The war on HIV/AIDS

The effects of metaphors
in HIV/AIDS communication
among coloured high school students
in South Africa.

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Date: 4-6-2008

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ABSTRACT

The spread of HIV/AIDS is currently a huge problem all over the world. South Africa is the country with the largest number of HIV/AIDS infections worldwide. The epidemic will have a devastating effect on the South African population in the years to come. Especially among young South Africans the infection rate is rapidly increasing. The best hope for HIV/AIDS prevention is counselling people on the steps they can take to protect themselves from contracting the virus. Communication can teach people more about HIV/AIDS and its prevention. The present research intends to contribute to the effectiveness of HIV/AIDS communication among youths in South Africa.

There are many different styles of HIV/AIDS communication which have different effects on different groups of people. The style in which a text is written can influence the effectiveness of a text. This style can be created by using rhetorical figures. The present research investigated the effects of the use of metaphors in HIV/AIDS communication. Metaphors are rhetorical figures used in order to provide means of understanding by describing one thing or experience (target domain) in terms of another thing or experience (source domain).

The present research was conducted in collaboration with Olislagers and Van Sambeek, and investigated whether the use of metaphors can enhance the effectiveness of HIV/AIDS communication among young people in South Africa. The effects of metaphors were tested on three different ethnic groups of South African youths; coloureds, Xhosas and whites. This particular research focused on coloured youths, while Olislagers (2008, 'More than words?') focused on Xhosas and Van Sambeek (2008, 'Attacking the 21st Century's Evil') focused on white youths. One of the reasons for studying each ethnic group separately is that according to, for instance Lakoff and Johnson (2003), metaphors can be understood very differently by people living in different cultures.

In order to reveal the effectiveness of metaphors in HIV/AIDS communication among coloured youths in South Africa, two main research questions were formulated. The first question reads:

> Under what conditions and to what extent does the use of metaphors in written HIV/AIDS communication affect the attractiveness, understanding and persuasiveness of HIV/AIDS communication among coloured high school students in South Africa?

The answer to this question reveals the possible positive effects that metaphors in HIV/AIDS communication have on coloured South African youths. The second research question reads:

> Under what conditions and to what extent does the use of metaphors in HIV/AIDS communication affect stigmatisation among coloured high school students in South Africa?

By answering this question can be revealed if the use of metaphors increases the stigma that is attached to HIV/AIDS, a possible negative effect of metaphors.

Olislagers and Van Sambeek used the same research questions to investigate different ethnic groups. In collaboration with these other two researchers, it was possible to reveal differences on the effectiveness of metaphors in HIV/AIDS communication between the three investigated ethnic groups. The collaboration also made it possible to draw conclusions about the three ethnic groups together;

the entire youth of South Africa. Four main research questions were formulated, the first research question reads:

> Under what conditions and to what extent does the use of metaphors in written HIV/AIDS communication affect the attractiveness, understanding and persuasiveness of HIV/AIDS communication among high school students in South Africa?

The second question is:

> To what extent do ethnic group and text version, affect the attractiveness, understanding and persuasiveness of HIV/AIDS communication among high school students in South Africa?

The answers to these two questions reveal possible positive effects that metaphors in HIV/AIDS communication have on South African youths. The answers also reveal the differences on the effects of metaphors between the investigated ethnic groups; coloured, Xhosa and white.

The third and fourth research questions were posed to reveal possible stigmatising effects of metaphors in HIV/AIDS communication on South African youths and the differences in these effects between the three ethnic groups. The third research question reads:

> Under what conditions and to what extent does the use of metaphors in HIV/AIDS communication affect stigmatisation among high school students in South Africa?

The fourth and last research question reads:

> To what extent do ethnic group and text version, affect stigmatisation among high school students in South Africa?

According to the conceptual metaphor theory, by for example Lakoff and Johnson (2003), metaphors are likely to enhance the attractiveness, understanding and persuasiveness of a text. McGlone (2007) is more sceptical about the effects of metaphors and indicates that only novel metaphors can induce effects such as the enhancing of attractiveness, understanding and persuasiveness. According to McGlone, conventional metaphors do not cause the effects and are processed directly; the same way in which non-metaphorical expressions are processed. Based on the theories of Lakoff & Johnson and McGlone diverging expectations could be formulated for the outcomes of the present research with respect to the kind of metaphors that were used. When novel metaphors were used instead of conventional metaphors effects could be found.

Three phases of research were carried out to answer the research questions. The first two phases were preliminary research for phase number three. First, a corpus analysis was carried out to find out which metaphors had already been used in existing HIV/AIDS communication, such as brochures. Second, a focus group discussion among health workers was conducted to find out to which extent metaphors could be used as a useful tool in educating people on HIV/AIDS and which metaphors were used by health workers. These two preliminary phases revealed several metaphors which are frequently used in HIV/AIDS communication. During the third phase of this research, an experiment was carried out. Five different text versions were designed. Four of these texts each contained one of the frequently used metaphors that were retrieved during the preliminary phases and one text was written without the use of a metaphor. The experiment, carried out as a between-group design, measured the attractiveness, understanding, persuasiveness and stigmatising effects of metaphors in

the designed textversions among high school students in Stellenbosch. The coloured students were retrieved from the Lückhoff High School. In total 936 students participated in this research, of which 369 were coloured, 285 were Xhosa and 261 were white.

The outcomes of the analyses for the coloured high school students showed no differences between the metaphorical texts and the neutral text on the attractiveness, understanding, persuasiveness and stigmatising effects of the texts. No differences were found on these variables between the different metaphorical texts either. This indicates that the different text versions did not influence the students' opinions on the investigated variables, and that metaphors in HIV/AIDS communication did not have any of the investigated effects on coloured youths.

The analyses in which all three ethnic groups were taken into account revealed no differences in attractiveness, understanding, persuasiveness and stigmatising effects between the different text versions. This indicates that there is no reason to assume that South African high school students perceived differences on the investigated variables between the text versions.

There were differences found between the ethnic groups on the attractiveness and the persuasiveness of the texts. It appeared that coloureds and Xhosas evaluated all texts as more attractive and more persuasive than whites. No differences were found between coloureds and Xhosas. Also, no differences were found between any of the ethnic groups for the variable 'understanding' which indicates that there is no reason to assume that the ethnic groups differed in their understanding of the five different text versions. No differences between the ethnic groups occurred for stigma on HIV/AIDS after reading one of the texts or after reading none of the texts either. There appeared to be no interaction effect between the text versions and the three investigated ethnic groups on 'attractiveness', 'understanding' and 'persuasiveness', which indicates that there was no specific text version that was preferred by any of the specific ethnic groups.

Also no interaction effect was found between the text versions and the investigated ethnic groups on 'stigma', which indicates that there was no specific text version that was evaluated more or less stigmatising by any of the specific ethnic groups.

The results of the present research do not support the conceptual metaphor theory which states that metaphors influence the effectiveness of a text. The most important explanation for not finding any effects of metaphors in HIV/AIDS communication among South African youths is that the metaphors that were used in this research can be considered conventional. Therefore, the findings support the theory of McGlone.

Further research is needed on how different metaphors are processed and to which effects this can lead. It would be interesting to replicate the present research by using novel metaphors in the text versions, to investigate if this leads to effects. Next to this, a within-group experimental design could be applied instead of a between-group design when replicating this research among another target group, for example adults. It could be the case that the respondents, when using a within-group design, will be able to see the difference between the metaphorical and the non-metaphorical texts because they get to read both texts, which can lead to different findings.

PREFACE

Through the course 'Intercultural aspects of health communication' ('Interculturele aspecten van gezondheidsvoorlichting') I got the chance to go to South Africa to practice research to obtain my Masters in Business Communication. The subject in particular caught my interest. Especially after following the course that gave a lot of attention to communication on HIV/AIDS in South Africa. Going to South Africa was a great opportunity for me to learn more about communication, cultures, people, languages, foreign countries and myself.

A perfect path was planned out so that I could study almost all the literature in the Netherlands and go to Stellenbosch with a well prepared plan of research. Because of this I knew what my goal was and started working immediately after my arrival in Africa. A lot of work was done in the following months and I am proud to present you the final result, this thesis.

There are a few people that I want to thank. First, my supervisors Prof. Dr. C.J.M. Jansen and Prof. Dr. L.G. de Stadler. Dear Carel, thank you for giving me the opportunity to go to Stellenbosch. Thanks for your feedback and support during the whole process of research and the writing of my thesis. I agree with you that it is good to keep a close eye on your students, especially when they are far away. I learned how important it is to keep my supervisor informed at all times. I liked working with you and I hope you also liked to work with a real 'Van Nistelrooij' for once.

Dear Leon, thank you for your hospitality. I appreciate the support and feedback that you gave me regardless of your extremely busy schedule at the time. Thank you for being the 'father figure' as you call it. I hope more international students will enjoy working with you in the future.

Second, I want to thank Maretha, Lize, Philip, Rose and Erina: employees of the Language Centre in Stellenbosch. You were very friendly and made me feel at home. Thank you for the fact that you were always willing to help me and gave good advice that I could really work with.

Third, Mrs. Lynette Rademeyer- Bosman deserves a big 'thank you' for giving me the opportunity to organise a focus group discussion in the HIV- testing Centre in Stellenbosch, where Lynette is CEO. I also want to thank you for your time and hospitality to invite me into your home for a real South African braai!

Third, I want to thank Mrs. Van Mulken for sharing her knowledge about language and metaphors with me. Thank you for helping me by answering my questions so quickly trough e-mail. Next to this I want to thank you for recommending me some relevant literature.

Last but definitely not least I want to thank my fellow students. In the beginning of the project the luck of the draw decided that I would go to Stellenbosch. Destiny decided the same for my colleague students Kim Olislagers and Maartje van Sambeek. What I can say now is: who expected that to be such a perfect combination in terms of work and friendship. Ollie and Sambal, thank you for all the fun we had. Besides the fun we also worked with each other and complemented each other perfectly. Thanks for the great discussions that we had and for all the fun of working with you two. Mooi bly!

Marloes van Nistelrooij

CONTENT

1   INTRODUCTION

AIDS is currently a huge problem all over the world. Especially South Africa is experiencing an HIV/AIDS epidemic of catastrophic proportions. Dorrington, Johnson, Bradshaw, and Daniel (2006) have predicted that the epidemic will have a devastating effect on the South African population in the years to come. No less than 4.2 million South Africans have been contaminated with the HIV virus, which corresponds to 11.4 percent of the South African population of 48 million people (Swanepoel, 2003). There is a rising number of HIV-infected individuals, estimated at 2000 cases per day (Moneymax, 1999-2001). South Africa has the largest number of HIV infections in the world, whereby southern Africa accounted for almost one third (32 percent) of all new HIV infections and AIDS deaths globally in 2007 (KFF, 2008). The size of the HIV/AIDS epidemic varies considerably between provinces in South Africa with contamination rates of 15 percent in the Western Cape to 39 percent in the province of KwaZulu-Natal. Research has shown that particularly young South Africans have been affected by HIV/AIDS (KFF).

Medicine for HIV/AIDS is still expensive and not available for everyone in Third World countries. This makes it even more important to prevent further spreading of the disease by using effective communication. According to Perloff (2001), even in this era of great medical discovery, the best hope for HIV/AIDS prevention is counselling people on the steps they can take to protect themselves from contracting the virus. Many South Africans are unaware of how they might contract the virus or how it could affect their health (Van Wessel, 2006). Communication about these subjects can teach the people of South Africa more about HIV/AIDS and its prevention. Because the infection rate among youth is increasing rapidly, prevention within this group is important. Research on more effective communication should lead to more knowledge about the different young target groups and how to reach and convince these young people. That is why the present study focuses on youth in South Africa.

There are a number of South African organisations that execute prevention initiatives against HIV/AIDS. Examples are the campaigns initiated by loveLife and Soul City. In the report by the AIDS Foundation of South Africa (2000) is stated that the results of these campaigns and prevention programmes have been largely disappointing, or hardly even evaluated. Clearly, more research is required to gain more knowledge about the effectiveness of written HIV/AIDS communication. In order to collect this type of knowledge the EPIDASA project (see www.epidasa.org) was started in 2003. This three-year project ended in 2006, and was followed by a similar project called HACALARA (see www.hacalara.org) which started in 2008. The present study forms part of the EPIDASA project and focuses on the effects of using metaphors in texts on HIV/AIDS. Because HIV/AIDS is a difficult disease for people to understand, the use of metaphors might be advantageous, in that it might make the disease more understandable. If people know exactly what HIV/AIDS is, and how they can become infected, this might possibly help in persuading them to undertake measures to prevent the disease.

2   THEORETICAL BACKGROUND

2.1   Style and Rhetorical Figures

Communication about HIV/AIDS in South Africa clearly needs to be improved (see chapter 1). Effective communication is necessary to teach people what the disease is and how they can become infected. On top of that, communication is needed to persuade people to prevent HIV/AIDS. According to Laanstra (2005), the style of a text can play an important role in the process of persuading people. Style is one of the aspects of communication and document design. Laanstra also argues that style can play an important role in the success of communication on HIV/AIDS in particular. According to Burger and De Jong (2002), style is the choice between possible formulations to shape thoughts. There are various elements that can create a certain style. An example of one of these elements is the use of slang. To illustrate the differences in style by using slang an example of a phrase that was used in the research carried out by Saal (2003) is given. The standard English version of the text reads: "Some of us love to sleep around. We mean having sex with a new partner every night, or trying to have more partners than the rest of the crowd." Versus the slang version of English: "Some of us lurv to score. We mean having sex with a hot new babe or guy every night, or trying to be a bigger playa than the rest of the crowd." In this example slang creates a different style in the text.

Next to slang, the use of rhetorical language is one of the tools that can be used to create a certain style, by using rhetorical figures in a text. Rhetorical figures may be defined as artful deviations in (expected) language use, designed to enhance communication (McQuarrie and Mick, 1996). According to Van Enschot- Van Dijk (2006), when a rhetorical figure is used, the content of the message stays the same; only the way in which the message is presented is different; the message is presented in an artistic or creative manner. McQuarrie and Mick (1996) provide the following framework for categorizing rhetorical figures:

Figure 1: Categorisation of rhetorical figures (McQuarrie and Mick, 1996)

In this framework three levels are distinguished. The first level consists of all existing rhetorical forms. The second level presents the distinction between schemes and tropes. *Schemes* are stylistic decorations which are easy to interpret by the receiver; they add redundancy to the message. *Tropes* are more difficult to interpret; they have to be interpreted to be understood by the receiver. Tropes represent incongruity, focused on background knowledge, as they do not fully communicate the intended meaning, or communicate multiple possible meanings. Tropes invite readers to elaborate. Examples of different schemes and tropes will be given later on in this section.

The third level of figure 1 subdivides both schemes and tropes. *Schemes* are divided into repetition and reversal. Examples of *repetition* are epanalepsis and rhyme. Epanalepsis is a figure of emphasis in which the same word or words both begin(s) and end(s) a phrase, clause, or sentence, for example; 'If I want to die, I'll die right here, right now fighting you, if I want to die'. An example of rhyme is for instance 'Buying Red Bull makes that you are cool'. An example of *reversal* is an antithesis; the juxtaposition of opposing or contrasting ideas.

Tropes are divided in substitution and destabilisation. Forms of *substitutions* are the rhetorical question, the hyperbole and metonymy. An example of the rhetorical question is: 'We sell nice clothes in here, don't you think so?'. A hyperbole can be 'The clothes we sell are the best in the whole world!'. Metonymy is a figure of speech in which something is referred to by something closely related to it, for example; 'In my office there is a Rembrandt on the wall'. An example of *destabilisation* is the metaphor, for example 'Red Bull gives you wings'. These examples of tropes are more difficult to interpret than the examples of schemes, which were given before. The examples of tropes have to be interpreted to be understood, while the examples of schemes are easier to understand. For example the scheme: 'Buying Red Bull makes that you are cool', which is concrete and easy to understand, versus the trope: 'Red Bull gives you wings' which is less concrete and more difficult to understand.

The gradient of deviation increases from left to right in figure 1, meaning that the rhetorical figures on the right side in figure 1 deviate more from language that readers expect, than the rhetorical figures on the left-hand side of figure 1. The metaphor is one of the rhetorical forms which deviates the most from expected language. In the following section metaphors are discussed more in depth.

2.2 Definition of the Metaphor

Not all rhetorical figures have so far been fully covered in research on HIV/AIDS communication. One of the rhetorical figures that needs to be investigated more closely is the metaphor. This rhetorical figure is chosen as a focus of the present research because it is frequently used in health communication (Liebert, 1999), which is the subject of the present study. Health communication about HIV/AIDS discusses complex concepts which can possibly be explained by the use of metaphors. Liebert indicates that metaphors are powerful linguistic tools for understanding and comparing complex systems. In pursuing their social and professional aims, doctors often adopt metaphors such as 'Fighting against cancer'.

Many definitions of the metaphor can be found in literature. Vroon and Draaisma (1985) state that the word metaphor comes from the Greek word *'metapherien'* which means transmission, meaning that the unknown is described in terms of the known. Metaphors are used to make concepts concrete.

Kövecses (2002) defines metaphors as understanding one conceptual domain in terms of another conceptual domain. 'This cake is bursting with flavour' is an example of a metaphor in which the abstract conceptual domain 'flavour' is described in terms of something we know as 'something bursting', the conceptual domain. According to Steger (2007), metaphors are means of representing one aspect of experience in terms of another. Any aspect of experience can be represented in terms of any number of metaphors. According to Lakoff and Johnson (2003) metaphors are the way we understand the vast majority of our most important abstract concepts. The essence of the metaphor, as Lakoff and Johnson also point out, is to understand or receive one kind of thing in terms of another kind of thing. A metaphor consists of two 'things': a 'literal' primary subject (source) and a 'figurative' secondary object (target). Metaphors occur first of all at the level of cognition and can manifest themselves on the pictorial as well as the verbal level, and possibly in other ways too. Lakoff and Johnson's vision is different from the traditional vision on metaphors, because they take the effect of metaphors to another level. According to them, we structure our lives in terms of metaphors; metaphors play such a strong role in structuring our reality that we base our everyday perceptions and actions upon them. Because metaphors are ordinary, we do not recognize their metaphorical character anymore. The metaphor 'Breaking news' is an example of one of the metaphors we hear almost every day without recognising it as one.

What all these definitions of the metaphor have in common is that they state that in metaphors (unknown) things or experiences are described in terms of other (known) things or experiences. In the present study it was decided to use a definition of metaphors, based on Vroon and Draaisma (1985), Kövecses (2002), Steger (2007) and Lakoff and Johnson (2003): Metaphors are rhetorical figures used in order to provide means of understanding by describing one thing or experience in terms of another thing or experience.

2.3 Categorization of Metaphors

According to Kövecses, there are two kinds of metaphors: conceptual metaphors and linguistic metaphors. *Conceptual metaphors* are mainly used to describe abstract concepts and are explained as: conceptual domain (A) is conceptual domain (B); one domain is understood in terms of another; A is understood in terms of B. A conceptual domain is any coherent organisation of experience. For example: we have coherent organised knowledge about journeys that we rely on in understanding life. The conceptual metaphor that belongs to the knowledge of journeys is 'Life is a journey'. In this example the 'journey' is called the source domain and 'life' is called the target domain. Elements of the source domain are mapped onto elements of the target domain. The domain of 'journey' is used to explain aspects from the domain of 'life'. Conceptual metaphors typically employ a more abstract concept as target and a more concrete or physical concept as their source. Conceptual metaphors can serve the purpose of explaining intangible concepts and other concepts that are difficult to understand on their own (Lakoff et al., 1987, as referred to in Kövecses and Szabo, 1996).

According to Kövecses *linguistic metaphors* are linguistic manifestations of conceptual metaphors. Linguistic expressions are manifestations of the conceptual metaphors and make them explicit. For

example: when 'Life is a journey' is the conceptual metaphor, then 'Look how far we have come' and 'We can't turn back now' could be linguistic metaphors.

In most cases of everyday metaphors, the source and target domains are not reversible. The metaphorical process typically moves from the more concrete to the more abstract but not the other way around. For example, 'Life is a journey' can not be reversed into 'Journey is a life' because the more abstract conception 'life' can not concretise the more concrete conception 'journey'.

According to the conceptual metaphor theory that is put forward by, for instance Lakoff and Johnson (2003), a distinction between conventional and novel metaphors can be made. *Conventional metaphors* refer to a source domain which has been repeatedly used and is familiar to people. Because of this it is possible that the reader does not recognise the metaphor as being one.

Novel metaphors, on the other hand, are completely novel and thus less familiar to the reader than conventional metaphors. Because of this, novel metaphors can be more difficult for the reader to understand. Gibbs and Tendahl (2006) also state that although metaphors take extra effort to comprehend compared to non metaphorical expressions, there might be cases where especially novel metaphors take a great deal of effort to understand.

Later on in this thesis, in section 2.5, these two sorts of metaphors will be further elaborated on.

2.4   Identification of Metaphors

In order to do research on metaphors it is necessary to use a method to clearly identify metaphors. Forceville (1998) distinguishes three crucial questions which have to be asked in order to determine whether an expression should be termed a metaphor. These questions are based on the interaction theory of metaphor, put forward by Black (as cited in Forceville, 1998). According to Black, metaphors consist of two parts. In each metaphor, one or more features of the secondary subject (the source domain) are mapped on to the domain of the primary subject (the target domain). For example: the function of the immune system in a human body is difficult to understand. In order to make this target domain (the functioning of the immune system) more recognisable, it can be compared to an army fighting against an enemy. The chosen source domain, in this example the army, acts as an inspiration source for the functioning of the immune system (the target domain).

The three crucial questions which have to be asked to determine whether or not an expression is a metaphor are:

- What are the two terms of the metaphor, and how do we know?
- Which of the two terms is the metaphor's primary subject and which is its secondary subject, and how do we know?
- Which features are projected from the domain of the secondary subject upon the domain of the primary subject, and how do we decide on these features?

When answering these questions it is important to take various contextual factors into account, for example the context in which the metaphor is written.

2.5   Processing of Metaphors

There are several theories about the way metaphors are processed by readers. As mentioned before, the conceptual metaphor theory that is put forward by, for instance Lakoff and Johnson (2003), handles a distinction between the conventional and the novel metaphor. McGlone (2007)[1], states that the conceptual metaphor theory does not carry sufficient empirical nor theoretical support. According to McGlone the theory is solely based on intuition about how certain idioms thematically cohere. He states that the theory of conceptual metaphor does not take into account the difference between the way novel metaphors or conventional metaphors are processed by its readers. McGlone states that the process of understanding a metaphor changes as a function of its conventionality; when a metaphorical expression is completely novel the process of understanding the metaphor is different from when a metaphorical expression is familiar, a conventional metaphor.

