makes a message convincing and likable. The mind follows what the heart tells them.

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