The conventional metaphor can be understood without recourse to conceptual mappings; mapping (known) things or experiences from the metaphors' source domain upon the (unknown) things or experiences from the metaphors' target domain; describing the unknown target domain in terms of the known source domain. Conventional metaphors appear to be understood directly and literally. An example of a conventional metaphor is 'The argument was shot down'. This expression is familiar to such an extent that no conceptual mapping such as 'Argument is war' is needed in order to understand this expression. Another example of a conventional metaphor is 'That sauna is an oven'. This expression is also familiar because people know that a sauna is hot and understand that there is a parallel with the heat of an oven (Gentner and Wolff, 1997).

In contrast, novel metaphorical expressions do involve inferring a conceptual mapping (between source and target domain). McGlone explains the processing of a novel metaphor with the following example of a novel expression: 'Rush Limbaugh's bloated ego gobbled up his integrity and then used the airwaves as a toilet'. In this case a conceptual mapping is needed between 'arrogance' and 'digestion', in order to interpret this metaphor.

Gentner and Bowdle (2001) agree with McGlone in that conventional metaphors are processed and interpreted differently from novel metaphors. Gentner and Bowdle state that there are two ways in which a metaphor can be comprehended: directly and indirectly. *Indirect* comprehension means that the meaning of the metaphor has to be derived from the source domain by the reader. The source domain is an aid to derive the correct denotation. *Direct* comprehension occurs when a metaphorical expression is processed in the same way as a literal expression. Gibbs and Tendahl (2006) also state that some metaphors can be understood as quickly as literal speech, when they are encountered in a rich linguistic context.

Gentner and Bowdle state that *novel metaphors* have source domains that refer to a domain-specific concept (e.g. a literal concept), but are not (yet) associated with a domain-general concept (e.g. an associated metaphoric category). For example, the novel source domain 'glacier' (as in 'Science is a glacier') has a literal sense – 'a large body of ice spreading outward over a land surface – but no

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[1] The articles of McGlone (2007) and Gentner and Bowdle (2001) were integrated in this thesis after the present research had been carried out among the target groups in South Africa. Therefore, these theories were not taken into account during the preliminary research and during the design of the material for the experiment.

related metaphoric sense (e.g. 'anything that progresses slowly but steadily'). The meaning of a novel metaphor has to be derived by the reader via the source domain. Therefore, novel metaphors will be processed indirectly.

Conventional metaphors involve source domains that refer both to a domain-specific concept and to a domain-general concept and these source domains are familiar and therefore used repeatedly. For example, the conventional source domain 'blueprint' (as in 'A gene is a blueprint') has two closely related senses: the literal sense 'A blue and white photographic print in showing an architect's plan' and the metaphoric sense 'anything that provides a plan'. This way of processing is not different from the processing of a literal expression. Therefore, conventional metaphors will be processed directly.

In short, the relevance of Gentner and Bowdle's theory for the present study is that novel metaphors are processed indirectly while conventional metaphors are processed directly. McGlone endorses these findings and adds that many expressions might be categorised as novel metaphors by Lakoff and Johnson, while in reality people are so familiar with them that they are used, processed, and understood as normal literal phrases and are conventional metaphors. A consequence is that, according to McGlone, possible effects of novel metaphors, such as the enhancement of understanding may not apply for conventional metaphors. According to this fact, it is important to make a well-considered decision about what kind of metaphors should be used in research.

2.6   Metaphors and Attractiveness

According to Hidi (1990), rhetorical figures frequently cause an increase of the so called 'text-based interest'; the attractiveness of a text. According to Hidi, this means that a receiver finds a text interesting as result of interest generating text properties. Research shows that advertisements which contain rhetorical figures are more attractive than advertisements which do not (McQuarie and Mick, 1999). Dingena (1994) also found that advertisements in which rhetorical figures were used, in the case of metaphors, metonymy and repetition, were more attractive than those without these rhetorical figures. Attractiveness of texts that contain rhetorical figures can be caused by pleasure that receivers experience during interpretation of the text. Advertisements which contain rhetorical figures are often more difficult for receivers to interpret than advertisements without rhetorical figures. Interpreting tropes is even more difficult for the receiver than interpreting schemes. Tanaka (1992) argues these advertisements might be more effective due to the extra effort needed by the receiver to comprehend them. This effect comes from the fact that it can be pleasurable for receivers to interpret tropes successfully. Tropes offer receivers a cognitive challenge that can lead to appreciation (Van Enschot- Van Dijk, 2006). On the other hand, figures that are more difficult can lead to frustration because of incorrect interpretation. For example, the reader cannot find out the exact meaning of the metaphor.

In short, an advertisement which contains a trope is, when understood, more attractive than advertisements which contain schemes or advertisements without rhetorical figures. This is because tropes, including metaphors, can cause pleasure during the digestion of texts (Van Enschot- Van Dijk, 2006). This in turn implies that advertisements which contain metaphors, when understood, can be more attractive than advertisements without metaphors. Also Meyers- Levy and Malaviaya (1999)

state that when metaphors are not understood readers can become frustrated because they do not know how to interpret the metaphor. This frustration can lead to a lower appreciation of a text.

It must be noted that these facts concern the attractiveness of metaphors in advertisements; further research is needed to find out if the attractiveness of a text increases when metaphors are used in health communication.

Hoeken en Poulssen (1991) state that persuasive texts which are written in a lively style are better appreciated than texts which are not written in a lively style. According to Ortony (1975), metaphors have a positive effect on the liveliness of a text. For example the metaphor 'He showered her with gifts', sounds more lively than just saying 'He gave her a lot of presents', or the metaphor 'That woman is the sunshine of my life' instead of the less lively sentence 'I like that woman very much'. Therefore, the use of metaphors in HIV/AIDS communication could perhaps make a text livelier and lead to a higher evaluation of attractiveness of a text.

2.7   Metaphors and Understanding

Hoeken and Poulssen also studied the understanding of a text in combination with liveliness. They expected a positive relation between the liveliness and the understanding of a text. They did not find any relation however, which could be caused by a ceiling effect: the majority of scores were all near the maximum.

Other researchers such as Lakoff and Johnson (2003) and Paivio (1986) did find a relationship between the use of metaphors and the understanding of a text. Lakoff and Johnson state that metaphors are more than just linguistic wrappings and metaphors can lead to a higher level of understanding. The human conceptual system is shaped by metaphors, which means that abstract concepts are understood through metaphors. According to Lakoff and Johnson metaphorising is the primary human resource for understanding experiences. The thinking process of humans is largely metaphorical, and therefore, many aspects of our society are created and understood through metaphors.

As explained before, metaphors are used in advertising because of their function of concretisation of abstract information. According to Davidson (1984) concretisation is the most important function of a metaphor. Simons (1980) also found, by conducting an experiment, that metaphors cause concretisation. Liebert (1999) states that metaphors in the medical world are seen as powerful linguistic tools for understanding and comparing complex systems. Mayer (as stated in Ortony, 1993 p. 570) argues that metaphors are essential for learning and states that metaphors should meet three conditions: they must be helpful in selecting, organising, and integrating. Selecting: when metaphors are familiar and concrete they can attract the readers' attention. Organising: the metaphor should direct the learners' attention to the key information. Integrating: connect events in a coherent structure.

The Dual Processing Theory (Paivio, 1986) indicates that there are two ways in which information can be captured within people's memories; verbal and visual. Information which is captured visually will often be remembered more accurately than verbally obtained information. Concrete words are easier

to visualise than abstract words and therefore concrete word pairs are more easily remembered than abstract word pairs. As previously mentioned, metaphors make concepts concrete. This implies that texts that contain metaphors might be better understood than texts without these rhetorical figures. According to Hoeken (1998), understanding is also an important step in order to persuade people, which is another aim of HIV/AIDS communication.

2.8 Metaphors and Persuasiveness

A text that is used for HIV/AIDS communication has to be attractive, understandable, but also persuasive. One part of the goal of communication about HIV/AIDS in South Africa is to teach people what the disease is and how people can be infected; another part is to persuade people that prevention of the disease is possible by, for example, practicing safe sex. Fishbein and Ajzen (1981) state that for health education campaigns to be effective, they must result in behavioural change, which can be accomplished by focussing on an important underlying determinant of behaviour: attitude. Attitude can be defined as the underlying determinant, or evaluation, of behaviour and is based on the following two components; beliefs that the behaviour leads to certain outcomes and the evaluation of these outcomes. This implies that writers of persuasive texts should address both components in order to influence a person's attitude. Perlof (2001) states that persuasion is about convincing people to change their attitude towards the behaviour.

The Elaboration Likelihood Model (ELM) (Petty and Cacioppo, 1986) describes how persuasion by communication through attitude change takes place. According to Petty and Cacioppo attitudes can be altered in two ways: via the central and peripheral route. If people are highly motivated and competent to read a text, people mostly use the *central route*. This means that they devote time and energy to study all the relevant arguments carefully and systematically. When readers take the *peripheral route* they are less focused on the content of arguments; readers' motivation and ability to scrutinise the arguments are both low. Instead, people use rules or heuristics to judge the text's message, for example: 'Arguments of experts are reliable' and 'If a product is used by many people, it must be good'.

Meyers- Levy and Malaviya (1999) add a third route to this theory, the *experiential route*. When people use this route they do not base their judgement on the arguments presented in the text or on heuristics. However, when people follow the experiential route they base their judgement on the feelings that they have during the processing of the message which forms the basis of their attitude.

According to Van Zandvoort (2004) and Van Enschot- Van Dijk (2006) metaphors can be processed by all three routes: "Peripheral processing only focuses on the structure of the metaphor and experiential processing on the emotions it invokes. Central processing, on the other hand, starts from the moment a person reads the metaphors and makes an effort to understand it." (Van Zandvoort 2004, p. 18).

More research is needed to find out whether or not metaphors can make HIV/AIDS communication in particular more persuasive.

2.9   Stigmatisation

As yet mainly possible positive effects of the use of metaphors in HIV/AIDS communication have been discussed. But the use of metaphors might have unwanted negative effects too. Sontag (1978) warns for the negative implications that the use of metaphors in health education can have on people. Sontag stresses that the employment of metaphors in the description of HIV/AIDS, can falsify and distort the truth about HIV/AIDS. According to Sontag, the societal and cultural responses to HIV/AIDS create a second illness in addition to the original affliction, which is called the 'double': the layers of stigma, rejection, fear, and exclusion that are attached to diseases. Sontag (1991) says that the metaphoric use of language in the description of HIV/AIDS can be an indication of the stigma attached to the disease. For example, HIV/AIDS implies a 'sexual plague' in the form of a metaphor like: 'This sexual plague attacks your body'. The sound of this metaphor is negative and could indicate that there is stigma attached to HIV/AIDS. Because of these negative effects, Sontag advocates a de-metaphorisation of diseases such as HIV/AIDS. She states that diseases should not be referred to by metaphors, but should be understood for the biological entities that they are.

The present research will investigate under which conditions and to what extent the use of metaphors in HIV/AIDS communication in South Africa indeed contributes to stigmatisation, and if that relates to people's culture. Therefore, it is needed to find out what these cultures are and how they view diseases like HIV/AIDS.

2.10   Illness and Metaphors

Metaphorisation of the human body, its illness and health have been in existence for a long time. Jacobson-Widding (1989) states that traditional African people widely believe that disease might be the result of spells by witches, and that the sins of human kind were visited by disease as a divine punishment. According to Sontag (1991) every disease is associated with certain myths, ideologies and metaphors. Through these myths, ideologies and metaphors, people try to understand suffering and death. A disease is often difficult to understand and by using metaphors these abstract concepts can become more concrete to people. For example, a disease is often intangible, complex and it is hard for people to understand what this disease actually is and what it does to the human body. HIV/AIDS is one of these diseases. Treichler (1991) says that our social construction of HIV/AIDS is not based on objective, scientifically determined 'reality', but on what we are told about this reality by the media. According to Treichler, HIV/AIDS has been described as a disease that escapes the confine medicine to invade the body politic, infecting not just individuals but an entire society.

2.10.1 AIDS Metaphors From Around the World

The most common source domains in metaphors are the human body, health and illness, animals, machines and tools. The most common target domains are emotion, desire, morality and thought (Lakoff et al., 1987, as referred to in Kövecses and Szabo, 1996). In different cultures and different languages, people often use the same metaphors to express feelings of lust and sex. People all over

the world use metaphors for sexual matters in terms of heat (especially used to describe females), eating and animals (Emanatian, 1996). These metaphors originate from the Chagga[2]:

> *Heat:* "Heat is mapped to a variety of desirable sexual attributes. A female partner can roast, burn, or be warm. These expressions are literal to a point (though they do involve a metonymy of nu- 'she' for 'her vagina'). The heat can be attributed more directly to her body: she can have a "heaven" of fire." (Emanatian, 1996, p. 207,208)

> *Eating:* "This is the most elaborated metaphor for sex and lust in Chagga and is based on the experience of eating. "The basic correspondence (again, at least from a male point of view) is between eating and the sex act itself. The man is the eater and the woman is the food." (Emanatian, 1996, p. 203).

> *Animals:* "Animals constitute a source domain for yet another, rather limited, metaphor for sexual matters in Chagga. Potential partners with a variety of sexual attributes correspond to certain kinds of animals."(Emanatian, 1996, p. 209).

Besides metaphors that are used to express feelings of lust and sex, there are specific metaphors and symbols for the disease HIV/AIDS among different cultural groups. According to Gilmore and Somerville (1994) at least seven metaphors have been used in interpreting the meaning of AIDS: AIDS as death, AIDS as otherness, AIDS as punishment, AIDS as horror, AIDS as crime, AIDS as villain and AIDS as war.

Mei Li. (2000) notes that information about HIV/AIDS does not only come from health practitioners, but also from many other parts of society. Mei Li. adapted a corpus analysis that was done on AIDS metaphors in TIME magazine. The results leave no doubt that reporting of AIDS is characterised by the language of evil. Mei Li. found the following five metaphors which are used to describe AIDS as a form of evil:

1. *The contamination of AIDS:* This metaphor positions people living with AIDS as the cause of their own illness and a potential risk to normal people, reviving the archaic idea of an evil tainted community condemned to die. This is reflected in a rich vocabulary associated with AIDS: pervert, pollute, stigma, decay, corrupt, taint.
2. *AIDS as an evil force:* AIDS is seen as a curse. AIDS is the century's evil. The disease has: the ability to reveal itself in certain forms, to travel from wife to lover, extend its reach. Besides being the century's evil, other negative references are: slim disease, mysterious disease, witchcraft, tragedy, and an ancient curse.
3. *AIDS as a form of moral pollution or plague:* Metaphors of the moral nature, forming a bridge among morality, AIDS, and homosexuals in general. Re-diseasing, homosexuality itself is considered to be a disease. The disease is seen as a moral scourge that threatens the existence of the homosexual community. Homosexuals are equated to the sodomites, who were wicked and are being judged by God for their immoral ways.

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[2] The Chagga are a Bantu speaking indigenous African tribe that is the third largest ethnic group in Tanzania (www.1world2travel.com).

4. *AIDS as a killer:* AIDS is a terrifying killer that has left a horrifying trail of destruction in its murderous path. It is a killer with human abilities such as sweeping mercilessly. It is a killer so petrifying that doctors refuse to name it. This is the metaphor of victory for the disease.

5. *AIDS and the metaphor of decay:* Metaphors of monsters are often used. Metaphorically, AIDS is described as a disease caused by an alien who lodges itself in a healthy body and then transforms the state of health into a state of illness. AIDS victims are seen as people who are near death's door.

    (Mei Li. ,2000)

Another example of an AIDS metaphor comes from Treicher (1992): "In a Central African Republic pamphlet on AIDS the immune system is shown surrounding the human figure like a rope; viruses, pictured as beaked and batlike birds, are eating through the protective boundary". (Treicher, 1992, as cited in Weiss, 1997, p. 464).

AIDS also can be metaphorised militarily. In literature these metaphors are described as 'militaristic metaphors'. An example of a militaristic metaphor is; 'The war against AIDS has to start'. A disadvantage of the use of these military metaphors is that they can motivate overly strong actions or cause unforeseen collateral damage such as stigmatization of the ill (Sontag, 1978).

2.11   Culture and Metaphors

According to Zuring (1970), disease and death influence the representations and design of cultural systems. People's attitudes towards illness, suffering and death depend on their cultures. Their cultures are the clearest evidence of people's attitudes to life. The interpretation of metaphors also differs by culture and often also by language. It is the culture of people that defines the interpretation of a metaphor. Many researchers have claimed that there is a broad tendency across different cultures and languages for abstract, non-physical concepts to be metaphorically understood in terms of concrete concepts. An important question that arises is to which extent the same metaphors are used universally. According to Emanatian (1996) "such general tendencies and the universalising effect on metaphorical expression that our shared physiologies and experiences as humans have appear to be offset by various culturally specific factors, the nature of which is not well understood. Obviously, some source domains will be available in some cultures and not in others; for example, those having to do with geographical or meteorological features. Beyond that, culture itself constrains the ways in which even panhuman domains will be viewed" (Emanatian, 1996, p.199, 200).

Lakoff and Johnson (2003) also state that not all of us live by the same metaphors. Metaphors depend on culture and on what we focus on in life. A culture may be thought of as providing, among other things, a pool of available metaphors for making sense of reality. A great many of our conceptual metaphors are based on physical experiences through our culture. Furthermore, Black (as cited in Forceville, 1998) warns that metaphors can be understood very differently by people living in different cultures. Bharat (2000) on the other hand, states that several metaphors are used in different cultural settings. Bharat argues that the interpretation of these metaphors can differ per culture and is guided by the social construction of the illness which also might vary per culture. For example; HIV/AIDS is

seen as a woman's disease in the Indian culture, in which the disease is associated with prostitution. While in the Thai culture HIV/AIDS is seen as a man's disease.

It is interesting to investigate whether the use of metaphors differs among different cultural groups and what the effects of the usage of metaphors in HIV/AIDS communication are in various South African cultural groups. The present research will investigate which metaphors are used for HIV/AIDS by which culture in South Africa.

2.11.1 South African Cultures

The three main ethnic groups in South Africa are the black, white and coloured population. These populations have their own cultures (Gudykunst, 1991). The present research focuses on the culture of the coloured people in South Africa. For a detailed description of the other two cultural groups please refer to the thesis of Olislagers, which focuses on the Xhosa population, and the thesis of Van Sambeek, which focuses on the white population.

The coloured population in South Africa is also known as Bruinmense, Kleurlinge or Bruin Afrikaners in Afrikaans. The coloured population is an ethnic group of people who possess some degree of sub-Saharan ancestry, and stem from slaves out of India, Indonesia and the east of Africa, which South African people brought to their country. Their official language was Malayan, an important trade language during the time of slavery. Nowadays most coloured people speak Afrikaans, while about ten percent of the coloureds speak English as their mother tongue, mostly in the Eastern Cape and Natal (Goldin, 1989). However, virtually all Cape Town coloureds are bilingual, comfortably codeswitching between "Kaapse taal" (a creolised dialect of Afrikaans spoken mostly in the Cape Flats), "suiwer Afrikaans" (formal Afrikaans, as taught at school, which is strongly related to the Dutch language), and English (CENSUS, 2000). There are about 4.5 million South Africans referred to as coloured, this is 10 percent of South Africa's total population (Byrnes, 1996).

2.12   Research Questions

The discussion in the previous sections leads to the following research questions which the present research focused on:
1. Under what conditions and to what extent does the use of metaphors in written HIV/AIDS communication affect the attractiveness, understanding and persuasiveness of HIV/AIDS communication among coloured high school students in South Africa?
2. Under what conditions and to what extent does the use of metaphors in HIV/AIDS communication affect stigmatisation among coloured high school students in South Africa?

Olislagers and Van Sambeek used the same research questions, but focused on different ethnic target groups. The results of the three investigations among three different target groups will be compared to each other and finally combined. The results of the three investigations can answer the following four research questions:

1. Under what conditions and to what extent does the use of metaphors in written HIV/AIDS communication affect attractiveness, understanding and persuasiveness of HIV/AIDS communication among high school students in South Africa?
2. To what extent do ethnic group and text version, affect the attractiveness, understanding and persuasiveness of HIV/AIDS communication among high school students in South Africa?
3. Under what conditions and to what extent does the use of metaphors in HIV/AIDS communication affect stigmatisation among high school students in South Africa?
4. To what extent do ethnic group and text version, affect stigmatisation among high school students in South Africa?

2.12.1 Expectations

Relating the conceptual metaphor theory of, for instance, Lakoff and Johnson (2003) and the theories of McGlone (2007) and Gentner and Bowdle (2001) to the present study may result in diverging expectations with regard to the possible effects of metaphors on the attractiveness, understanding and persuasiveness of a text, as discussed in section 2.5. If the conceptual metaphor theory is taken as a starting point for the present research, it is expected that various metaphors are processed indirectly, which involves conceptual mapping of the metaphors' source and target domain. Therefore, various metaphors might have an effect on the attractiveness, understanding and persuasiveness of a text.

If the theory of McGlone is taken as a starting point, it is expected that the way metaphors are processed depends on their novelty. Novel metaphors and conventional metaphors are processed differently. According to McGlone novel metaphors are processed indirectly and conventional metaphors are processed directly, implying that the processing does not differ from the processing of a normal literal expression. Consequently, it is to be expected that the use of conventional metaphors might not have effects on the attractiveness, understanding and persuasiveness of a text. Moreover, if the metaphors which will be used in the present study are novel they might have effects on the variables mentioned above.

The question which arises is: When is a metaphor defined as novel and when is a metaphor defined as conventional? The opinions on this point also differ among researchers. As described in section 2.5, the distinction between metaphors by the conceptual metaphor theory is less strict than the one by McGlone. It is therefore reasonable to assume that the metaphors that are used in the present study are classified as novel by the conceptual metaphor theory, while McGlone would classify the metaphors as conventional. According to McGlone, the chances of finding any effects of metaphors are small because he classifies very few metaphors as novel. According to the conceptual metaphor theory the chances of dealing with a novel metaphor are larger and this automatically enlarges the chance of finding effects.

In short, the probability of finding effects of metaphors on the attractiveness, understanding and persuasiveness of HIV/AIDS communication is higher when the conceptual metaphor theory is taken as a starting point, which means that there is a large chance that novel metaphors are used. When the theory of McGlone is taken as a starting point for the present research there is a large chance that conventional metaphors are used. This point of discussion will be further elaborated on in chapter five.

Apart from the effects of metaphors on the attractiveness, understanding and persuasiveness of a text there are expectations about the effects that metaphors could have one stigma. Based on the theory of Sontag (1978), presented in section 2.9, it is expected that metaphors might have negative effects on the stigma around HIV/AIDS. Sontag stresses that the use of metaphors in HIV/AIDS communication can falsify and distort the truth about HIV/AIDS. What can be expected of the present research is that metaphors indeed increase the stigma on HIV/AIDS. Sontag (1978) also points out that military metaphors specifically can cause unforeseen collateral damage such as stigmatisation of a disease. For instance: When military metaphors are going to be used in the present research it is to be expected that they increase stigma on HIV/AIDS.

Based on the theory of Emanatian (1996) it is to be expected that the interpretation of the metaphors that are used in the present research depends on people's culture. Therefore, it is to be expected that differences between the different ethnic groups (coloureds, Xhosa and whites) occur on the effects that metaphors might have on the effectiveness of a text.

3   METHOD

3.1   Overview

The aim of the present research was to investigate whether or not metaphors can enhance the effectiveness of HIV/AIDS communication in South Africa. In order to reach this goal, three steps of research were taken. The first step was a corpus analysis, the second step was a focus group discussion, and the third step was an experiment. The first two steps were preliminary research. The outcome of the corpus analysis and the focus group discussion were used as a foundation for the experiment. The same research was done among coloured, Xhosa- and white high school students in Stellenbosch, South Africa. Consequently, the corpus analysis and the focus group research were only done once for all the different ethnic groups together, in cooperation with the other two researchers. These two phases will be described in sections 3.2 and 3.3 of this chapter. The last phase, the experiment, will describe the procedure for the coloured high school students and all three ethnic groups taken together, in section 3.4.

3.2   Corpus Analysis

3.2.1 Relevance

A corpus analysis is an objective way which can reveal what people have done in the past and which decisions have been made on a certain subject. A corpus study was conducted to obtain a brief overview on whether or not health educators in South Africa have used metaphors in their written HIV/AIDS communication and if so, which metaphors they used the most. The outcome of the corpus analysis was utilised in the second step; the focus group discussion.

3.2.2 Procedure

In order to find out whether or not HIV/AIDS related metaphors occur in HIV/AIDS communication in South Africa, a total of 112 brochures on HIV/AIDS were analysed. These brochures were all different, but all had the aim of educating people on HIV/AIDS. The brochures were collected from HIV/AIDS related institutions in Stellenbosch, such as the Clinic, the Centre for AIDS management, and the HIV-testing Centre. In addition an available collection of brochures on the subject HIV/AIDS which have been collected over the years by the Language Centre of the University of Stellenbosch was used. All brochures that were used for the analysis have been collected in the southern areas of South Africa. However, all material was distributed nationally and was published in a time period ranging from 1992 to 2006, except for one brochure, which dated from 1986.

Every brochure was read thoroughly by all three researchers[3]. The metaphor-identification-method by Forceville (1998), presented in theory section 2.4, was used to identify the different metaphors. Forceville's three questions were used to determine whether or not a verbal expression should be termed a metaphor. The main aim of the questions was for each researcher to identify the source and target domains, and to find out which features of the source domain were projected onto the target

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[3] Researcher 1 is Van Nistelrooij, researcher 2 is Olislagers, and researcher 3 is Van Sambeek.

domain of the metaphor. After the independent analyses were done by the three researchers separately, the inter-rater reliability between the researchers was checked by calculating Cohen's Kappa.

3.2.3 Cohen's Kappa

After the independent analyses of the 112 brochures by the three researchers the results were compared per couple of two researchers. In order to measure the inter-rater reliability the same method was used as in Hornikx (2003, p. 213). This method involves three decisions: 'Is a certain expression a metaphor?'; 'What is the source domain of the metaphor?'; and 'What is the target domain of the metaphor?'. The first decision reveals which expression is a metaphor. The second and third decisions look solely at the metaphors that both researchers found. It reveals whether the researchers identified the same source and target domains.

The Kappas that compared 'decision one' ('Is a certain expression a metaphor?') were calculated by making a file in which a '1' was given when the researcher had found a metaphor, and a '2' when the researcher did not find a metaphor. The findings of the researchers were compared with each other, and as can be seen in table 1 all the values were >.8. This indicates that the inter-rater reliability was very adequate (Neuendorf, 2002).

Table 1: Kappas concerning 'decision one'

Comparisons	Kappa (source)
Researcher1 * researcher2	.81
Researcher1 * researcher3	.89
Researcher2 * researcher3	.81
Average of researchers 1,2,3	.84

The 'second and third decisions' ('What is the source domain of the metaphor?' and 'What is the target domain of the metaphor?') had to be made for all cases in which both researchers identified the same expression as a metaphor. These decisions were made by specifying the sources and targets per found metaphor, per researcher. In total, twenty different kinds of source domains and ten different kinds of target domains were found (table 2). These sources and targets were compared among the researchers. This means that because there were more source domains than target domains found, some of the target domains appeared more than once in the twenty metaphors that were found in total.

Table 2: Found source and target domains

	Source domains	Target domains
1	Army	AIDS
2	Attackers	CD8
3	Boxer	Condom

4	Bus of uninvited friends	HIV
5	Crazy killer	Immune system
6	Defence force	Microphages
7	Dragon	Process of a virus getting into a cell
8	Enemy	Rules you live by
9	Figures	Viruses
10	Garbage men	White blood cells
11	Invaders	
12	Killer cells	
13	Monster	
14	Person	
15	Plan in the sand	
16	Process of building a house	
17	Shield	
18	Soccer game	
19	Soldier	
20	War	

The sources and targets that all three researchers specified per metaphor were compared. For each metaphor it was decided whether or not the two researchers who were compared had identified the same source- and target domain. Table 3 shows that all Kappas appeared to be 1, implying that when both researchers identified a metaphor they identified the exact same source- and target domains in all of the cases.

Table 3: Kappas concerning 'decision two' and 'decision three'

Comparisons	Kappa (source)	Kappa (target)
Researcher1 * researcher2	1	1
Researcher1 * researcher3	1	1
Researcher2 * researcher3	1	1
Average of researchers 1,2,3	1	1

After the Cohen's Kappas were calculated, a session took place in which the differences in outcome between the researchers for 'decision one' were discussed. Researcher 1 and researcher 2 had seven cases in which one of them had not identified a metaphor. Researcher 1 and researcher 3 had four cases in which one of them had not identified a metaphor. Researcher 2 and researcher 3 had seven cases in which one of them had not identified as metaphor. Consensus was achieved on which linguistic expressions should be termed a metaphors and which should not. It turned out that all the metaphors that were found could be termed a metaphor. All differences between the researchers were solely due to the fact that one of the researchers had not noticed the metaphor in one of the brochures. This resulted in a list of found metaphors that is presented in chapter four, section 4.1, table 4. From the 112 brochures that were analysed, ten brochures contained one or more metaphors.

Some metaphors occurred more often than others. These metaphors are also described in section 4.1. The three most frequently used metaphors might be the most effective metaphors to use in HIV/AIDS communication. To find out more about this, these metaphors were presented to and discussed with the participants of a focus group discussion, which was the next phase of the research.

3.3   Focus Group Discussion

3.3.1. Relevance

Apart from knowing which metaphors occur in existing material, it is important to find out which metaphors are used in oral communication with the different ethnic groups in South Africa. The metaphors that have been used in the brochures might not be used in oral communication for a certain ethnic group, or might not be used at all. In order to get a better view on which metaphors occur in HIV/AIDS communication, a focus group discussion was conducted. A focus group discussion is an ideal method to get an impression of the underlying attitudes concerning metaphors in HIV/AIDS communication. The aim of the focus group discussion was to find the three most effective metaphors per ethnic group, which could be used to design the material for the experiment.

3.3.2 Participants

Kitzinger (1995) states that the ideal group size for a focus group discussion varies from four to eight participants. This allows them to interact with each other while the group is still small enough to increase the participants' "sense of belonging to the group". According to Puchta and Potter (2004) a group of eight participants allows the moderator to encourage introvert participants to interact, express their opinions, and moderate the influence of the more dominant participants when needed. Taking this into account, it was decided the focus group should consist of seven people. All participants were health workers at the HIV- testing Centre in Stellenbosch, three of which were male and four of which were female. All ethnic groups were represented in the discussion; two men were Xhosa speaking, one man and one woman were whites, and the other three women were coloured.

Health workers were chosen to participate in the discussion because they would provide useful information on the use of metaphors in HIV/AIDS communication. They are experienced with communication on HIV/AIDS, and therefore will have a large vocabulary regarding HIV/AIDS. They might know which metaphors are being used when educating people on HIV/AIDS. Besides, health workers often engage in dialogues with people from different ethnic groups in local communities, and therefore have a good impression of how people talk about HIV/AIDS, and whether or not these people use and understand metaphors. Because it is to be expected that HIV/AIDS might still be a taboo topic for many South Africans, it was reasonable to assume that sufficient information would be gained when having a focus group discussion among health workers. They are experienced in talking freely and openly about HIV/AIDS and related topics. The experience during the focus group discussion was that the health workers did know a lot about the topic and could, after this discussion, provide three effective metaphors per ethnic group. Time wise it was not possible to arrange focus groups among the different target groups as well. However, taking into consideration that this phase was only preliminary, it was decided that one focus group among health workers would be sufficient.

3.3.3 Time and Location

The focus group discussion took place at the HIV- testing Centre in Stellenbosch on 24 August 2007. The discussion was held in the morning during a regular meeting of the health workers, which is held once every two weeks. The discussion lasted for 68 minutes in total. The tables in the room were set up in a so called u-shape (figure 2), so that everybody could see each other during the discussion:
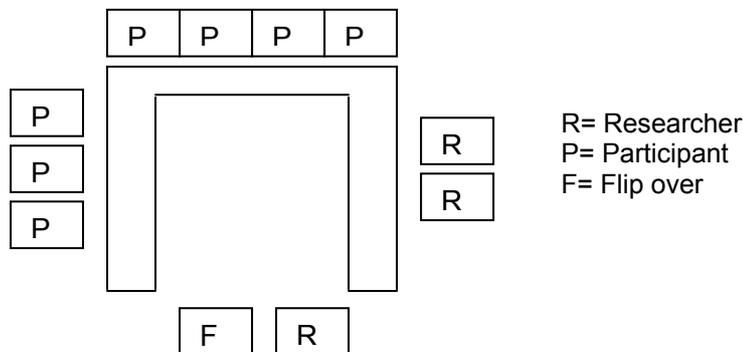

Figure 2: Table set up during the focus group discussion

3.3.4 Pre-test and Tasks

Before the session began, the three researchers designed a script (appendix 7.3). In order to make the researchers feel comfortable with their tasks and to test the method of research, a pre-test session was held. Five international students from the University of Stellenbosch were asked to participate in this pre-test session in order to simulate a real focus group discussion. In this pre-test session two points of interest were discovered. First of all, the participants had problems with understanding what a metaphor was and how it worked. It turned out that the best way to explain a metaphor appeared to be by giving an example of a metaphor for the human body. In such an example the human body is compared to a car and explained the meaning of a metaphor well. Secondly, it turned out to be important to tell something about your home country when introducing yourself before you start talking about HIV/AIDS, because most people do not know much about the Netherlands. More importantly, it can break the ice for the rest of the session.

During the discussion, the researchers had their own tasks in order to create a well-organised session. Researcher one was the moderator, researcher two was the moderator's assistant and minutes secretary, and researcher three was the main minutes secretary and observed the discussion. The moderator made sure that all the essential information was collected within the available time frame and that the discussion went according to script. The minutes secretaries documented thoroughly who said what during the session. A voice recorder was used to record the discussion, this way the session could be replayed during the analysis. Finally, an elaborated report on the session was written (appendix 7.4). A short overview of the session is given in chapter four, section 4.2.

3.3.5 Content of the Discussion

The focus group discussion started with an introduction of the researchers. After that, the topic of the research and the aim of the focus group discussion were presented to the health workers. This introduction was needed to ensure that the health workers knew what was expected of them; hence

they could start thinking about the subject and start initiating ideas. They were also encouraged to talk to each other rather than to address the moderator. After the introduction, the participants were asked to introduce themselves by telling something about their work and their experiences. This was followed by a conversation on the following subjects: the definition of a metaphor, examples of metaphors, the use of metaphors by health workers, and their opinion on what would be the most effective metaphors for students in 8th to 11th grade of high school.

The second step of the session investigated whether metaphors could be effective for HIV/AIDS communication and if health workers had experienced positive or negative effects of metaphors. On top of that, the participants were asked if they used different metaphors for different ethnic groups. Kitzinger (1995) advises group exercises in order to encourage people to start a discussion on a certain topic. He states: "A common exercise consists of presenting the group with a series of statements on large cards. The group members are asked collectively to sort these cards into different piles depending on, for example, their degree of agreement or disagreement with that point of view or the importance they assign to that particular aspect of service. For example, I have used such cards to explore public understandings of HIV transmission (placing statements about "types" of people into different risk categories). Such exercises encourage participants to concentrate on one another (rather than on the group facilitator) and force them to explain their different perspectives" (p. 300). This method was used in the third step of the focus group discussion. In this part, the metaphors that were revealed by the corpus analysis and the focus group discussion were presented on several cards to each participant. The participants were asked to rank these cards individually from most effective metaphor to least effective and discuss this with each other. After that they were asked to rank these same cards collectively from most effective metaphor to least effective. This had to be done for every ethnic group. The individual top three lists were discussed in order to reach consensus among the participants which eventually resulted in a top three of most effective metaphors per ethnic group.

3.3.6 Outcome

The outcome of the focus group discussion was essential to design the material for the next phase of the present research; the experiment. The top three of most effective metaphors named by the focus group participants was compared to the top three that was brought to light in the corpus analysis. Together, these outcomes were used to design metaphorical texts that were used in the experiment, see section 4.2.

3.4   Experiment

The experiment was the last phase of the present research. During this phase the effectiveness of metaphors in HIV/AIDS communication among high school students was tested. This section covers the method that was applied for the coloured high school students in Stellenbosch, South Africa.

3.4.1 Material

The outcomes of both the corpus analysis and focus group discussion revealed several metaphors which might be useful in HIV/AIDS communication. Two examples of the found metaphors in HIV/AIDS communication are the source domains 'army' and 'fire station' which refer to the target domain 'immune system', which protects the body against HIV/AIDS. The rest of the found metaphors are discussed in results section 4.2. In order to test the effectiveness of these metaphors, educational texts, which portrayed these metaphors, were designed in collaboration with Olislagers and Van Sambeek. A total of five text versions were designed; four texts which contained a metaphor and one neutral text. All texts explained the immune system with regard to HIV/AIDS. This subject was chosen because the immune system is difficult to understand and metaphors could help young people to understand it better. The texts were written in English because much of the public information in South Africa is in English and it is expected that all different ethnic groups of high school students speak English to some extent. Each target group was exposed to four text versions; one neutral text and three metaphorical texts. This means that for the coloureds, texts A, B, D and E were used (appendix 7.7). Text C was designed for the Xhosas, section 4.2 in chapter 4 will explain more about the different text versions that were used for the target groups. All texts were about the same in length and metaphorical weight. All metaphorical models were attempted to be the same.

Different metaphors were used in the texts, because this way they could be compared to the neutral version as well as to one another. By comparing the metaphors to one another it can be found out whether or not the possible effects are due to the use of metaphors in general, or due to a specific metaphor. A questionnaire was designed to measure the effectiveness of the various text versions. This questionnaire will be elaborated on in section 3.4.4.

Pre-test

In order to find out if the texts and the questionnaire were of good quality, two different pre-tests were held. One pre-test was held among experts and one among the target group: high school students (appendix 7.5).

Pre-test among Experts

The first pre-test was held among experts. The two experts that participated work at the Language Centre of the University of Stellenbosch, and obtained a degree in document design. Both experts received all five text versions and answered questions about the quality of the texts. These questions concerned the understanding and readability of the texts. Apart from knowing whether the language of the text was readable and easy to understand, it was also important to find out if the content of the different texts was the same. The only difference in the texts was meant to be the style, not the content. Therefore, after they read all texts, the experts had to indicate whether the texts were similar in meaning.

As a manipulation check two questions were posed. The first question was designed to reveal if the difference in style between the metaphorical texts and neutral text was noticeable. The second question tried to reveal whether the neutral text and the texts with a metaphorical model differed in the use of metaphorical language. This method of pre-testing was based on Laanstra (2005).

Outcomes Pre-test among Experts

Both experts indicated that the neutral text A and the text with the 'army' metaphor (text B) were easy to understand and easy to read. The paragraphing was short and the texts were clear. A general comment was made regarding the texts that contained metaphors with the 'boxer' (text C), the 'house' (text D), and the 'fire station' (text E), that sometimes the distinction between reality and the metaphor was too vague. The text with the 'boxer' metaphor seemed the most problematic. Both experts indicated that this metaphor was the most difficult to read. All three of these metaphorical texts were thoroughly reread and revised. The distinction between the metaphorical language and reality was sharpened. Also, difficult words were replaced by more simple words. Both experts indicated that all texts were quite similar in meaning. They also noticed that, although all text conveyed the same message, they used different strategies to get the message across.

The manipulation check showed that the experts disagreed that metaphorical language was used in the neutral text A. They all agreed that in text B, C, D, and E metaphorical language was used. This implies that the experts noticed that there was one neutral text and four metaphorical texts.

Pre-test among Target Group

Because the target group of this research was made up of high school students, it was important to do an additional pre-test. It was relevant to know if high school students thought that the texts and questionnaire were of good quality and especially if they were clear and understandable for them. Five high school students were asked to participate in this pre-test. Three of these students were whites, one was coloured, and one was Xhosa. They were all requested to read one of the texts and then fill out the questionnaire. After that, they had to answer three questions about the texts. The first question was asked to reveal whether the text was understandable. If something had not been understood, the student was asked to indicate what made it hard to understand. The second question was about language; 'Was the language easy to understand?'. If the student did not understand the language, he or she was asked to indicate why it was difficult. The last question was asked to find out if the text was clear, and if not, what part was not clear.

The respondents were also asked their opinion about the questionnaire. They first had to indicate whether they understood the questions and the language that was used in the questionnaire. If they had not understood the language or the questions, they were asked to indicate what was difficult and why.

Outcomes Pre-test among Target Group

The evaluation of the text revealed that all students found the texts understandable and clear. Four students found the language in the text easy to understand. Only one student revealed that some words were a bit hard to understand. The questions about the questionnaire revealed that three students understood all the questions. Two students said that they understood most questions, but that there were some parts that were difficult.

All the participants replied that they found the language in the questionnaire easy to understand. In order to find out which questions might cause problems, a rule was set that all questions that had been answered with 'I don't know' by three students or more would be reconsidered. With ten questions this

seemed to be the case. A total of six of these ten questions were removed; they seemed to be too difficult and were impossible to revise. The following statements were left out: 'The writer of the text is dependable', 'The text is rational', 'The text is exaggerating', 'The text is appropriate', 'The text is preachy', and 'The text has a complaining tone'. These statements could be omitted since there were plenty of other questions covering the same variables. Three statements were revised. The statement 'the writer talks to me in an informal way' was changed into: 'The writer talks to me in the same way as my family and friends would do'. The statement 'the text makes the immune system more recognisable' was changed into: 'The text makes it easier to picture what the immune system is'. And lastly, the statement 'I find the content of the text realistic' was changed into 'I think that the text is realistic'. One statement had received the reply 'I don't know' at least three times, but it was unable to be changed and could not be left out. This was the following statement: 'In the text, the immune system is explained by using examples that make the immune system more concrete'.

3.4.2 Respondents

This particular research was done among coloured South Africans. As mentioned before, there are two other ethnic groups among whom the present research was done: Xhosas and whites. In total at least 240 respondents (of which 50 percent was female and 50 percent male) per ethnic group were needed. This section first describes the coloureds as separate group and after that the South African youths existing of coloureds, Xhosas and whites will be elaborated on.

Descriptive Statistics for Coloureds

The respondents were coloured high school students in grades eight to eleven of the Lückhoff High School in Stellenbosch. In total, the 369 respondents who participated were between 12 and 19 years old, and the average age was 16 (SD=1.33). The grades these respondents were in were quite evenly distributed. Twenty percent was in grade eight, 28 percent in grade nine, 27 percent in grade ten and 25 percent was in grade eleven. There were slightly more female respondents (51 percent) than male respondents (49 percent). 96 Percent of the respondents indicated that their mother tongue was Afrikaans and four percent indicated they speak English.

Descriptive Statistics for South-African Youth

Note: These are the descriptive statistics for all respondents who filled out questions about texts A, B, E or 'Stigma'. Texts C and D were left out of the analyses because only one or two of the ethnic groups read these texts. The other texts were read by all the three groups.

In order to get a more elaborate picture of the South African youth in general, all the ethnic groups were put together in one database. The same analyses as the ones that had been done for the coloureds were done for this combined dataset. In total 936 respondents participated from 12 to 22 years of age of which the average age was 16 (SD=1.78). There were 139 respondents who were in grade eight (15 percent), 171 who were in grade nine (18 percent), 301 who were in grade ten (32 percent), and 325 were in grade eleven (35 percent). In total 524 respondents were female (56 percent) and 405 were male (44 percent). 615 Respondents spoke Afrikaans (66 percent), 286 spoke

Xhosa (31 percent), 25 spoke English (3 percent), and eight respondents indicated that they spoke a different language (1 percent). The ethnic group that was represented by the largest number of respondents was the coloureds: 369 respondents (40 percent), followed by the Xhosas: 285 respondents (31 percent), the whites: 261 respondents (28 percent), and lastly the group that is referred to as 'other': 18 (2 percent).

3.4.3 Design

It was decided to use a within-group design for this research. The respondents would receive one of the metaphorical texts as well as the neutral text. Half of the respondents would receive the neutral text first, and the other half would start with one of the metaphorical texts. The respondents had to read one text and answer questions about this version. After this one text had been read and the questionnaire was completed and handed in, a second text would be presented together with a second questionnaire.

However, in practice it appeared that this design was not appropriate. During the first data collecting session, the design immediately turned out to be too difficult for research among high school students. It turned out to be too much to read for the students, who could not concentrate for such a long period of time. The discipline among the students in the classes was not good enough to concentrate on reading two texts and filling out two questionnaires, which contain 122 questions in total. The design of the research was immediately changed into a between-group design because a within-group design would only lower the quality of the results. The respondents received only one text they had to read and one questionnaire that they had to fill out. It was noticed that for some students this was still a tough task to complete. The final research design is shown in figure 3.

Neutral text → 7 male, 8 female grade 8
8 male, 7 female grade 9
7 male, 8 female grade 10
8 male, 7 female grade 11

Metaphor 1 → 7 male, 8 female grade 8
8 male, 7 female grade 9
7 male, 8 female grade 10
8 male, 7 female grade 11

Metaphor 2 → 7 male, 8 female grade 8
8 male, 7 female grade 9
7 male, 8 female grade 10
8 male, 7 female grade 11

Metaphor 3 → 7 male, 8 female grade 8
8 male, 7 female grade 9
7 male, 8 female grade 10
8 male, 7 female grade 11

Questions on 'Stigma no text' → 7 male, 8 female grade 8
8 male, 7 female grade 9
7 male, 8 female grade 10
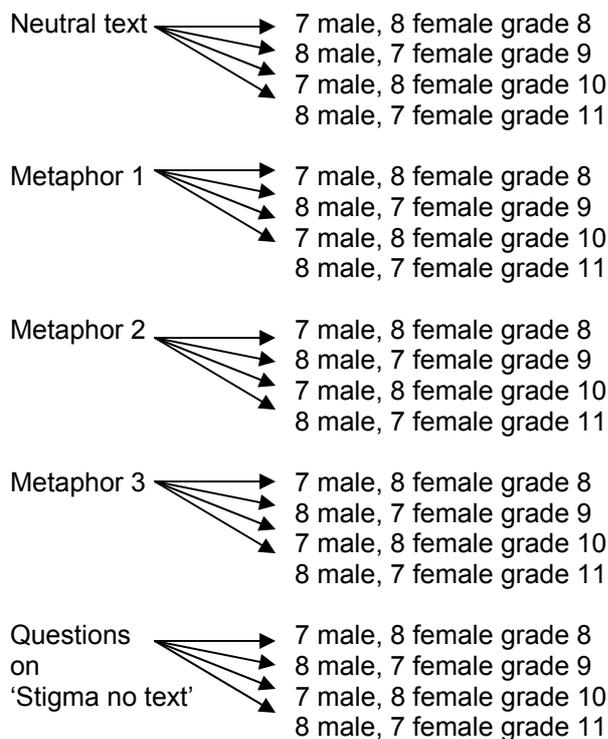8 male, 7 female grade 11

Figure 3: Research design for coloured high school students

Of the coloured ethnic target group 106 respondents read text A (29 percent), 61 respondents read text B (17 percent), 57 read text D (15 percent), and 54 students read text E (15 percent). Of the South African youths 217 respondents read text A (28 percent), 174 read text B (23 percent), and 177 students read text E (23 percent).

In order to measure to what extent high school students stigmatise people with HIV/AIDS, additional respondents were needed. The data of the respondents who had read one of the texts were compared to baseline information of respondents who had to answer the same questions on stigma, but did not read any text (will be referred to as 'stigma no text'). An extra 60 respondents per ethnic group were needed in order to quantify the amount of stigma without reading any text. Ninety one of the coloured students filled out the questionnaire to measure 'stigma no text' (25 percent). Two-hundred and two of the South African students filled out a questionnaire to measure 'stigma no text' (26 percent).

3.4.4 Instrumentation

In this section will be discussed which variables were measured and how these variables were operationalised. All the variables were measured by asking the high school students to fill out a questionnaire.

Independent Variables

The independent variables were 'text version', 'ethnic group', 'mother tongue', 'age', 'gender' and 'high school grade'. The questionnaire started off with questions that measured the independent variables. The respondents' level of education (grade) was revealed by presenting a semantic differential existing of grades eight until eleven. After that, the respondents were asked to write down their exact age and they had to indicate whether they were female or male. Even though in South Africa many different languages are spoken, most public information is only provided in English. This might influence, for instance, the understanding of the information in a text, since for many people English is not their mother tongue. Therefore, the respondents were asked to indicate which language is mostly spoken at their home. The last question referred to the ethnicity of the respondents. This was measured by directly asking them what their ethnic background is.

Because the target group of the research consisted of high school students, five point Likert-scales were chosen to use throughout the whole questionnaire to facilitate the measuring of the dependent and independent variables. The values of this five point scale varied from totally disagree (1) to totally agree (5). This implies that the higher the score was, the more the student agreed with a certain statement. Five point Likert-scales are easy for students to understand; it is less complicated to choose from five possibilities than from, for example, seven possibilities. If students don't know what to fill in it is easy for them to fill out the middle choice.

The section below describes the dependent variables and their internal consistency. Also 'metaphor recognition' and 'perception of realism' will be covered.

Dependent Variables

Attractiveness

The variable 'attractiveness' in the present research is operationalised in a similar way as in Laanstra (2005). 'Attractiveness' is operationalised by subdividing this variable into 'interest in the text' and 'judgement of the text'. Figure 4 shows how 'attractiveness' was measured:
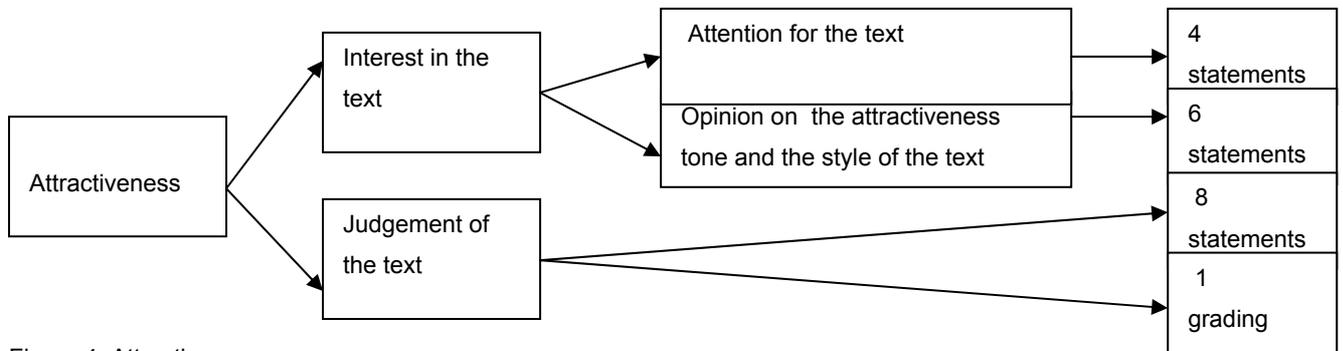
Figure 4: Attractiveness

1. Interest in the text

'Interest in the text' was measured with a combined item variable. It distinguished two terms: 'attention for the text' and 'opinion on the attractiveness of the tone and style in the text'. 'Attention for the text' was tested by using four statements. The first question measured to what extent the text gave enough incentives to read it. The second and third question revealed the motivation to finish reading the text. The last question tried to find out if the respondents would be motivated to read the text on their own initiatives. Seven questions were presented on the way the reader is approached and on the 'attractiveness of the tone and the style in the text'. The questions tried to reveal if the writer had used direct language; if the writer had used informal language; if the writer had used language which was perceived as easy-going; if the writer had used lively language; the quality of the text; if the text was interesting; and the likeability of the style of the text.

2. Judgement of the text

The judgement of the text was measured by using a combined item variable and by asking the respondents to grade the texts. Seven questions were designed to measure the judgement of the attractiveness of the texts. All questions were retrieved from Laanstra (2005). The first five questions measured: dullness; liveliness; formalness; seriousness; and to which extent the reader agreed with what has been said in the text. The next two questions measured the attractiveness of the language and the suitability of the language in the text for HIV/AIDS communication. The last question tried to determine what mark the respondents would give the text. This mark varied from 1 to 10 (1 is very low and 10 is very high). This implies that this is the only question which was not measured on a five point Likert-scale, but on a ten point scale. Because this mark for the text is measured on a different scale than the eighteen statements mentioned before, this average mark will be discussed separately from the statements in chapter four, section 4.3.

The Cronbach's Alpha of these questions was calculated to determine to what extent the various questions measured the same variable. The Cronbach's Alpha turned out to be .87 for the coloureds and .88 for the South African youths.

Understanding

The dependent variable 'understanding' was measured the same way as in Laanstra (2005). Laanstra used six questions to measure 'understanding'. The first four directly tried to reveal the text's clearness, conciseness, readability, and to which extent the high school students understood the text. The next two questions were based on Hoeken (1998). The first question was on the use of illustrative and concrete language in the text, the second question referred to the use of clear language in the text.

The Cronbach's Alpha of these questions turned out to be .75 for the coloureds and .77 for the South African youths.

Persuasiveness

According to Aristotle, persuading someone means that the receiver thinks your ideas are valid. In order to reach this goal three categories need to be addressed: pathos, logos, and ethos. In this research, the persuasiveness of the text was measured by 18 questions based on Feltham (1994) and Ohanian (1990).

The first nine questions measured the *ethos* of the text. According to Hoeken (1998) the credibility of the source (ethos) is part of the persuasiveness of a text. The ethos of a text refers to the credibility of the sender of the text and was measured by looking at the trustworthiness and reliability, and the expertise of the sender. The first four questions measured the trustworthiness and reliability by asking questions about the believability, the credibility, the trustworthiness, and the reliability of the writer of the text. The last five questions measured the expertise of the writer by measuring whether or not the sender was: an expert, experienced, knowledgeable, qualified and skilled.

The next three questions measured the *logos* of the texts. The logos of a text is the appeal based on logic and reason. These three questions measured to what extent the text is: informative; dealing with facts; and logical.

The last six questions that measured 'persuasiveness' dealt with the *pathos*; the emotion that the text initiated. It measured to what extent: the text affected the respondent's feelings; the respondent was emotionally touched by the text; the respondent was given new ideas by the text; the text reached out to the respondent; the respondent found the texts inspiring; the respondent found the texts exciting.

The Cronbach's Alpha of these questions turned out to be .83 for the coloureds and also .83 for the South African youths.

Stigma

Another dependent variable was 'stigma'. Six questions which are based on Plaat (2005) were designed in order to measure what influence the metaphorical models had on stigma. The first two questions tried to reveal if after reading the text the respondent was less likely to hug, and share his or her water bottle with a HIV infected person. The third and fourth question revealed if after reading the text the respondent would be less likely to shake the hand of a person who is HIV positive and would want to avoid a HIV infected person. The fifth question measured if the text made the respondent feel

that HIV infected people had done something wrong. The last question tried to reveal whether or not the text made the respondents think that they would feel ashamed if they were infected with HIV.

The Cronbach's Alpha of these questions turned out to be .73 for the coloureds and .75 for the South African youths.

A measurement of stigma was done without reading any text, in order to be able to compare stigma after having read one of the texts to the stigma that is already attached to HIV/AIDS (without reading a text). The same six questions were posed to measure 'stigma no text' as to measure 'stigma' after reading a text. Only the phrase 'after reading the text', was left out in these questions.

The Cronbach's Alpha of these questions turned out to be .65 for the coloureds and .72 for the South African youths.

Metaphor recognition

In the present research it is important to measure if respondents recognised the metaphors in the different text versions. If they did not recognise the metaphors as such, their answers might be based on other factors of the text and not on metaphorical language; if so, then the manipulation has failed. Five questions were presented on the recognition of metaphors. The first question tried to reveal whether the reader recognised that the features of the source domain were mapped upon the target domain. The second question tried to reveal to what extent the text made the target domain more concrete. The third question tried to reveal whether the text made the target domain more recognisable. The fourth question was on the use of lively language. The last question tried to reveal if the information in the text was presented in a simple way.

The Cronbach's Alpha of these questions turned out to be .78 for the coloureds and .78 for the South African youths either.

Perception of realism

According to Jansen, Croonen, and De Stadler (2005) it is important to measure if respondents think that the text that is presented to them is realistic. If respondents do not think that the text is realistic this will influence their answers to the questions in the questionnaire. The standard of realism of the texts was measured by confronting the respondents with the statement 'I think that the text is realistic' and the statement 'I think that the text is common'. Both statements were retrieved from Jansen et al..

The Cronbach's Alpha of these questions turned out to be .14 for both the coloureds and the South African youths. Since this value is too low, it was impossible to combine these two items into one variable, therefore only one question was analysed. It was decided to solely use the item that most directly measured the ´perception of realism´. The statement 'I think that the text is realistic' was therefore used to measure this variable, while the statement 'I think that the text is common' was left out for the rest of the analysis. In the questionnaire these are questions number 60 and 61 (appendix 7.6.1). Another motivation to leave out the statement 'I think that the text is common' is because 'common' could be interpreted as 'vulgar' in South Africa.

3.4.5 Procedure

The Lückhoff High School agreed on handing out the texts and questionnaires in class on October 2 and 3 2007. The three researchers started off by introducing themselves and after that they explained what the students needed to do. It was explained that they should first thoroughly read the whole text and then fill out the questionnaire. The texts and questionnaires were handed out after this introduction. The researchers stayed in the classroom in case there were any questions and to see if everything went as planned. The whole process took about 20 minutes per class. Most sessions went as planned but in some classrooms the students were noisy and disturbed other students.

3.4.6 Analyses

In order to answer the research questions, all the collected data were entered into SPSS. Before any analyses could be done, there were two questions that needed to be recoded by reversing them (1=5, 2=4, 3=3, 4=2, and 5=1). These were questions 32 and 41 (appendix 7.6.1). After this the analyses that led to the answers to the research questions could be carried out. Pearson's correlation coefficients were calculated to find out to what extent 'perception of realism' cohered with the dependent variables 'attractiveness', 'understanding', 'persuasiveness', and 'metaphor recognition'. Pearson's correlation coefficient 'r' measures the linear relationship between two variables (McClave, 2003, p.306). Also, Multivariate Analyses of Covariance (MANCOVA), and Univariate Analyses of Variance (ANOVA) were carried out. MANCOVA is a multivariate procedure in which group differences are assessed on more than one metric variable which includes metric variables as covariates. ANOVA is a Univariate procedure in which group differences are assessed on a single metric variable. The MANCOVA and ANOVA enabled various text versions and different ethnic groups to be compared on the dependent variables that are mentioned in section 3.4.4 (Hair, Black, Babin, Anderson, Tatham, 2006).

4   RESULTS

In this chapter the results of all three research phases are presented. Section 4.1 describes the results of the corpus analysis. In section 4.2 the results of the focus group discussion are presented. Section 4.3 describes the results of the last and most important research phase; the experiment.

4.1   Corpus Analysis

This section starts off with a short overview of which metaphors were found in the analysed brochures about HIV/AIDS. After that the metaphors that occurred most frequently will be discussed briefly.

In table 4 an overview is presented of the metaphors that were identified in collaboration with Olislagers and Van Sambeek.

Table 4: Overview of metaphors that were found during the corpus analysis

Brochure	Metaphors that occur in the brochure
1. VIGS	- killer/attackers are used to describe HIV - soldier/protector is used to describe white blood cell - the enemy that kills secretly is used to describe HIV
2. Metropolitan Positive Health	- person is used to describe virus
3. Soul City: Living with HIV	- army is used to describe the immune system
4. ThethaNathi	- one crazy killer is used to describe this disease (HIV/AIDS)
5. Soul City: This is my life!	- boxer is used to describe HIV - shield is used to describe condom - boxer is used to describe AIDS
6. Brochure: Brenda het 'n drakie in haar bloed	- dragon is used to describe HIV - soldiers are used to describe white blood cells
7. Brochure: Battles in blood….HIV& the immune system	- defence force is used to describe the immune system - invaders are used to describe HIV - army is used to describe the blood cells of our immune system - killer t-cells are used to describe CD8-cells - garbage man is used to describe macrophages - war is used to describe HIV in the blood
8. Ubangani: A Parent Guide for Life Skills, Sexuality and HIV/AIDS Education	- boxer is used to describe white blood cells - monster is used to describe HIV
9. How 2b AIDS aware	- bus full of uninvited friends is used to describe AIDS - process of building a house is used to describe the process of a virus getting into a cell - army is used to describe white blood cells - plan drawn in the sand is used to describe viruses - figures are used to describe viruses - figures are used to describe a cell
10. Play it safe	- soccer game is used to describe your life

In total 26 metaphors were found in ten different brochures. From the 112 analysed brochures 8.93 percent contained one or more metaphors. The metaphors with the following source domains to explain HIV/AIDS were used the most in the brochures: 'army' 3x; 'boxer' 3x; 'soldier' 2x. These three metaphors were presented to the participants of the next phase of research; the focus group discussion. The choice to present these three metaphors to the participants was made because there is a considerable chance that health workers know these metaphors and have experience with using them in HIV/AIDS communication, because of the frequency with which they are used in brochures.

4.2   Focus Group Discussion

In this section an overview of the most important results of the focus group discussion is presented. Since the focus group discussion is part of the preliminary phase of the experiment, only the results that were used in the experiment will be discussed. A more elaborate report of what happened during the focus group discussion can be found in appendix 7.4.

The participants in the focus group, who were health workers, were asked to name the metaphors that they use when educating people about HIV/AIDS. During a brainstorm session several metaphors were revealed by the participants, which were not found in the corpus analysis. These metaphors are presented in table 5.

Table 5: Metaphors revealed during focus group discussion

Source domains	Target domains
checking for fire	VCT
burgling into a house	VCT
policeman	condom and immune system
eating sweets with wrappers on	safe sex
jacket	condom
umbrella	condom
missing a match	having a period
someone's blood is dead	being HIV positive

After these metaphors were revealed, the metaphors that occurred most frequently in the corpus analysis were presented to the participants. The goal of the focus group discussion was for the health workers to make a top three of the most effective metaphors for students in 8th to 11th high school grade, per ethnic group: coloureds, Xhosas and whites. The participants were asked to choose from the metaphors they had just come up with together with the metaphors from the corpus analysis.

Before this was done two important points were put forward by the health workers. The first aspect they pointed out was that the 'soldier' and the 'army' metaphors are the same: they both draw upon the concept of 'war' and were from now on looked at as one and the same metaphor. The second aspect was that the health workers thought there were no differences in the use of metaphors between the coloured and the white South Africans. This implicates that in their view the top three for these two ethnic groups have to be the same.

According to the participants of the focus group discussion the top three of most effective source domains of metaphors to explain HIV/AIDS as a target for the coloureds and whites are: 'army/soldier', 'house/security system', and 'fire station'.

The top three of most effective source domains of metaphors to explain HIV/AIDS for Xhosas are: 'army/soldier', 'boxer', and 'fire station'.

The health workers were also asked if the use of metaphors could lead to specific feelings, associations or emotions. One of the participants indicated that the use of metaphors could lead to stigmatisation of HIV/AIDS infected people. This is because the disease is not directly pointed out and talked about. People talk about HIV/AIDS through something else, the metaphor.

It was also suggested by one of the participants to always make sure that people have understood the metaphor in order to prevent confusion. This is an important issue among low literates. Therefore, a pre-test of the different texts that are going to be used during the experiment is essential.

The results of both the corpus analysis and the focus group discussion had to be combined in order to choose three metaphors which were used in the four metaphorical texts that the respondents had to read during the experiment. Both the corpus analysis and the focus group discussion revealed that the army metaphor was mostly used and expected to be most effective among all target groups. Consequently, this was the first metaphor used in the experiment. The corpus analysis showed that the soldier metaphor was second in line of most used metaphors. However, the focus group discussion revealed that this metaphor draws on the same concept as the army metaphor, the concept of war, and therefore is similar. The boxer metaphor was, according to the corpus analysis, the third most used metaphor. However, the focus group discussion revealed that the boxer metaphor is only effective to use among Xhosas because boxing is a big sport for these people, not among coloureds and whites. Therefore, the participants of the focus group discussion came up with two alternative metaphors that were supposed to be effective among coloureds; the house/security system metaphor and the fire station metaphor. These were the two next metaphors that were used in the texts for the experiment.

4.3   Experiment

In this section the results of the experiment are presented. Section 4.3.1 reveals the results for the coloured high school students. For the specific results of the other two investigated ethnic groups please refer to Olislagers for the Xhosa population and to Van Sambeek for the whites. Section 4.3.2 will discuss the results of the three ethnic groups in South Africa: coloureds, Xhosas, and whites.

Cohen's Power was calculated when an analysis appeared to be insignificant. This was done to find out if the number of respondents could be the cause of insignificancy. Each power analysis was done for large, medium and small effects. According to Cohen (1991) the only specification for power is .80, a convention proposed for general use. A materially smaller value than .80 would incur too great a risk of a Type II error. A Type II error occurs when an assumption is rejected when in reality it should have been accepted. Therefore in the present research .80 will be regarded as a standard for adequacy.

4.3.1 Results for Coloureds

In this section the results of the analyses for the South African coloureds will be presented. First, the 'perception of realism' is described. Second, the Multivariate Analysis is covered with the independent variable 'text version' and the dependent variables 'metaphor recognition', 'attractiveness' (including 'average mark'), 'understanding', and 'persuasiveness'. Third, the Univariate Analysis measuring 'stigma' is described.

4.3.1.1 Perception of Realism

The two items measuring the 'perception of realism' attempted to find out whether the respondents perceived the text they had just read as realistic. As can be seen in section 3.4.4 the Cronbach's Alpha of these two items was too low. Therefore, only one of the items was take into account.

In order to find out whether or not the 'perception of realism' could influence the results of further analyses, the correlations between 'perception of realism' and the variables 'metaphor recognition', 'attractiveness' (including 'average mark'), 'understanding', and 'persuasiveness' were calculated and presented in table 6.

Table 6: Pearson's Correlations between 'perception of realism' and dependent variables

Dependent variables	Realism
metaphor recognition	.42**
attractiveness	.27**
attractiveness: average mark	.00
understanding	.21**
persuasiveness	.2**

**=p<.01

Because the correlations between 'perception of realism' and the dependent variables 'metaphor recognition', 'attractiveness', 'understanding', and 'persuasiveness', were significant, it was reasonable to believe that the ´perception of realism´ could have influenced the evaluation of the effectiveness (attractiveness, understanding, and persuasiveness) of the different texts. Therefore 'perception of realism' was taken as a covariate in the Multivariate Analysis of Variance that is described below.

4.3.1.2 Multivariate Analysis

Effects of text version on the dependent variables

A Multivariate Analysis of Covariance (MANCOVA) was carried out with the independent variable 'text version' and the dependent variables 'metaphor recognition' (M=3,77, SD=.67), 'attractiveness' (M=3,74, SD=.57), 'average mark' (M=7.88, SD=1.86), 'understanding' (M=3,93, SD=.66), and 'persuasiveness' (M=3,59, SD=.49), with the covariate 'perception of realism'. This analysis showed that there was no significant overall effect of 'text version' ($F(3, 231)=1.1$, $p=.35$, $\eta^2=.02$). Cohen's power analysis showed that if in reality the effect of the independent variable 'text version' on the dependent variables would be large or medium, the power of this test, e.g. the chance that this effect

would be detected, exceeded .80 and that the power of this test could therefore be regarded as adequate (ES=.40, *power> .995*; and ES=.25, *power>.995*). This implies that the chance that a Type II error occurred is low (1-.995) and therefore the chance that in reality there is a significant effect of 'text version' for a target group such as in this study is low. The power was not adequate, however, to detect a possible small effect which might occur in reality <.80 (ES=.10, *power=.77).* This implies that the chance that a Type II error occurred is slight (1-.77) and therefore there is a slight chance that in reality there is a significant effect of 'text version' for a target group such as in this study, that was not detected here (for definitions of large, medium and small effect sizes, see Cohen, 1991).

The covariate 'perception of realism' showed a significant effect (F(1, 231)=7.04, p<.001, η²=.14).

4.3.1.3 Univariate Analysis

Effect of text version on stigma

A Univariate Analysis of Variance (ANOVA) was carried out to find possible differences between the 'stigma' after having read text A, B, D, E, and the 'stigma' that was identified without having read a text. In this way, conclusions could be drawn about whether stigma regarding HIV/AIDS would be enlarged after reading any of the texts. The dependent variable of the analysis was 'stigma' and the independent variable was 'text version'. The average mean of 'stigma' was 2.49 (SD=.81). No significant effects were found (F(4, 366)=1.61, p=.18, η²=.02). Cohen's power analysis showed that if in reality the effect of the independent variable 'text version' on the dependent variable 'stigma' would be large, medium, and small the power of this test, i.e. the chance that this effect would be detected, exceeded .80 and that the power of this test could therefore be regarded as adequate (ES=.40, *power> .995*; and ES=.25, *power> .995;* and ES=.10*. power=.90*). This implies that the chance that a Type II error occurred is low (1-.995) and therefore the chance that in reality there is a significant effect of 'stigma' for a target group such as in this study is low. This implies that there is no reason to assume that coloureds found the texts stigmatising.

4.3.2 Results for Coloureds, Xhosas, and Whites

In this section the results of the Analysis of (Co)Variance for three different ethnic groups living in South Africa (coloureds, Xhosas, and whites) are presented. The analyses were done to find possible differences between the ethnic groups and to draw conclusions regarding South African youths in total. The analyses were done in collaboration with Olislagers and Van Sambeek. Text C and D were left out of the analyses because not all ethnic groups had read these texts. Text A, B, E, and the 'stigma' that was measured without having read a text were used in these analyses.

4.3.2.1 Perception of Realism

As can be seen in section 3.4.4 the Alpha of the two items that measured the 'perception of realism' was too low. Therefore, only one of the two items will be analysed.

In order to find out whether or not the 'perception of realism' could significantly influence the results in the Multivariate Analysis, the correlations between 'perception of realism' and the variables 'metaphor

recognition', 'attractiveness' (including 'average mark'), 'understanding', and 'persuasiveness' were calculated.

Table 7: Correlations between 'perception of realism' and dependent variables

Dependent variables	Realism
metaphor recognition	.48**
attractiveness	.37**
attractiveness: average mark	.17**
understanding	.25**
persuasiveness	.32**

**=p<.01

As can be seen in table 7 all the correlations between the dependent variables and 'perception of realism' were significant. Therefore, 'perception of realism' will be taken as a covariate in the Multivariate Analysis that will be described in the section below.

4.3.2.2 Multivariate Analysis

Effect of text version and ethnic group on the dependent variables

A Multivariate Analysis of Covariance (MANCOVA) was carried out with the independent variables 'text version' and 'ethnic group', and with the dependent variables 'metaphor recognition' (M=3.82, SD=.63), 'attractiveness' (M=3.71, SD=.61), 'average mark' (M=7.81, SD=1.84), 'understanding' (M=3.99, SD=.65), 'persuasiveness' (M=3.55, SD=.48), and the covariate 'perception of realism'. This analysis showed that there was no significant overall effect of 'text version' ($F(2, 568)=1.12$, $p=.35$, $η²=.01$). Cohen's power analysis showed that if in reality the effect of the independent variable 'text version' on the dependent variables would be large, medium, and small the power of this test, i.e. the chance that this effect would be detected, exceeded .80 and that the power of this test could therefore be regarded as adequate (ES=.40, *power> .995*; and ES=.25, *power> .995;* and ES=.10. *power=.95*). This implies that the chance that a Type II error occurred is low (1-.995 and 1-.95) and therefore the chance that in reality there is a significant effect of 'text version' for a target group such as in this study is low. In other words, there is no reason to assume that South African high school students perceived differences between the text versions.

A significant overall effect of 'ethnic group' ($F(3, 565)=9.94$, $p<.001$, $η²=.10$) was found. There was a significant main effect of 'ethnic group' on 'metaphor recognition' ($F(3, 538)=3.51$, $p<.05$, $η²=.02$). A Bonferroni post hoc test showed that Xhosas (M=3.92, SD=.63) scored higher than whites (M=3.72, SD=.58) $p<.05$. Xhosas did not differ from coloureds. No differences were found for 'metaphor recognition' between whites and coloureds either.

A main effect was also found for 'ethnic group' on 'attractiveness' ($F(3, 518)=30.35$, $p<.001$, $η²=.17$). A Bonferroni post hoc test showed that Xhosas (M=3.95, SD=.5) scored higher on 'attractiveness' than whites (M=3.38, SD=.64) $p<.001$. Coloureds (M=3.82, SD=.54) also scored higher than whites $p<.001$. No differences were found for 'attractiveness' between Xhosas and coloureds.

A significant main effect was found for 'ethnic group' and 'average mark' $(F_{(3, 542)}=18.51, p<.001, \eta^2=.11)$. A Bonferroni post hoc test showed that Xhosas (M=8.38, SD=1.81) gave higher marks than whites (M=6.93, SD=1.61) p<.001. Coloureds (M=7.9, SD=1.84) also gave higher marks than whites p<.001. No difference was found for 'average mark' between Xhosas and coloureds.

No main effect occurred for the variable 'ethnic group' on 'understanding' $(F_{(3, 544)}=2.19, p=.09, \eta^2=.02)$. Cohen's power analysis showed that if in reality the effect of the independent variable 'ethnic group' on the dependent variable 'understanding' would be large, medium, and small the power of this test, i.e. the chance that this effect would be detected, exceeded .80 and that the power of this test could therefore be regarded as adequate (ES=.40, *power> .995*; and ES=.25, *power> .995;* and ES=.10. *power=.95*). This implies that the chance that a Type II error occurred is low (1-.995 and 1-.95) and therefore the chance that in reality there is a significant effect of 'ethnic group' on 'understanding' for a target group such as in this study is low. In other words, there is no reason to assume that the ethnic groups differed in their understanding of the different text versions.

The last main effect was the significant effect of 'ethnic group' on 'persuasiveness' $(F_{(3, 526)}=21.17, p<.001, \eta^2=.13)$. A Bonferroni post hoc test showed that Xhosas (M=3.67, SD=.46) scored higher on persuasiveness than whites (M=3.31, SD=.44) p<.001. Coloureds (M=3.64, SD=.46) also scored higher than whites p<.001. No difference was found for 'persuasiveness' between Xhosas and coloureds.

There was a significant effect of the covariate 'perception of realism' $(F_{(1,552)}=27.05, p<.001, \eta^2=.24)$.

The Multivariate Analysis of Covariance showed that there was no significant overall interaction effect of 'ethnic group' and 'text version' $(F_{(6, 565)}=.96, p=.53, \eta^2=.01)$. Cohen's power analysis showed that if in reality the interaction effect of 'ethnic group' and 'text version' would be large, medium, and small the power of this test, i.e. the chance that this effect would be detected, exceeded .80 and that the power of this test could therefore be regarded as adequate (ES=.40, *power> .995*; and ES=.25, *power> .995;* and ES=.10. *power=.95*). This implies that the chance that a Type II error occurred is low (1-.995 and 1-.95) and therefore the chance that in reality there is a significant interaction effect between 'ethnic group' and 'text version' for a target group such as in this study is low.

4.3.2.3 Univariate Analysis

Effect of text version on stigma

This analysis took the 'stigma' into account that was measured after reading text A, B, E, and the 'stigma' that was measured without having read a text. An Analysis of Variance (ANOVA) was done for the independent variables 'ethnic group' and 'text version', and with the dependent variable 'stigma' (M=2.47, SD=.63). This Analysis of Variance showed that there was no significant main effect of the independent variable 'ethnic group' on the dependent variable 'stigma' $(F_{(3, 734)}=.21, p=.89, \eta^2=.00)$. Cohen's power analysis showed that if in reality the effect of the independent variable 'ethnic group' on the dependent variable 'stigma' would be large, medium, and small the power of this test, i.e. the chance that this effect would be detected, exceeded .80 and that the power of this test could therefore be regarded as adequate (ES=.40, *power> .995*; and ES=.25, *power> .995;* and ES=.10. *power=.99*). This implies that the chance that a Type II error occurred is low (1-.995 and 1-.95) and therefore the

chance that there are in reality differences between the ethnic groups on the stigmatising effect of metaphors for a target group such as in this study is low. This indicates that there is no reason to assume that there are differences in stigma between the coloureds, Xhosas, and whites.

The second main effect was the influence of the independent variable 'text version' on the dependent variable 'stigma'. This analysis enabled drawing conclusions on whether stigma around HIV/AIDS was enlarged by any of the texts. This effect proved to be not significant ($F_{(3, 734)}=1.16$, p=.33, $η²=.01$), indicating that there is no reason to assume that stigma is influenced by one of the texts. Cohen's power analysis showed that if in reality the effect of the independent variable 'text version' on the dependent variable 'stigma' would be large, medium, and small the power of this test, i.e. the chance that this effect would be detected, exceeded .80 and that the power of this test could therefore be regarded as adequate (ES=.40, *power> .995*; and ES=.25, *power> .995;* and ES=.10*. power=.99*). This implies that the chance that a Type II error occurred is low (1-.995 and 1-.99) and therefore the chance that there is in reality a difference between the different text versions and the stigmatising effect of these texts for a target group such as in this study is low. This indicates that there is no reason to assume that South African students perceived differences in 'stigma' after reading the different text versions or after reading no text at all.

No interaction effect was found for the independent variables 'ethnic group' and 'text version' on the dependent variable 'stigma' ($F_{(9, 734)}=1.12$, p=.34, $η²=.01$). Cohen's power analysis showed that if in reality the effects of the independent variables 'ethnic group' and 'text version' on the dependent variable 'stigma' would be large, medium, and small the power of this test, i.e. the chance that this effect would be detected, exceeded .80 and that the power of this test could therefore be regarded as adequate (ES=.40, *power> .995*; and ES=.25, *power> .995;* and ES=.10*. power=.99*). This implies that the chance that a Type II error occurred is low (1-.995 and 1-.99) and therefore the chance that there is in reality a significant interaction for 'stigma' between 'text version' and 'ethnic group' for a target group such as in this study is low.

5   CONCLUSION

The conclusion of the present research is presented in this chapter by answering the research questions that were formulated in section 2.13. Two research questions were formulated to learn more about the coloured high school students in South Africa and four research questions were formulated regarding the entire South African youth. The research questions regarding the coloured youths will be answered in section 5.1. The answers to the questions about the South African youths will be presented in section 5.2.

5.1   Conclusion for Coloureds

The perception of realism of the text versions that coloured high school students had read, appeared to be related to the appreciation of these texts, indicating that different results of students between the text versions might be due to differences in the perception of realism of the texts. From research carried out in 2005 by Jansen, Croonen, and De Stadler, this could be expected. They found that there is a chance that the readers' perception of realism of a text correlates with the dependent variables of research. For the present research the correlations between the 'perception of realism' and the dependent variables 'metaphor recognition', 'attractiveness', 'persuasiveness', and 'understanding' were significant. These findings indicate that the perception of realism of the texts affected the students' evaluation of all the dependent variables, except for the average mark that the students gave the texts. A Multivariate Analysis of Covariance also showed significant effects of the covariant 'perception of realism' for the coloureds. This implies that according to the present research, the perception that respondents have of the realism of a text affects the appreciation of such a text as evaluated by South African coloured youths.

The first research question that was formulated in section 2.13 reads:

> Under what conditions and to what extent does the use of metaphors in written HIV/AIDS communication affect the attractiveness, understanding and persuasiveness of HIV/AIDS communication among coloured high school students in South Africa?

The results show that the answer to this question implies that the use of metaphors under none of the investigated conditions and to no extent proved to affect the attractiveness, understanding, and persuasiveness of written HIV/AIDS communication among coloured youths in South Africa. The metaphors that appeared in the texts about HIV/AIDS were not even recognised as such by the coloured high school students. The youths did not understand any of the designed texts any better than the others. The persuasiveness and attractiveness of the different texts did not differ per text either, according to the coloured respondents. There were no differences in the effects of the metaphorical texts and the non-metaphorical text. This implies that according to the present research the use of metaphors in written HIV/AIDS communication does not have any of the investigated effects on coloured youths in South Africa.

The second research question is aimed at determining whether metaphors increase the stigma on people who live with HIV/AIDS and reads:

> Under what conditions and to what extent does the use of metaphors in HIV/AIDS communication affect stigmatisation among coloured high school students in South Africa?

The results show that the answer to this question entails that the use of metaphors in written HIV/AIDS communication under none of the investigated conditions and to no extent proves to affect stigmatisation among the coloured youths in South Africa. None of the texts initiated a higher evaluation of stigma on HIV/AIDS, indicating that there is no reason to assume that one metaphorical text might be more stigmatising than another metaphorical text or a neutral text. The evaluation of stigma after the students had read a text did not differ from the stigma that was measured among the students who had not read any text. This implies that according to the present research, the use of metaphors in written HIV/AIDS communication does not have a stigmatising effect on coloured youths in South Africa and metaphors might be used in HIV/AIDS communication for coloured high school students without initiating more stigma than neutral texts.

5.2   Conclusion for South African Youth

As mentioned before, the same experiment that was done among coloured high school students in South Africa was also carried out among two other ethnic groups in this country; Xhosas and whites. This section will focus on the comparison of these three experiments´ results.

The perception of realism of the texts that the South African respondents had read is related to the appreciation of the texts, which also occurred with the coloured target group. Once again, the findings of Jansen et al. (2005) are proven. For the present research the correlations between the 'perception of realism' and all dependent variables. This indicates that the perception of realism of the texts affected the respondents' evaluation of all the dependent variables. A Multivariate Analysis of Covariance also showed significant effects of the covariant 'perception of realism' for the South African high school students. This implies that according to the present research, the perception that respondents have about the realism of a text affects the appreciation for this text as evaluated by South African youths.

To investigate the effects that metaphors can have on young people in South Africa, four research questions were formulated. The first research question reads:

> Under what conditions and to what extent does the use of metaphors in written HIV/AIDS communication affect the attractiveness, understanding and persuasiveness of HIV/AIDS communication among high school students in South Africa?

The results show that the use of metaphors under none of the investigated conditions and to no extent proved to affect the attractiveness, understanding or persuasiveness of written HIV/AIDS communication among youths in South Africa. The metaphors that appeared in the texts about HIV/AIDS were not even recognised by the South African respondents. However, South African Xhosas proved to recognise metaphors better than whites. The youths did not understand any of the designed texts any better than the others. The persuasiveness and attractiveness of the different texts

did not differ per text either, according to the respondents. This implies that according to the present research the use of metaphors in written HIV/AIDS communication does not have any of the investigated effects on the youth in South Africa.

The next research question that was formulated reads:

> To what extent do ethnic group and text version, affect the attractiveness, understanding and persuasiveness of HIV/AIDS communication among high school students in South Africa?

There appeared to be no different effects of the dependent variables when comparing the results of the different text versions; the four metaphorical texts and the neutral text. However, the results did show differences between the three ethnic groups. The ethnic group a student belongs to affects a students' evaluation of the attractiveness and persuasiveness of a text. Xhosas found all five texts more attractive than whites. Coloureds also found the texts more attractive than whites. No differences were found between the Xhosas and the coloureds.

The same happened when these groups were asked to give the texts a mark: Xhosas and coloureds gave higher marks than whites. Once again no differences occurred between Xhosas and coloureds when looking at the average mark that they gave the different texts.

Xhosas also found all five texts more persuasive than whites, the same thing occurred between coloureds and whites. Once again no differences were found between coloureds and Xhosas.

What is remarkable is that for the variables that measured the effectiveness of the texts there were no differences between Xhosas and coloureds. In addition, Xhosas and coloureds had a tendency to give every variable a more positive evaluation, followed by the white high school students. This might imply that Xhosas and coloureds tend to be more positive in answering questions than whites.

Another important conclusion for this part of the research is that there did not appear to be any interaction effect between the text versions that the youths read and the ethnic group to which they belong. This implies that there was no specific text version that was preferred by any of the specific ethnic groups.

The third research question that was formulated related to stigmatisation:

> Under what conditions and to what extent does the use of metaphors in HIV/AIDS communication affect stigmatisation among high school students in South Africa?

What the results show is that the use of metaphors under none of the investigated conditions and to no extent proved to affect stigmatisation in written HIV/AIDS communication among the respondents. There is no reason to assume that the stigma on HIV/AIDS is influenced by any of the texts that the youth has read during the experiment. The youths have not perceive differences between the stigma of the different text versions indicating that there is no reason to assume that one metaphorical text might be any more stigmatising than another metaphorical text or a neutral text. The evaluation of stigma after the respondents had read one of the texts does not differ from the stigma that was measured among the youths that had not read any text. This implies that according to the present research, the use of metaphors in written HIV/AIDS communication does not have a stigmatising effect on young people in South Africa. This might indicate that metaphors can be used in HIV/AIDS

communication for South African high school students, without initiating more stigma than neutral texts.

The final research question that has to be answered reads as follows:

> To what extent do ethnic group and text version, affect stigmatisation among high school students in South Africa?

The results show that there are no differences in the effects of stigmatisation between the three ethnic groups.

An important conclusion is that there did not appear to be any interaction effect between the text versions that the respondents read and the ethnic group to which they belong. This implies that there was no specific text version that was deemed more or less stigmatising by any of the specific ethnic groups.

The present research did not find support for the effects of metaphorical language over non-metaphorical language. However, no effects of non-metaphorical language over metaphorical language are found either, which indicates that both styles of writing can be used in HIV/AIDS communication for high school students in South Africa.

5.3   Used Metaphors

In section 2.3 the categorisation of metaphors is discussed. According to section 2.5 there are different ways of processing different kinds of metaphors. Two visions were discussed; the vision of the conceptual metaphor theory by, for instance, Lakoff and Johnson (2003), and McGlone's vision (2007). The present research does not support the expectations of the conceptual metaphor theory, namely the expectation that metaphors are likely to enhance the attractiveness, understanding and persuasiveness of a text. The results show that the non-metaphorical text was rated as understandable, persuasive and attractive as the metaphorical texts. This leads to the conclusion that the results of the present research tend to support McGlone's vision. He states that very few metaphors can enhance factors such as the understanding, persuasiveness and attractiveness of written communication. The fact that no differences were found between the metaphorical and the neutral texts makes it reasonable to assume that the metaphors that were used in the experiment were not novel and were therefore processed directly. This would support McGlone's theory that no effects of metaphors are to be expected if the metaphor is familiar and conventional. This means that the metaphors that were used in the texts for the experiment could be labelled as conventional metaphors.

In order to determine if the metaphors that were used in the present research are indeed conventional, it is necessary to take a closer look at these metaphors. As discussed in section 2.5 the most profound difference between novel and conventional metaphors, according to Gentner and Bowdle (2001), concerns the source domain. The source domain of a *novel metaphor* only refers to a domain-specific concept (e.g. a literal concept), and is not (yet) associated with a domain-general concept (e.g. an

associated metaphoric category). The source domain of a *conventional metaphor*, however*,* refers to both a domain-specific concept and to a domain-general concept.

According to McGlone, the most profound difference between novel and conventional metaphors concerns their familiarity. Conventional metaphors are metaphorical expressions with which a reader is familiar, and they can be understood without recourse to conceptual mapping (between source and target domain). Novel metaphors, however, are metaphorical expressions with which a reader is not familiar, and which involve inferring conceptual mapping in order to be understood.

The source domains that were used in the present research compared the immune system to: an army; a boxer; a fire station; and a house/security system. Considering the theory of Gentner and Bowdle, it can be stated that all source domains refer to a domain-specific concept, e.g. they all have a literal sense. For example, the novel source domain 'boxer' has the following literal sense 'someone who takes part in the sport of boxing'. Additionally, all source domains might also be associated with a domain-general concept. 'Army', 'boxer', 'fire station', and 'house/security system' can all be grouped in the category 'things that protect me'. Because of this, these metaphors can be considered more conventional than novel.

Furthermore, Gentner and Wolff (1997) present an overview in which they give clear examples of conventional and novel metaphors (table 8).

Table 8: Metaphors divided by their conventionality (Gentner and Wolff, 1997)

High Conventionality		*Low Conventionality*	
High similarity	Low similarity	High similarity	Low similarity
That argument is a war	That conversation is a war	That philanthropist is a fountain	That developer is a fountain
That lie is a boomerang.	That statement is a boomerang.	That casino is a drug.	That resort is a drug.
That horoscope is a map.	That book is a map.	That ballerina is a top.	That dancer is a top.
That sauna is an oven.	That room is an oven.	That island is a cork.	That can is a cork.
That ferry is a bridge.	That boat is a bridge.	That detective is a ferret.	That policeman is a ferret.
That suburb is a parasite.	That town is a parasite.	That genius is an eagle.	That student is an eagle.
That giraffe is a skyscraper.	That busboy is a skyscraper.	That mosquito is a dart.	That nurse is a dart.
That audition is a door.	That play is a door.	That fisherman is a spider.	That mariner is a spider.
That baby is an angel.	That child is an angel.	That moat is a fence.	That river is a fence.
That librarian is a mouse.	That receptionist is a mouse.	That slum is a tumor.	That neighbourhood is a tumor.
That salesman is a bulldozer.	That merchant is a bulldozer.	That camel is a cactus.	That vase is a cactus.

Table 8 presents metaphorical expressions, which are divided by their conventionality. The right-hand side of the table presents metaphorical expressions with low conventionality, e.g. novel metaphors. For example the metaphor 'The casino is a drug' refers to the casino as being addictive. Few people

would use this comparison, so it can not be deemed common. Therefore, there is a reasonable chance that people do recognise the use of a metaphor in this expression. Moreover, conceptual mapping is needed to understand this expression. The left-hand side of the table presents metaphors with high conventionality, e.g. conventional metaphors. For example the metaphor: 'That baby is an angel' refers to a baby as being sweet or beautiful. For most people this is a common expression and, therefore, there is a reasonable chance that they might not recognise the use of a metaphor in this expression.

The metaphors which were used in the present research are similar to the metaphors presented on the left-hand side of the table, e.g. conventional metaphors. The expression 'This army is a protector', for instance, is a common expression because 'army' is often associated with 'protection'. Because of this, there is a reasonable chance that people would not recognise the presence of a metaphor in this expression. Therefore, it is likely that the respondents that participated in the present research associated the source domains ('army', 'boxer', 'fire station', and 'house/security system'), in one way or another, with a category that could be something like: 'protection'. This indicates that all source domains that were used in the present research refer to both a domain-specific concept and to a domain-general concept, as pointed out in the theory of Gentner and Bowdle. Because of this, the metaphors of the present research can be considered conventional instead of novel.

Considering McGlone's theory, the metaphors which were used in the present research, might also be considered conventional. All metaphors were based on the results of the corpus analysis and the focus group discussion. Both methods revealed metaphors which are used frequently in current HIV/AIDS communication in South Africa. Thus, there might be a reasonable chance that the respondents have already been exposed to metaphors such as 'The immune system is like an army that protects you'. Consequently, no conceptual mapping is required in order to understand this metaphor, indicating that the used metaphors might indeed be conventional.

6   DISCUSSION

In this chapter possible explanations for the findings of the present research are described. Moreover, the limitations of the research are discussed. Section 6.1 describes the possible explanations for the results and the research's limitations. Section 6.2 describes the possibilities for future research, and section 6.2.1 gives a short assessment of the different research methods that were used to carry out this research in South Africa.

6.1   Possible Explanations for the Results

Hoeken (1998) is one of the researchers who proved that the use of metaphors could enhance the persuasiveness and attractiveness of a text. The present research proves otherwise. There are several possible explanations for the fact that the present research did not find any effects of metaphors on the attractiveness, understanding and persuasiveness of written HIV/AIDS communication.

The most important explanation for the fact that there were no effects of metaphors found could be that the metaphors that were used in the present research could be defined as conventional instead of novel. The conclusion in section 5.3 explained that the present research supports the vision of McGlone (2007).

Another possible reason for not finding the expected effects of metaphors could be the target group of the research, which consisted of high school students between the ages of 12 to 22 years. Experience has taught that this can be a difficult group to research, especially when grouped together, for example in a classroom. Several classrooms counted over forty students who were often noisy and there were students who walked in late. In some cases students were distracted by each other. Not every teacher had enough control to keep the students focussed on reading and filling out the questionnaire. Because of this, it was difficult for some of the students to concentrate and do what they were asked to do. This might have led to differences in the results.

Another explanation for the distraction of the youth could be the researchers themselves who decided to stay in the classrooms during the research in order to observe and to answer students' questions if necessary. The researchers introduced themselves before handing out the texts and questionnaires. The students were interested in who the researchers were, where they came from and what they were doing at their high school in South Africa. All this curiosity possibly led to distraction among the students.

What also needs to be taken into account is that the texts that the students were asked to read were quite long, as was the questionnaire, which consisted of 61 questions. This might have been too much to concentrate on for students of this age who all had different levels of education.

Another explanation for the results, as far as the respondents were concerned, is that the material that was used for this research was written in English, which was not the mother tongue of most of the students taking part. Descriptive statistics indicate that only 3 percent of the students (25 students in total) filled out English as their mother tongue. What has to be taken into account is that some ethnic

groups might not have been completely honest about which language they speak at home. They might say that they speak mostly English because this is a more international and prestigious language than, for example, Afrikaans (personal communication with Prof. dr. De Stadler, September 2007). This implies that the 3 percent that indicated they speak English as their mother tongue could be even less in reality.

The language of the material could also be the reason for the fact that the coloured youth and the total group of students did not recognise the metaphors as such in the texts. If the texts and questionnaire had been written in the native language of the respondents it might have been easier for them to distinguish the non-metaphorical from the metaphorical language.

The language in which the material was written could also be the reason for the effects of metaphors on 'understanding' not being found. Some students may have had problems understanding the texts and questionnaire because the language it was written in was not their mother tongue.

It could also be the case that there were no effects found on 'understanding' because of all the communication about HIV/AIDS in South Africa, the students might have already known what the immune system was and did not need metaphors to have it explained. Maybe more various source domains in the metaphors should have been used instead of only the immune system. This might have led to other findings.

The character of the manipulation check could be a reason for the fact that none of the ethnic groups recognised the differences between neutral and metaphorical language. A manipulation check was done among experts only. According to the experts it was very clear in which texts the metaphors appeared and in which text non-metaphorical language was used. Maybe the difference between the neutral and metaphorical texts was not noticeable enough for the students, especially since at their level of education they may not yet have acquired the skill to consciously deal with the difference between figurative and non-figurative language yet.

Another possible explanation for not recognizing the metaphors concerns the linguistic context where the metaphors were placed in. Gibbs and Tendahl (2006) claimed that metaphors can be understood as quickly as literal speech when they are encountered in a rich linguistic context. This might account for the metaphors which were used in the present research, which were all encountered in a long, rich text.

A last possible explanation for the results is that metaphors are simply not a good tool to increase the attractiveness, understanding and persuasiveness of written HIV/AIDS communication.

There is one possible explanation for not finding any effects of the dependent variables on the variable 'text version' that only concerns the coloured high school students. The power score for this analysis was under .80, namely .77. This occurred for the Multivariate Analysis of Covariance with the independent variable 'text version' and the dependent variables 'metaphor recognition', 'attractiveness', 'average mark', 'understanding', and 'persuasiveness'. This analysis showed that there was no significant overall effect of 'text version' on these variables. Cohen's power analysis showed that the power was not adequate, however, to detect a possible small effect which might occur in reality <.80 (ES=.10, *power=.77).* This implies that the chance that a Type II error occurred is slight

(1-.77) and that there is a slight chance that in reality there is a small significant effect of one or more variables on 'text version' that was not detected because the number of respondents was too low for this analysis.

As is stated by, for instance, Emanatian (1996) in section 2.11, the effectiveness of metaphors varies per culture. This is partly supported by this research because there are differences found between the ethnic groups but these differences are not due to the different metaphors that were used. What can be concluded is that Xhosas and coloureds tend to rate answers to questions more positively than whites. There could be several explanations for this. Xhosas and coloureds could have interpreted the Likert-scales in a different way than whites did. They might be less familiar with answering questions in questionnaire form. Another possible explanation is that Xhosas and coloureds gave more positive answers than whites because they actually liked the metaphorical and non-metaphorical texts more than the whites did, probably because their cultures are more used to storytelling. It is also possible that the texts used in this research are in reality more effective for coloureds and Xhosas than for white youths. Another explanation for the positive answers could be that the Xhosas and coloureds find it more difficult to be critical than whites and Xhosas and coloureds might be more inclined to adhere to the social standards and norms of society.

A notable fact with regard to the similarities between the answers that Xhosas and coloureds gave is that during the focus group discussion the participants pointed out that they thought that the top three most effective metaphors had to be the same for coloureds and whites. After looking at the results, it could be more likely to use the same top three of metaphors for Xhosas and coloureds because these groups both rate answers to questions higher and possibly share the same opinions on some points.

Sontag (1978) warns about the negative implications that the use of metaphors in health education can have on people. As described before in section 2.9 Sontag (1991) says that the use of metaphorical language in communication on AIDS is an indication of the stigma attached to the disease. In the present research no stigmatising effects of metaphors were found. Reading the metaphorical texts did not lead to more stigmatisation of HIV/AIDS among the youths in South Africa, than reading the neutral text. Next to this, none of the metaphorical texts appeared to be more stigmatising than another while Sontag (1978) states that military metaphors can cause stigmatisation of a disease. A possible explanation for these findings could be the fact that the youth did not recognise the metaphors that were used in the texts.

The character of the texts and the metaphors could also have played a role. Perhaps the texts did not lead to stigmatisation because they were purely informative texts in which the immune system was explained by different metaphors. Other subjects, such as living with HIV/AIDS, might lead to different results. The metaphors that were used in the texts to explain the immune system are different from the examples of metaphors that were given in section 2.10.1, for example: 'AIDS as a form of moral pollution or plague' or 'AIDS as a killer'. These metaphors are of a more negative character. The source domains of the metaphors that were used in the present research were less negative, such as

'fire station'. The subject of the texts and the positive or negative nature of a metaphor that is used in research material might have influenced the results.

6.2   Future Research

The present research revealed several results that lead to new questions that can be answered by future research. According to this research the use of metaphors did not have any effect on the investigated factors. The theories that do expect these effects, such as the conceptual metaphor theory, need to be looked at in the future. Different views about the processing and categorisation of metaphors exist; more detailed research is needed to get a better perspective on the processing and categorisation of metaphors. McGlone (2007) mentioned before that more empirical and theoretical knowledge is needed to found a theory like the conceptual metaphor theory.

The novelty of the metaphors used is something to take a closer look at in further research. It would be interesting to redo the present research with the use of novel metaphors instead of conventional metaphors in the text versions, so the effects of the novel metaphors can be investigated.

It would be interesting to take a closer look at the differences that occurred between the ethnic groups. It appears that Xhosas and coloureds tend to be more positive in answering questions than whites. As described above, the participants of the focus group discussion pointed out that the metaphors that are most effective are the same for the coloured and white ethnic group. Further research could take this into account and focus on the actual differences and similarities between ethnic groups in South Africa.

When replicating this research it might also be a good idea to use more than only one target domain in the metaphors. Besides the immune system, metaphors with other target domains could be used to explain HIV/AIDS-related subjects which could lead to different findings.

Another important thing when redoing this research would be to do a manipulation check during the pre-test among the target group. During the pre-test of this research a manipulation check was done among experts only. They appeared to recognise the difference between the metaphorical texts and the non-metaphorical text. It appears that the members of the target group did not recognise this difference.

What would also be interesting would be to try to use a within-group design when redoing this research. During the data collection of the present study it appeared that it was impossible to carry out a within-group design, it was changed into a between-group design. Maybe in another setting, among another target group, for example adults, a within-group design would work. Adults could have fewer problems to concentrate on reading two texts and filling out two questionnaires than high school students. It would be interesting to find out if the use of a within-group design leads to different results. It could be the case that the respondents, when using a within-group design, would be able to see the difference between the metaphorical and the non-metaphorical text because they would get to read both. In addition, it is also possible that the use of another design would make no difference to the results, because readers are not necessarily sensitive to complex text design features unless these

are clearly indicated to them with, for instance, contrasting examples. It would also be interesting to investigate more about the ability of South African high school students to recognize figurative language in texts.

One final important aspect when redoing this research would be to take a closer look at the pre-test of the focus group discussion. The session that took place to pre-test the focus group discussion was held among international students at the University of Stellenbosch only. For future research it would be advisable to hold a pre-test session among the research's target group. This is because all the international students were from other continents as Africa, and therefore had a different culture than the South Africans, and they all had a particular level of education, which could have influenced the results.

As mentioned before, the expectations regarding the stigmatising effect of metaphors according to Sontag (1978) were not supported by this research. No stigmatising effects of metaphors were found. This does not deny that there can be cases in which metaphors could enhance stigma on HIV/AIDS. Further research is needed to find out if there are conditions under which Sontag's expectations do apply. What needs to be discovered is if the character of the metaphors could play a role in the effect that the metaphor has. As mentioned before in this discussion, the metaphors used in this research were different from examples of metaphors such as: 'AIDS as a killer'. It would be interesting to know if the metaphors' character plays a role in producing different results.

It would also be interesting to carry out this same research in other countries. As said before, the effects of metaphors can depend on people's cultures. It could lead to interesting results if this research was redone in a country with a totally different culture from the cultures of the different ethnic groups in South Africa. Besides the African continent the HIV/AIDS epidemic is also rife on the Asian continent. An estimated 4.9 million people are living with HIV/AIDS in Asia. The diversity of the epidemic is even bigger in Asia than it is in Africa. If nothing is done to stop this epidemic it could exceed the one in Africa in the next 20 years. Some of the Asian countries that need help are Indonesia (especially in the Papua province) and Vietnam. The number of people living with HIV/AIDS in these countries is growing (UNAIDS, 2007), therefore these would be suitable countries to carry out this research in and help them by providing information on the effects of metaphors in HIV/AIDS communication.

6.2.1 Used Research Methods

Different research methods were used to execute the present research; a corpus analysis, a focus group discussion and an experiment. Not all of these methods are commonly used in South Africa. Because of this a short assessment of these methods might help the use of them in South Africa in the future:

There is not much to say about the corpus analysis because this research method does not depend on culture. This method can be used all over the world without experiencing any problems due to culture because of the fact that for this kind of research no respondents are necessary.

A focus group discussion is a method that worked really well in the context of South Africa. In the beginning of the session participants reacted slightly awkward, but they quickly found out what the aim of the session was and what was expected of them. What was prominent was that the white participants talked freely almost from the beginning. It took some of the coloured and black participants longer to express their opinions. As the session progressed, almost all participants spoke freely about their knowledge of the use of metaphors in HIV/AIDS communication. There were two participants, one black female and one coloured male, who did not speak as much as the rest but that is a phenomenon that could also occur when a focus group discussion is held in a Dutch or European context.

What can be concluded is that a focus group discussion is an appropriate research method to use among different ethnic groups in South Africa, providing that there is good preparation in the form of a pre-test among the target group, a script and an experienced and well-prepared focus group leader.

The last method that was used to carry out the present research was an experiment. This method was carried out by means of a questionnaire that measured the respondents' opinions. It was noticeable that not all the ethnic groups in South Africa were used to interpreting and filling out questionnaires. Particularly the coloured and Xhosa groups asked questions about how they should fill out the questions in the questionnaire. Questions about how the Likert-scales should be interpreted, for example. Therefore, one needs to be very sensitive to the fact that questionnaire research may not always work because respondents' attention could be distracted by the difficulty of dealing with the instrument itself. This could have influenced the results of the present research. Because of this, it is important that a target group receives clear instructions and explanation before starting on the questionnaire. It must not be taken for granted that everyone knows how to fill out a questionnaire, as is the case in the Netherlands, for example.

What can be concluded is that all the methods of research that were used for the present research are appropriate for use in South Africa, providing that they are well planned and enough time is taken to execute the research.

Final Note

The present research contributed to knowledge of the effects of metaphors in HIV/AIDS communication in South Africa. The most important finding is that the theory of McGlone (2007) is supported which indicates that the different processing of conventional and novel metaphors might indeed exist. Further research is needed to investigate the exact differences between these processes.

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8 APPENDIXES

8.1   Alphabetically Ordered List of Analysed HIV/AIDS Brochures

Title brochure	Number of pages	Language	Subject	Author
A real life story… looking for love in a world of AIDS.	6	English	A story about a woman that had the nerves to stand up for herself by asking the man questions and insisting on using condoms.	Wellness project management
A real life story…Looking for love in a world of AIDS 2	6	English	Discussing AIDS (to a partner).	Wellness Project Management
An AIDS-free life	6	English	Basic information about what AIDS is, how to protect, ABCD.	CLF
Anti- retroviral treatment for life!	41	English	Information on ART.	Soul City Institute and Khomanani Caring Together
Anti- retrovirale behandeling	6	Afrikaans	Answer to questions regarding ARB (ART).	Soul City Institute and Khomanani Caring Together
Are you pregnant and HIV positive?	6	English	PMTCT (what is it, how does it work, getting support, after birth).	Department of Health, Provincial Administration of the Western Cape Health (PAWCH)
Battles in the blood.. HIV & the immune system	6	English	Information about what happens to the cells inside the human body when someone is HIV positive.	Wellness project management
Borstvoeding & MIV	4	Afrikaans	MNKO (moeder na kind oordraging), education for HIV positive- mothers.	Department of Health, PAWCH
Breaking the male mould	8	English	Stereotyping about male and female characteristics.	Khomani, caring together
Brenda het 'n drakie in haar bloed	40	English	Story about a little girl that is HIV positive.	RKWO/ Garamond Uitgewers
Campus Peer Educators	6	English	Information on peer educators on US (what is it, what to	University of Stellenbosch

			expect, how to apply.	
Caring for people with HIV and AIDS	8	English, Afrikaans, IsiXhosa, Setswana	How to deal with and care for people who are living with HIV/AIDS.	department of health: HIV/AIDS and TB chief Directorate
Caring together for children	37	English	How to care for (HIV-positive) children.	Soul City
Condoms	8	English, Afrikaans, IsiXhosa, Setswana	Information about condoms.	Department of health: HIV/AIDS and TB chief Directorate
Dear pastor, do you know that AIDS is a killer?	4	English	How pastors should deal with PHLA.	CLF AIDS Trust/ VIGS Trust
Die lewensvaardighede en HIV/VIGS onderrig program in skole	6	Afrikaans	Information for parents on HIV and their children.	Department of health: HIV/AIDS and STD Directorate
Divisions of HIV/AIDS Prevention	8	English	What HIV/AIDS is, how you can stay healthy, pregnancy, help.	Centre for disease control and prevention
Fact Sheets on HIV/AIDS for nurses and midwives	54	English	HIV/AIDS infection, Care of PHLA, Stigma, counselling, teaching on HIV/AIDS, HIV/AIDS prevention, TB, HIV and the workplace.	UNISA, UNAIDS, World Health Organization, International Counsil of Nurses and Advanced Nursing Sciences
Get tested fo HIV	6	English	VCT	Higher education HIV/AIDS Programme
Getting Him to use a condom	8	English	Information about persuading the man to use a condom.	Stellenbosch AIDS action
Growing up	16	English	Information on the human body.	Living and Loving
Health Western Cape	2	English	How "health Western Cape" can help PLWA.	Health Western Cape
HIV & AIDS Policy US	6	English	Guidelines for HIV & AIDS Policy at the University of Stellenbosch.	University of Stellenbosch

HIV and AIDS and Treatment	49	English	HIV (infection, prevention, treatment, talking about it, places to go for help).	Soul City and Khomanani Caring Together
HIV and AIDS. Prevention care and treatment	56	English	Information about HIV and Aids, prevention, care and treatment.	Soul City
HIV positive- now what?	6	English	Dealing with a positive HIV-test result.	Christian Literature Fund
HIV The Answers	7	English	General facts about HIV, VCT.	ETR association
HIV What if I'm positve	6	English	What you can do if you have HIV, sex, protection.	ETR association
HIV, AIDS, and rights	8	English, Afrikaans, IsiXhosa, Setswana	Rights people living with AIDS have.	Department of health: HIV/AIDS and TB chief Directorate
HIV/AIDS & antiretroviral drugs	6	English	Antiretroviral drugs.	Cape technikon, student welfare and health
HIV/AIDS and Relationships	4	English, Afrikaans, IsiXhosa, Setswana	Relationships and HIV/AIDS.	Department of health: HIV/AIDS and STD Directorate as part of the beyond awareness campaign
HIV/AIDS counselling	8	English, Afrikaans, IsiXhosa, Setswana	Counselling for people living with HIV/AIDS.	Department of health: HIV/AIDS and STD Directorate as part of the beyond awareness campaign
HIV/AIDS workplace resource Guide	6	English	Practical guide on how to deal with HIV/AIDS at work.	Department of Health
HIV-positive… What is a CD4 count	6	English	Information about CD4.	Wellness project management
How 2b AIDS Aware	169	English	Book for schools, colleges about many topics regarding HIV/AIDS, HIV/AIDS projects.	Tabeisa
How to Protect	14	English	Ways to protect yourself	Department of

			against AIDS.	Health and Human Services
How to Talk With Your Child About HIV/AIDS	4	English	Talking about HIV/AIDS with your children.	Bergen County Department of Health Services
HRD and training	4	English	Newsletter with HIV facts.	Metro district
I had an HIV test-now what?	10	English	Dealing with the results of a HIV-test, Where to find more information.	Khomanani Caring Together
Important facts about HIV/AIDS STD'S and TB	6	English	Information about HIV/AIDS, TB, STD's. What can be done about it, how you can look after yourself.	Cape town Administration Health department
Important things to know about having an HIV test	6	English	Explaining the process of HIV testing.	Wellness Project Management
Important things to know about STD's	8	English and Isixhosa	Description of the common STD's, ways to reduce the risk.	Wellness Project Management
key points about HIV/AIDS	8	English, Afrikaans, IsiXhosa, Setswana	General information on HIV/AIDS.	Language groups, Western Cape
Knowledge is power	8	English	Dealing with HIV/AIDS, VCT (what is it, where to go etc.)	Khomanani Caring Together
Kos en gesondheid	6	English, Afrikaans	General information on HIV and how to protect yourself.	Checkers
Leef positief saam met MIV en Vigs	48	Afrikaans	General information on AIDS and information on how you live with people who are HIV positive.	Soul City
Leef positief saam met MIV en VIGS	48	Afrikaans and English	MIV/VIGS, how to deal with a positive HIV status, caring/helping HIV positive people.	Soul City
Let's talk about it…	8	English	Information how to be firm about your choices, knowing yourself.	Department of health. Republic of South Africa
Living with HIV and AIDS	8	English, Afrikaans, IsiXhosa,	What people who are living with AIDS should do.	Department of health: HIV/AIDS and TB chief

		Setswana		Directorate
Living with HIV/AIDS	8	English, Afrikaans, IsiXhosa, Setswana	What people who are living with AIDS should do.	Department of health: HIV/AIDS and STD Directorate as part of the beyond awareness campaign
Looking for love in a world of AIDS V	6	English	Story about a people who have AIDS.	Wellness project management
LOVEFACTS	27	English	Relationships, sex, HIV, pregnancy, protection, STI's.	LoveLife
Loving Life	24	English	Information on AIDS, protection, improving quality of life.	SABC
Loving Safely	6	English	Safe sex.	Planned parenthood Association of South Africa
Male condoms	8	English, Afrikaans, IsiXhosa, Setswana	Information on male condoms.	Department of health: HIV/AIDS and STD Directorate as part of the beyond awareness campaign
MIV Geen toekoms nie, reg	6	Afrikaans	Protection and VCT.	Stellenbosch University
MIV- VIGS	6	Afrikaans	Wat is VIGS en hoe kan ik het voorkomen.	Studentensake US
MIV/VIGS "ken jouw status projek"	3	Afrikaans	Protection and VCT.	Stellenbosch University
MIV/VIGS: Sit hand by	2	Afrikaans	Programmes on HIV/AIDS prevention and a partnership.	Government
my beautiful body	6	English	Special parts of the body should not be touched until god gives you the right person to marry.	CLF
My child is HIV positive	2	English	Information is given to parents whose child might have/ has	CLF

			HIV/AIDS.	
Nasionale jeugdige gesondheid studie	6	Afrikaans	Research on HIV/AIDS.	RHRU
No matter where you live or work you need to know about HIV and AIDS	14	English	HIV/AIDS overview, facts and fiction and HIV related to Sex/ children/pregnancy.	
Play it safe	4	English	Live by the rules of God.	CLF
Positve health (metropolitan)	88	English	The booklet is for people who are infected by HIV.	Metropolitan
Pregnancy and HIV	8	English, Afrikaans, IsiXhosa, Setswana	Pregnancy and HIV.	Department of health: HIV/AIDS and TB chief Directorate
Pregnancy and HIV - What you should know	12	English	Information for pregnant women who are HIV positive.	Soul City (Community Development project)
Prevention, protection, passion	6	English	General information on HIV/AIDS, testing and prevention methods.	Planned parenthood Association of South Africa
Ripe and Ready for a Ride, but is it worth the risk?	4	English	Sex and the risk of getting HIV, how to use a condom	Unknown
S'camtoprint	18	English	Magazine for the young on several topics, like (sexual) relationships.	Sunday Times and LoveLife
Sexually Transmitted Diseases	8	English, Afrikaans, IsiXhosa, Setswana	STD's.	Department of health: HIV/AIDS and STD Directorate as part of the beyond awareness campaign
Sexually Transmitted Infections	8	English, Afrikaans, Isizulu, sesotho	STI's.	Department of health: HIV/AIDS and TB chief Directorate

Some important things to know….Germs and opportunistic infections	6	English	Explaining what opportunistic infections do a description on TB, Candida, Shingles, PCP, CMV and Cryptococcal meningitis.	Wellness Project Management
Soul Buddyz. Tomorrow is ours	40	Afrikaans	A magazine for parents on how to communicate with their kids.	Soul City Institute
Soul City George's story	36	English	A magazine with all kind of information presented in different ways; cartoons, stories, fact sheets.	Soul City
Soul City HIV and AIDS affect all children	45	English	A magazine with a range of information regarding HIV/AIDS.	Soul City
Soul City HIV and AIDS User Guide	54	English	A magazine with guidelines for health workers.	Soul City
Soul City Know your body your reproductive health book	49	English	Magazine about health, puberty, testing, preventing, human body.	Soul City Community Development Project
Soul City Living with AIDS	31	English	Magazine with information on how to live with HIV/AIDS, there are questions and puzzles about HIV/AIDS.	Soul City
Soul City Simanga's choice	36	English	A magazine with all kind of information presented in different ways; cartoons, stories, fact sheets.	Soul City
Soul city. HIV and Aids… action now!	42	English	Magazine covering all kind of topics on HIV/AIDS.	Soul City (Community Development Project)
Soul city. VIGS in ons gemeenschap	33	English, Afrikaans	All kind of general information on HIV/AIDS.	Soul City (Community Development Project)
Stop TB because you can	17	English	Information on TB (what is it, cure, treatment, living with TB and places to go for help).	Soul City and Khomanani Caring Together

Talking about sexually transmitted infections	25	English	Description of the common STD's, protection, talking about STD's.	Soul City and Khomanani Caring Together
Talking about… HIV/AIDS	6	English, Afrikaans	General information on HIV and how to protect yourself.	National Department of Health
Tell me more	20	English	Magazine covering topics that are related to sex, communication, respect.	LoveLife
The best of friends	8	English	Supporting friends who are HIV positive.	Khomani, caring together
Thethanathi	7	English	Magazine for the young on several topics especially about fears.	LoveLife
ThethaNathi	8	English	Newspaper about love, relationship, sex, HIV/AIDS.	LoveLife
This is my life	47	English	Magazine with information on HIV/AIDS, protection, how to say no.	USAID
Ubungani	32	English	Information for parents on how to educate children on sex, relationships, AIDS	Department of Health, DFID
UNCUT	44	English	A magazine with all kind of information presented in different ways; cartoons, stories, fact sheets.	LoveLife
UNCUT	28	Afrikaans	Magazine covering all kind of topics on HIV/AIDS.	LoveLife
UNCUT	44	Afrikaans	A magazine with all kind of information presented in different ways; cartoons, stories, fact sheets.	LoveLife
UNCUT, februari 2005, uitgawe 20	27	Afrikaans	Magazine for the young on several topics, also sex related topics.	LoveLife
UNCUT, januari 2005, uitgawe 18	27	English	Magazine for the young on several topics, like sex related topics, sports and music.	LoveLife
UNCUT, uitgave 27	43	Afrikaans	Magazine for youth about	LoveLife

			school related topics and body issues.	
VIGS	6	English, Afrikaans, IsiXhosa	Specific information on HIV/AIDS. Cells.	CLF
Vigs - Om liefde te deel	6	Afrikaans	Transmission facts and myths, facts on safe sex, proper condom use.	Planned Parenthood Association of South Africa (PPASA) and Old Mutual
Voluntary counselling and Testing (VCT)	8	English, Sesotho, Isizulu, Afrikaans	Information on voluntary testing	Department of health: HIV/AIDS and Directorate by CADRE
Voorkom MIV na verkragting	16	Afrikaans	Rights, What to do after rape (testing and medicine)	Centre for the Study of Violence and Reconciliation (CSVR)
Wat is 'n SOS	6	English	STD's	Planned parenthood Association of South Africa
What did you hear about AIDS today?	4	English	Facts on AIDS in Africa, The HIV/AIDS strategic plan for SA.	Ministry of Health
What is right for me?	8	English	Life, love, relationships, pressure, choice, sex.	Department of health. Republic of South Africa
Whose right?	75	English	Information about the understanding of AIDS.	University of Pretoria
Workplace basics… HIV & AIDS	8	English	What is AIDS, how to prevent it and exposures to AIDS at work.	Wellness Project Management
World AIDS day. 2004	2	English	General information on HIV/AIDS, and information on AIDS day.	Department of the premier: Departmental HIV and AIDS Committee
World AIDS day. How can you help	4	English	What people can do on the AIDS day.	Avert

You & HIV/AIDS	25	English	Teenagers, STD's, sex, alcohol and drugs.	Unknown
You are one in a million	6	English	Being young, group behaviour.	Unknown
Your Mouth & HIV	5	English	Steps to maintain a healthy mouth for people who are HIV-positive.	University of Stellenbosch

8.2 Metaphors Found During Corpus Analysis

Forceville (1998) states that there are three critical questions (based on Black's theory) in order to determine whether an expression should be termed a metaphor:

- What are the two terms of the metaphors? In other words: what thing is described/perceived in terms of another thing? And how do we know?
- Which of the two terms is the metaphor's primary subject, and which is its secondary subject? And how do we know?
- Which features are projected from the domain of the secondary subject upon the domain of the primary subject?

1 Brochure: VIGS

This brochure contains several metaphors. For each metaphor, Forceville's questions will be answered:

- The two terms are HIV & killer/attackers. We know these are the two domains because in the text they refer to the virus attacking the white blood cells and killing them. This is illustrated in a picture that shows little viruses attacking a white blood cell.
- The primary subject is HIV. Into the little puppets that attack the white blood cell is written: "HIV". Therefore we know HIV is the target. The secondary subject is Killers/attackers. We know this is the source because HIV is being explained as a virus that comes into the blood and kills the white blood cells. In the picture it also shows that a white blood cell is defeated by a couple viruses.
- The features:
  - o HIV is strong and has the ability to attack and kill the white blood cells and make it more susceptible to other diseases.

- The two terms are white blood cell and soldier/protector. We know these are the two domains because in the text they literally refer to the white blood cell as a protector. This proves that features of one domain are mapped onto another domain.
- The primary subject is the white blood cell. In the text is said that the white blood cell protects the body from viruses. The secondary subject is a little soldier that carries a shield. The little soldier is presented as picture and it protects the body with a shield against viruses. However; the soldier cannot protect the body from HIV.
- The features:
  - o The white blood cell is the protector of the human body. It has a shield that protects and it has a spear that can stab the viruses that try to attack the body;
  - o HIV is the one virus the white blood cell cannot protect the body from; HIV kills the white blood cell.

- The two terms are HIV and the enemy that kills secretly. In the text is literally stated: "VIGS is 'n vyand wat in het geheim doodmaak".

- The primary subject is HIV and the secondary is an enemy that kills secretly. We know that these are the source and the target, because the features of the enemy that kills secretly are mapped on the virus.
- The features:
    - HIV is an enemy that secretively hides in your body and has the ability to kill you.

2 Brochure: Metropolitan Positive Health
- The two terms are virus and person. The text refers to mister Virus. Infected people are advised to talk to the virus as if it was a person. This conversation is also shown in a picture.
- The primary subject is HIV and the secondary is mister virus (a person). We know this because human abilities are mapped upon HIV.
- The features:
    - HIV is someone you can talk to and is able to talk back at you.

3 Brochure: Soul City: Living with HIV
- The two terms are the army and the immune system. We know this because of the context of the text.
- The primary subject is the immune system and the secondary is the army. The context of the secondary subject is projected upon the primary subject; the immune system is explained in terms of the army.
- The features:
    - Protection (an army protects that body);
    - Healing the body from sickness;
    - Army can get weak if HIV attacks. After the army is weak it won't be able to fight back as good as before, and therefore the health can get in danger.

4 Brochure: ThethaNathi
- The two terms are this disease (HIV/AIDS) and one crazy killer. We know this because of the context of the text.
- The primary subject is the disease HIV/AIDS and the secondary is one crazy killer. The context of the secondary subject is projected upon the primary subject.
- The features:
    - The disease kills, has to ability to kill;
    - It literally kills people but also the youth culture; it is crazy because of this.

5 Brochure: Soul City: This is my life!
This brochure contains several metaphors. For each metaphor, Forceville's questions will be answered:
- The two terms are HIV and boxer. The fight between the two is shown in a picture.
- The primary subject is HIV and the secondary is a boxer. We know this because the process of becoming infected with HIV is described in terms of a boxing match.

- The features:
  - It seems HIV can be beaten, but in the end HIV is the winner of the fight.

- The two terms are shield and condom.
- The primary subject is a condom and the secondary is the shield. We know this because the function of a condom is explained in terms of a shield.
- The features:
  - Condom is a shield, who protects you against infections, bacteria's and diseases.

- The two terms are AIDS and boxer. The fight between the two is shown in a picture.
- The primary subject is AIDS and the secondary is a boxer. We know this because the process of becoming infected with AIDS is described in terms of a boxing match.
- The features:
  - It seems AIDS can be beaten, but in the end AIDS is the winner of the fight.

6 Brochure: Brenda het 'n drakie in haar bloed
- The two terms are AIDS (MIV) and virus-dragon. We know this because of the context of the text; these two terms are repeated all throughout the text.
- The primary subject is AIDS and the secondary is a virus-dragon. How AIDS penetrates the body is described in terms of a bad virus-dragon penetrating into the blood.
- The features:
  - AIDS is a virus-dragon, which makes people sick, tired and feverish;
  - Medicine makes the dragon go to sleep. So, if you do not take your medication, the dragon will wake up and will attack you. Consequently, you will get sick.

- The two terms are white blood cells and soldiers. We know this because of the context of the text; these two terms are repeated all throughout the text.
- The primary subject is a white blood cell and the secondary is a soldier. How cells fight of diseases is described in terms of a soldier protecting you.
- The features:
  - White blood cells protect you body by patrolling in the bloodstream and by attacking invaders.

7 Brochure: Battles in blood….HIV& the immune system
This brochure contains several metaphors. For each metaphor, Forceville's questions will be answered:
- The two terms are defence force and immune system
- The primary subject is the immune system and the secondary the defence force, because the "unknown" operation of the immune system is described in more recognizable terms of a defence force.
- The features:

- o The immune system is like a defence force of one's body, e.g. a network of organs/ tissues, cells and chemicals that cooperate in order to identify, attack, destroy and kill invader;
  - o The line of defence is linked to patrolling the body against viruses.

- The two terms are invaders and HIV.
- The primary subject is HIV and the secondary subject is the invader, because the "unknown" process of HIV entering one's body is described in more recognizable terms of a war in which invaders want to enter your land (e.g. your body).
- The features:
  - o HIV has to overcome barriers in order to invade and destroy;
  - o HIV has chosen a path to enter the body and damage its lining.

- The two terms are army and the Blood cells of our immune system
- The primary subjects are the Blood Cells of our immune system and the secondary subject is the army. The army is used to explain how the blood cells work in a human body to protect it.
- The features:
  - o The army patrols the body and protects it.

- The two terms are CD8-cells and killer t-cells
- The primary subject is the CD8-cell and the secondary the killer t-cell, because the abstract medical term (CD8) is made more concrete in terms of killer cells.
- The features:
  - o CD8-cells destroy and kill viruses.

- The two terms are macrophages and garbage man. Both terms are used to make a comparison.
- The primary subject is the macrophage and the secondary the garbage man, because the "unknown" (the macrophages) is described in more familiar terms of garbage man.
- The features:
  - o The macrophages collect all bacteria's, gobbling op any kind of viruses.

- The two terms are HIV and war. Both terms are used to make a comparison.
- The primary subject is the HIV and the secondary is war, because the "unknown" (the HIV in your body) is described in more familiar terms of a war.
- The features:
  - o The HIV comes into your body and a war is created between the body and the HIV.

8 Brochure: Ubangani: A Parent Guide for LIfe Skills, Sexuality and HIV/AIDS Education

This brochure only contains pictorial metaphors.
- The two terms are boxer and white blood cells.

- The primary subject is white blood cell and the secondary is a boxer. The boxer named "white blood cell" defeats the boxer called "cough". The comic continues and another character makes his entrance.
- The features:
  - The boxer fights viruses.

- The two terms are monster and HIV.
- The primary subject is HIV cell and the secondary is a monster. The monster fights with a boxer called "white blood cell" and defeats/ destroys hem.
- The features:
  - HIV is a monster that can fight and defeat your white blood cells.

9 Brochure: How 2b AIDS aware

This brochure contains several metaphors. For each metaphor, Forceville's questions will be answered:

- The two terms are a bus full of uninvited friends and AIDS. These terms are shown in a pictorial and described in the text.
- The primary subject is AIDS and the secondary is a bus full of unvited friends. We know this because the features from the secondary subject are projected upon the primary subject.
- The features:
  - AIDS is like a bus full of uninvited friends, one is no problem but your not prepared for a whole group;
  - Being a guest, coming in, visiting.

- The two terms are the process of building a house and the process of a virus getting into a cell. These terms are shown in a pictorial and described in the text.
- The primary subject is the process of a virus getting into a cell and the secondary is the process of building a house. We know this because the process of building a house is used to explain HIV contamination.
- The features:
  - The attributes needed to build a house are compared to the different "attributes" of becoming infected.

- The two terms are army and white blood cells. These terms are shown in a pictorial and described in the text. In the pictorial, the cells are armed white a sword and shield in order to fight and protect the body.
- The primary subject is white blood cell and the secondary is an army. We know this because features of the secondary subject are mapped upon the primary subject.
- The features:
  - Protecting a the body;
  - Fighting against invaders (viruses).

- The two terms are plan drawn in the sand and viruses. These terms are shown in a pictorial and described in the text.
- The primary subject is a virus and the secondary is plan drawn in the sand. We know this because features of the secondary subject are mapped upon the primary subject.
- The features:
  - Some viruses stay for a longer time then others. It is compared to a plan drawn in the sand; when a plan (a virus) is drawn in the sand is does not stay long. The wind, for instance, can wash the plan away;
  - Stays infectious for a really short time once outside a cell or body.

- The two terms are figures and viruses
- The primary subject is viruses and the secondary subject are figures. Viruses are referred to as figures. This is also portrayed in a drawing.
- The features:
  Viruses are like living things.

- The two terms are figures and cells
- The primary subject is cells and the secondary subject are figures. Cells are referred to as figures. This is also portrayed in a drawing.
- The features:
  - A cell is like a living creature. For example, it can move and die.

10 Brochure: Play it safe
- The two terms are a soccer game and your life. We know this because on the brochure they show a picture of someone who is playing soccer and in the text the use the soccer game to talk about your life.
- The primary subject is the rules of your life; what decisions people make regarding their life. The person's life is like a game; you can take risks or you can live safely. The secondary subject is a soccer game; a picture as well as a story is presented on a soccer game and its rules. The rules that are used in soccer games are mapped upon the rules that people live by in real life.
- The features:
  - The soccer game is projected on life. Life is a game; there are many decisions you have to make, and there are rules that you should play by. The decisions you make in soccer determine whether or not you are going to win, and this concept is projected on the decision that people make in real life.

8.3   Script for Focus Group Discussion

Date: 24-08-2007

INTRODUCTION

– **Participants will be welcomed with coffee/tea and snacks.**

– **We thank the group for their participation in the focus group.**
  - o   Welcome everyone. Thank you very much for letting us join today's session.

– **We introduce ourselves informally: the monitor tells a story with some cultural differences and the other two researchers shortly tell who they are and how they have been liking South Africa so far. This small talk is necessary to break the ice and to create an informal atmosphere. The participants now know who they are dealing with, and this way they might feel more comfortable.**
  - o   We are Maartje, Kim, and Marloes, and we are students from the Netherlands. Last year we had a lecturer who was South African, and we attended his course on South Africa, with health communication and HIV/AIDS in particular. This course was so interesting that we decided to go to South Africa to do research on HIV/AIDS communication. After spending 300 hours on getting our visas, injections, etc. we flew to South Africa in the beginning of July. In July and the beginning of August we first travelled a bit to first get to know the country. Even though the weather is not always as good as we expected, we have been enjoying our stay very much! We stay here and do our research until the end of December 2007.
  - o   We have noticed that the people here are a lot more laid back than most Dutch people. In Holland most people are always in a hurry. What we also really like about here is the friendliness of the people; they are always willing to help, and they always have time for you. They are also very open and like to chat.

– **We shortly explain what we want to talk about in the focus group (we tell that our research is on HIV/AIDS communication for high school children). We try to use simple language to make sure that everybody understands everything and so that everybody feels comfortable.**
  - o   We'll now try to explain what our research is about. As I said before, we are doing research on HIV/AIDS communication. Our target group will be high school students in the grades 7 up to 11. What we want to find out is what kind of style you should use when educating High School students.

– **We explain to the group that we would like to have an open discussion and that everybody should be able to give his or her opinion and talk about all the subjects. We ad that they will stay anonymous.**

- o During this session we would like all of you to speak openly and say everything that comes to your mind. We can assure you that all the information that you give us will strictly be used for our research and will be anonymous. We are only using the tape recorder as a back up, in case we cannot read our own hand writing anymore.

- **A short introduction of the health workers: who are they and what do they do.**
  - o Now that you all know who we are, maybe everybody can shortly introduce themselves. Maybe tell us what you do, and what you like about your job.

CORE

- **We explain that there are different ways in which you can educate people on HIV/AIDS. One tool that can be used is metaphorical language. Clear examples are given to explain what we mean by metaphorical language. One example: a body as a complicated machine. The machine can get out of order for many external reasons: dirt and worms cause diarrhoea and other stomach troubles, cold rains cough and fever. The process of healing could be referred in terms of preparing the machine in order to work normally.**
  - o Ok, now that we got to know each other a little bit better, we can start.
  - o There are many ways in which you can try to educate people on HIV/AIDS related topics. Some people say it is best to use comics or pictures, some say it is best to write in a certain slang, and others might say it is best to use scary pictures. What we want to find out is whether or not metaphors could be a useful tool to use in HIV/AIDS education for High School students. A metaphor is a kind of figurative language (beeldspraak) in which you describe something that is difficult to understand in terms of something that is more familiar. Let me give an example: A metaphor you could use for a human body is a complicated machine. This means that the features of a machine are mapped upon the human body. When you talk about a person that is sick, you could use this metaphor, by saying that the sick body is like a machine that is out of order. You can also use this metaphor to talk about the healing of a body by saying; the machine needs to be fixed. Another example of a metaphor is using the phrase 'eating out' in order to refer to sex. You go to another person to do something nice. When one refers to sex, one could compare it to the experience of eating. For instance: *I want to eat her* or *He tasted nice.* (Example of it goes round the group, Brenda met draakie.) Do you now understand what we mean by metaphors?

- **We ask them if they use a similar method/ figurative language when they work with Children in the grades 8-11. If so, can they provide examples? We write down their input.**
  - o Have you ever used such methods in your work on HIV/AIDS education, and do you use them often?
  - o And do you use them when addressing High School students?
  - o Could you possibly give us some examples of metaphors you use? (write down)

- **If they use metaphors, we try to reveal why they use them and what the effects are. All the metaphors that are put forward in this discussion will be written down visibly.**
    - Why do you use metaphors; what do you think are the effects.

- **We present the metaphors that we found in the corpus analysis. We ask the health workers to give their opinion on these metaphors. Do they understand these metaphors? Do they use these metaphors themselves when educating high school students? Do they think high school students will understand them? In short: would the metaphors be effective?**
    - The metaphors that we found, are the following:
        - Army; the immune system is like a defence force of one's body, e.g. a network of organs/ tissues, cells and chemicals that cooperate in order to identify, attack, destroy and kill invaders.
        - Boxer; picture two boxers, one is called "white blood cell" and the other one "HIV". The two fight and eventually HIV destroys/defeats the white blood cells and is this match' winner. (We show the pictorial to the health workers.)
            - Soldier; the white blood cell is seen as the soldier of one's body. It has a shield that protects and it has a spear that can stab the viruses that tries to attack the body. HIV is the one virus the white blood cell cannot protect the body from; HIV kills the white blood cell.
    - Do you all understand these metaphors?
    - Would you use them when educating High School students?
    - Do you think High School students will understand them?
    - Do you think these metaphors could contribute to effective HIV/AIDS education for High School students?

- **We make a list in which we present the most frequent metaphors from the corpus and the metaphors that the health workers came up with themselves. We ask them which they think would work best..**
    - Do you think some metaphors are better than others? If so, which ones are better and why?

- **We tell that we distinguish three ethnic groups and we ask the health workers about the differences in the use of the metaphors that were just discussed. If there is a difference, we ask them to make a top three of most effective metaphors per ethnic group.**
    - We are aware that there are many different ethnic groups in South Africa. In our research, we distinguish three ethnic groups: Xhosa speaking people, Afrikaans speaking whites, and coloured South-Africans.
    - Do you counsel all of these groups? Or are there different counsellors per group?
    - Do you think that the different groups will use different metaphors for HIV AIDS or related topics?

- o Is it possible for you to make a top 3 of best metaphors that would be most effective for the 3 different groups?

- **We ask them about possible emotional reactions that could be caused by these metaphors. (We want to find out if the health workers think that the metaphors could enhance stigmatization)**
    - o Are there any emotional reactions to these metaphors? Perhaps some metaphors can lead to certain feelings, associations.

OPEN COMMENT ROUND
- **The participants can share all their comments about the subject or the session with us.**
    - o Are there any last comments that you would like to make? Any suggestions; things that come to mind. Please share it with us.

END
- **We thank the participants, and we promise them to keep them informed on the progress of the research.**
    - o That was all. Thank you very much for your help and cooperation. You have definitely been a great help to us. If you would like we could keep you updated on the results of our research

8.4 Minutes from Focus Group Discussion

Date: 24-08-2007
Task partitioning during the session:
Kim Olislagers: assistant and minutes secretary
Maartje van Sambeek: minutes secretary
Marloes van Nistelrooij: moderator

Participants: the focus group consisted of seven participants:

Timbee (Xhosa, male), Benjamin (Afrikaans speaking white, male), Heidi (coloured, female), Laprisha (coloured, female), Nasi (coloured, female), Timbi (Xhosa, male), Keri (Afrikaans speaking white, female).

Introduction

Moderator: Welcome everyone. Thank you very much for letting us join today's session. We are Maartje, Kim, and Marloes, and we are students from the Netherlands. Last year we had a lecturer who was South African, and we attended his course on South Africa, with health communication and HIV/AIDS in particular. This course was so interesting that we decided to go to South Africa to do research on HIV/AIDS communication. After spending 300 hours on getting our visas, injections, etc. we flew to South Africa in the beginning of July. In July and the beginning of August we first travelled a bit to get to know the country. Even though the weather is not always as good as we expected, we have been enjoying our stay very much! We stay here and do our research until the end of December 2007.

We have noticed that the people here are a lot more laid back than most Dutch people. In Holland most people are always in a hurry. What we also really like here is the friendliness of the people; they are always willing to help, and they always have time for you. They are also very open and like to chat. We'll now try to explain what our research is about. As I said before, we are doing research on HIV/AIDS communication. Our target group will be high school students in the grades 7 up to 12. What we want to find out is what kind of style you should use when educating High School students. During this session we would like all of you to speak openly and say everything that comes to your mind. We can assure you that all the information that you give us will strictly be used for our research and will be anonymous. We are only using the tape recorder as a back up, in case we cannot read our own hand writing   anymore.

Now that you all know who we are, maybe everybody can shortly introduce themselves. Maybe tell us what you do, and what you like about your job.

-Participants introducing themselves-

Moderator: Ok, now that we got to know each other a little bit better, we can start. There are many ways in which you can try to educate people on HIV/AIDS related topics. Some people say it is best to use comics, some say it is best to write in certain slang, and others might say it is best to use scary

pictures. What we want to find out is whether or not metaphors could be a useful tool to use in HIV/AIDS education for High School students. A metaphor is a kind of figurative language (beeldspraak) in which you describe something that is difficult to understand in terms of something that is more familiar. Let me give an example: A metaphor you could use for a human body is a complicated machine, for instance a car. This means that the features of a machine (in this case the car) are mapped upon the human body. So you can say: a car needs petrol in order for it to work. The human body needs food, in order for it to live. Another example is that when the engine of the car is broken it won't work/start. That is just the same with the human body; it needs the heart to beat in order to live. When you talk about a person that is sick, you could also refer to a machine by saying that the sick body is like a machine that is out of order. You can also use this metaphor to talk about the healing of a body by saying; the machine needs to be fixed. Another example of a metaphor is using the phrase 'eating out' in order to refer to sex. You go to another person to do something nice. When one refers to sex, one could compare it to the experience of eating. For instance: *He tasted nice.* Do you now understand what we mean by metaphors?
-Example of it goes round the group, Brenda het 'n drakie in haar bloed.-

Group: Yes, we all understand.

Moderator: **Do you use metaphors in your work?**

Timbi: In the clinics where we work we mostly deal with grown ups, who often already know about HIV/AIDS. However, metaphors are used for VCT. I used a metaphor yesterday. I said that testing was like checking the body if there are any fires. If you find a fire, this means that the immune system is fighting. I use metaphors for creating individual understanding and adjust them to the person.

Nasi: I work on farms a lot. In order to educate farmers, we use a toolkit with pictures. I use the pictures to make a local story. I let people choose names for the characters in the pictures, and I will use these names in my story. It must be a true story. I often make stories about being responsible, living a responsible life and about the consequences of having unprotected sex. It is interesting to see people's reactions, especially the youngsters, when they see that AIDS could lead to death. I use the local stories so people can identify themselves with the characters.

Benjamin: I often use a soldier metaphor to explain the immune system. HIV kills your soldiers; which is a metaphor for HIV killing the white blood cells or immune system. I also use a metaphor in which the body is a house. Someone tries to break into the house. This is a very clear example with all the crime in South-Africa; everybody knows what you are talking about. In order to prevent the burglars to break in, you need a security company to prevent your house from being burgled. This metaphor uses the house to talk about the body and HIV trying to break into you body. It explains that you need to take measures in order for the HIV to break into your body. The security company can be compared to a HIV-test, it checks to see if there is something wrong in the house, your body.

Moderator: **Do you also use metaphors when addressing High School students?**

Timbi: Fifty percent of the schools in South Africa do not have any program for HIV/AIDS education. HIV/AIDS education does not have a high priority in some schools. Most do not have a good system. Teachers are also afraid that the children's parents will not appreciate it if they speak to the children about sex and HIV/AIDS.

Heidi: Often the education is integrated into a common course. The way that HIV/AIDS is explained in these courses is often very difficult for children to understand. It is even too difficult for me to understand! Often this education is integrated in the biology class. The language that is used in the biology books is often very technical; many medical terms are being used. This is difficult for the children to understand. They should break it down to kids-level.

Timbi: There are no brochures especially for kids, only the LoveLife campaigns.

Minutes secretary: And what about the Soul City magazines?

Timbi: Yes, that's another one.

Benjamin: I disagree with you Timbi. There is more for kids. Besides the LoveLife campaigns, there is also a youth insert in the newspaper; one page that is for the children. This insert has cartoons and very simple information. HIV/AIDS is often also a topic that occurs in this insert. Next to that, I think that a lot of brochures are suitable for children and adults, because AIDS is often described very simple.

Group: We agree with that, most brochures are suitable for people of all ages.

Moderator: **The metaphors that we found by looking through brochures on HIV/AIDS, are the following ones.**

-The metaphors revealed by the corpus analysis are presented to the group by handing out papers with the following explanation on them-

- o Army: A little army that walks around the body and is the immune system. It is there to fight viruses so the body stays healthy.
- o Boxer: Two boxers fighting, one is called HIV and one is called white blood cell. Eventually HIV comes out as a winner of this boxing game.
- o Soldier: The soldier is a white blood cell in one's body. HIV is the virus that the white blood cell cannot protect the body from; HIV kills the white blood cell.

Moderator: **You named some of these metaphors yourself in the beginning of the session; do you all understand the given metaphors?**

Group: Yes, we understand them.

Moderator: **Do you think High School students will understand them?**

Timbi: Yes, it would be understood by children as well; it is very clear. When kids can relate to the topic or metaphor then they will understand it. Kids know what an army or a boxer is, so they will understand these metaphors.

Group: We agree with Timbi.

Moderator: **Would you use these metaphors when educating High School students?**

Benjamin: Kids know about HIV/AIDS. Most know what it is. They are pretty well aware because of television and media. When you talk to children about sex or HIV/AIDS, you try to call it what it is and do not make it too easy. But when you talk to a group and you are talking about a one-night-stand you might say: "I had a take out this weekend".
Heidi: Or people might say: "I don't eat my sweets with a wrapper on".

Benjamin: So we mostly use metaphors to make difficult concepts more clear.

Moderator: **Do you think these metaphors could contribute to effective HIV/AIDS education for High School students?**

Group: Yes, we think so.

Moderator: We are aware that there are many different ethnic groups in South Africa. In our research, we distinguish three ethnic groups: Xhosa speaking people, Afrikaans speaking whites, and coloured South-Africans. **Do you counsel all of these groups? Or are there different counsellors per group?**

Group: Almost every counsellor works with several cultural groups.

Moderator: **Do you think that the different groups will use different metaphors for HIV AIDS or related topics?**

Laprisha: We would use the same metaphors for all the groups.

Group: We agree with the previous speaker.

Timbi: Xhosa is more metaphorical in nature compared to the other languages. In Xhosa you always use metaphors. For example, "Condoms are referred to as a jacket or an umbrella", you never say the word condom. But people know what you mean when you say umbrella or jacket.

Laprisha: Coloured people are more direct.

Heidi: The coloured people I work with have a lower educational level and cannot afford a doctor and therefore go to the local clinic. I adjust the message to them and do not use a lot of direct terms because they do not understand them.

Benjamin: I work with all the three groups. I think whites are more direct than Xhosas. They just say the terms; maybe they do not even use metaphors at all.

Heidi: When you deal with older coloured people, you have to use metaphors and can not say it directly.

Moderator: **Is this the same with older white people?**

Benjamin: With older white people, you use more sophisticated words. You won't use the word "dick", but just "penis" and you definitely do not use slang.

Timbi: Factors that determine how to talk to people depends on many things: education, where you come from, age. In Xhosa when a girl has her period she will never say: "I have my period". She will more likely say: "I missed a match yesterday". There are many words for the same thing. People do not often use the word STI or AIDS-HIV, They have other words to refer to it.

Moderator: **Is it possible for you to make a top 3 of best metaphors that would be most effective for the 3 different groups?**

Benjamin: I would group the soldier and army together. They are the same. I think I would not use boxer.

Group: We agree with Benjamin on grouping the army and soldier together.

Benjamin: I think the soldier/ army metaphor is the most effective for all three groups.

Timbi: The policemen metaphor is also often used in the townships. People here all know what policemen are. It's the way of thinking. Boxing is easy for Xhosas to understand; it is a top sport in our communities, especially in the Western Cape. For the Xhosa, I would use soldier/army, then boxer and at last the police.

Laprisha: Coloured people would also use soldier/army the most, followed by the house metaphor.

Benjamin: I agree with Laprisha; the second best metaphor for the whites and the coloured is the house- metaphor.

Heidi and Nasi: We agree with Benjamin and Laphrisa.

Timbi: In Xhosa, you could never use the house metaphor. It is very sensitive because many people in the Xhosa community do not have a house. I always try to avoid sensitive topics, such as a house, in my education.

Group: We agree with Timbi.

Keri: Counsellors usually have some metaphors they use more often. They will stick to the ones they feel comfortable with, so I think it is a bit personal.

-Eventually, the group comes to the following top three for the Xhosa speaking people-
- o army/soldier,
- o boxer;
- o fire engine.

-For the Whites and the Coloured the top three is the same-
- o army/soldier,
- o house;
- o policemen.

Moderator: **Do you think that High School children like to read metaphors? Perhaps some metaphors can lead to certain feelings, associations. Are there any emotional reactions to these metaphors?**

Timbi: Some health workers are not promoting the use of metaphors. Metaphors could encourage stigma.

Benjamin: Besides that it also leads to confusion. It's better to be clear and direct in education. Use metaphors only for difficult things; to explain them, and then talk in direct language again. Metaphors can be useful, but at the end you must always use direct language again in order to remind people of what you are referring to. For example, so HIV is like a soldier.

Timbi: Yes, the confusion exists. I had a client who said: I would like to test whether or not my blood is dead or alive. That is bad. So I said: "You are not testing if it's dead; your blood is only dead when YOU are dead." Talking too much in circles is bad.

Keri: Metaphors could cause confusion. Therefore, use them as examples to compare difficult things with.

Moderator: **Are there any last comments that you would like to make? Any suggestions or things you would like to share with us?**

Timbi: Unscramble: use metaphors. Just to explain.

Benjamin: In areas of lower literacy, you need to be very, very direct. If you for example demonstrate condom use with the help of a broom stick, the very low literates might lay a broom stick with a condom next to the bed, and assume they can have safe sex then. Be very concrete and specific with this group.

Moderator: That was all. Thank you very much for your help and cooperation. You have definitely been a great help to us. If you would like we could keep you updated on the results of our research.

8.5 Pre-test

8.5.1. Pre-test experts

Thank you very much for helping us with our research. The texts you are about to read are designed to inform high school students about HIV/AIDS. Please read them carefully and answer the questions.

Then the different text versions were presented, followed by these questions:

After you have read all texts:

1. Do you think text A is easy to understand? *Motive your answer please.*

_____

_____

2. Do you think text A is easy to read? *Motive your answer please.*

_____

_____

3. Do you think text B is easy to understand? *Motive your answer please.*

_____

_____

4. Do you think text B is easy to read? *Motive your answer please.*

_____

_____

5. Do you think text C is easy to understand? *Motive your answer please.*

_____

_____

6. Do you think text C is easy to read? *Motive your answer please.*

_____

_____

7. Do you think text D is easy to understand? *Motive your answer please.*

_____

_____

8. Do you think text D is easy to read? *Motive your answer please.*

_____

_____

9. Do you think text E is easy to understand? *Motive your answer please.*

_____

_____

10. Do you think text E is easy to read? *Motive your answer please.*

_____

_____

11. Do you think text all texts are quite similar in meaning? *Motivate your answer please.*

_____

_____

12. Do you think there is a clear difference in style between text A and text B/C/D/E? *Motivate your answer please.*

_____

_____

_____

_____

13. → Metaphorical language is used in text A
   Totally agree ☐ ☐ ☐ ☐ ☐ totally disagree

 → Metaphorical language is used in text B
   Totally agree ☐ ☐ ☐ ☐ ☐ totally disagree

 → Metaphorical language is used in text C
   Totally agree ☐ ☐ ☐ ☐ ☐ totally disagree

 → Metaphorical language is used in text D
   Totally agree ☐ ☐ ☐ ☐ ☐ totally disagree

 → Metaphorical language is used in text E
   Totally agree ☐ ☐ ☐ ☐ ☐ totally disagree

8.5.2. Pre-test target group

Dear Student,

First of all, we would like to thank you for helping us with our research. The reason that we need your help is because we would like to test the quality of a text and a questionnaire that we designed for our research among high school children.

We would like you to start off with reading the text on the next page. After you are finished with reading, there are a couple questions about the text that we would like you to answer. Please take all the time you need and explain your opinion.

Good luck!
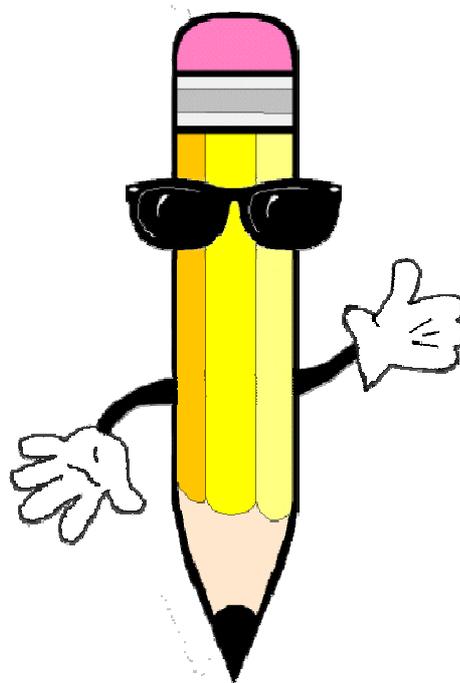
First the text was presented to the target group, followed by these questions:

1. Did you understand the text?
   o If it wasn't clear, could you indicate what made it hard to understand?

_____

_____

_____

_____

_____

_____

2. Was the language easy to understand?
   o If it wasn't easy to understand, could you indicate why it was hard?

_____

_____

_____

_____

_____

_____

3. Was the message clear?
   o If not, what part was not clear?

_____

_____

_____

_____

_____

_____

Below you will find the questionnaire that we want to give to the high school kids. They have to answer these questions after they read the text. Could you also try to answer them?

After this introduction the questionnaire was presented, followed by these questions:

We would now like to hear your opinion about the 67 questions you just answered.

Did you understand the questions?
- o If there were questions that you didn't understand, could you write down which were difficult?

_____

_____

_____

_____

_____

Was the language easy to understand?
- o If not, could you indicate why it was hard?

_____

_____

_____

_____

_____

_____

Thank you very much ☺ you have been a great help to us!

8.6   Questionnaires

8.6.1. Questionnaire

Questionnaire

Thank you for helping us with our research! Take all the time you need to read the texts and answer the questions. We think you will be finished in about 15 minutes. Please mark the answer that you think is the best. There are no wrong answers! We want to know what you think; nobody will judge you for it. You do not have to write your name down so we will not know who answered what.

Good luck!

1. What high school grade are you in?
o   Grade 8
o   Grade 9
o   Grade 10
o   Grade 11

2. What is your age?   _____

3. What is your gender?
o   Female
o   Male

4. Which language is mostly spoken in your home?
o   Afrikaans
o   Xhosa
o   English
o   Other

5. To what ethnic group do you belong?
o   Xhosa
o   Afrikaans speaking white
o   Coloured
o   Other

Example:

From now on the questions in this questionnaire look as the following example:

1. Rugby is my favourite sport:

□ totally disagree   □ disagree   □ don't know   ■ agree   □ totally agree

Mark the answer that you think is best;

If you mark the answer **totally disagree**, this means that you hate rugby.

If you mark the answer **disagree**, this means that you think rugby is not that much fun.

If you mark the answer **don't know**, this means that you do not have an opinion on rugby.

If you mark the answer **agree**, this means that you like rugby but it is not your favourite sport.

If you mark the answer **totally agree**, this means that rugby is your favourite sport.

6. The text is clear:

□ totally disagree   □ disagree   □ don't know   □ agree   □ totally agree

7. The text is short:

□ totally disagree   □ disagree   □ don't know   □ agree   □ totally agree

8. The text is easy to read:

□ totally disagree   □ disagree   □ don't know   □ agree   □ totally agree

9. The text is easy to understand:

□ totally disagree   □ disagree   □ don't know   □ agree   □ totally agree

10. I think that the writer has used language that helps to explain difficult subjects:

□ totally disagree   □ disagree   □ don't know   □ agree   □ totally agree

11. The writer has used language that is clear to me:

□ totally disagree   □ disagree   □ don't know   □ agree   □ totally agree

12. I believe what the writer says in the text:

□ totally disagree   □ disagree   □ don't know   □ agree   □ totally agree

13. The writer of the text is convincing:

□ totally disagree   □ disagree   □ don't know   □ agree   □ totally agree

14. I trust the writer of the text:

□ totally disagree   □ disagree   □ don't know   □ agree   □ totally agree

15. The writer of the text is reliable:

□ totally disagree □ disagree □ don't know □ agree □ totally agree

16. The writer of the text is an expert on HIV:
□ totally disagree □ disagree □ don't know □ agree □ totally agree

17. The writer of the text is experienced:
□ totally disagree □ disagree □ don't know □ agree □ totally agree

18. The writer of the text is well informed:
□ totally disagree □ disagree □ don't know □ agree □ totally agree

19. The writer of the text is qualified:
□ totally disagree □ disagree □ don't know □ agree □ totally agree

20. The writer of the text is skilled:
□ totally disagree □ disagree □ don't know □ agree □ totally agree

21.The text gives me new information:
□ totally disagree □ disagree □ don't know □ agree □ totally agree
22. The text deals with facts:
□ totally disagree □ disagree □ don't know □ agree □ totally agree

23. The text is logical:
□ totally disagree □ disagree □ don't know □ agree □ totally agree

24. The text affects my feelings:
□ totally disagree □ disagree □ don't know □ agree □ totally agree

25. The text touches me emotionally:
□ totally disagree □ disagree □ don't know □ agree □ totally agree

26. The text gives me new ideas:
□ totally disagree □ disagree □ don't know □ agree □ totally agree

27. The text reaches out to me:
□ totally disagree □ disagree □ don't know □ agree □ totally agree

28. The text is inspiring:
□ totally disagree □ disagree □ don't know □ agree □ totally agree

29. The text is exciting:

□ totally disagree   □ disagree   □ don't know   □ agree   □ totally agree

30. The text is interesting and I wanted to read it:
□ totally disagree   □ disagree   □ don't know   □ agree   □ totally agree

31. While I was reading the text, I realized that I would like to read the whole text:
□ totally disagree   □ disagree   □ don't know   □ agree   □ totally agree

32. After I read the first paragraph, I wanted to stop reading:
□ totally disagree   □ disagree   □ don't know   □ agree   □ totally agree

33. Even if nobody would ask me to read this text, I would still like to read it:
□ totally disagree   □ disagree   □ don't know   □ agree   □ totally agree

34. The way the writer talks to me is straight forward:
□ totally disagree   □ disagree   □ don't know   □ agree   □ totally agree

35. The writer talks to me in the same way as my family and friends would do:
□ totally disagree   □ disagree   □ don't know   □ agree   □ totally agree

36. The way the writer talks to me is easy-going:
□ totally disagree   □ disagree   □ don't know   □ agree   □ totally agree

37. The writer talks to me in a lively way:
□ totally disagree   □ disagree   □ don't know   □ agree   □ totally agree

38. The text is of good quality:
□ totally disagree   □ disagree   □ don't know   □ agree   □ totally agree

39. The text is interesting:
□ totally disagree   □ disagree   □ don't know   □ agree   □ totally agree

40. I like the way this text is written:
□ totally disagree   □ disagree   □ don't know   □ agree   □ totally agree

41. The way this text is written is dull:
□ totally disagree   □ disagree   □ don't know   □ agree   □ totally agree

42. The text is written in a lively way:
□ totally disagree   □ disagree   □ don't know   □ agree   □ totally agree

43. The text is informal:

□ totally disagree   □ disagree   □ don't know   □ agree   □ totally agree

44. The text is serious:
□ totally disagree   □ disagree   □ don't know   □ agree   □ totally agree

45. I agree with what is said in the text:
□ totally disagree   □ disagree   □ don't know   □ agree   □ totally agree

46. I like the language that is used in the text:
□ totally disagree   □ disagree   □ don't know   □ agree   □ totally agree

47. I think all HIV/AIDS texts should be written in the same way as the text I just read:
□ totally disagree   □ disagree   □ don't know   □ agree   □ totally agree

48. Please put a circle around the grade that you would give the text: (1=low, 10=high)
1   2   3   4   5   6   7   8   9   10

49. The text makes me feel that I shouldn't hug a HIV-infected person:
□ totally disagree   □ disagree   □ don't know   □ agree   □ totally agree

50. The text makes me feel that I shouldn't share my water bottle with people who are infected with HIV:
□ totally disagree   □ disagree   □ don't know   □ agree   □ totally agree

51. The text makes me feel that I shouldn't shake the hand of someone who is HIV-infected:
□ totally disagree   □ disagree   □ don't know   □ agree   □ totally agree

52. The text makes me want to avoid people who are infected with HIV, so that I don't get the disease myself:
□ totally disagree   □ disagree   □ don't know   □ agree   □ totally agree

53. The text makes me think that people who are infected with HIV have done something wrong:
□ totally disagree   □ disagree   □ don't know   □ agree   □ totally agree

54. The text makes me feel that I would be ashamed if I were HIV-infected:
□ totally disagree   □ disagree   □ don't know   □ agree   □ totally agree

55. In the text, the immune system is explained in terms of something familiar:
□ totally disagree   □ disagree   □ don't know   □ agree   □ totally agree

56. In the text, the immune system is explained by using examples that make the immune system more concrete:
□ totally disagree   □ disagree   □ don't know   □ agree   □ totally agree

57. The text makes it easier to picture what the immune system is:

□ totally disagree □ disagree □ don't know □ agree □ totally agree

58. Lively language is used in the text:

□ totally disagree □ disagree □ don't know □ agree □ totally agree

59. The information in the text is presented in a simple way:

□ totally disagree □ disagree □ don't know □ agree □ totally agree

60. I think that the text is realistic:

□ totally disagree □ disagree □ don't know □ agree □ totally agree

61. I think that the text is common:

□ totally disagree □ disagree □ don't know □ agree □ totally agree

Thank you very much for answering these questions! ☺

8.6.2. Questionnaire Stigma (stigma no text)

Questionnaire

Thank you for helping us with our research! All you have to do is fill out the questions below. We think you will be finished in about 5 minutes. Please mark the answer that you think is best. There are no wrong answers! We want to know what you think; nobody will judge you for it. You do not have to write your name down so we will not know who answered what.

Good luck!

1. In what high school grade are you at the moment?
   o Grade 8
   o Grade 9
   o Grade 10
   o Grade 11

2. What is your age? _____

3. What is your gender?
   o Female
   o Male

4. Which language is spoken most in your home?

  o Afrikaans

  o Xhosa

  o English

  o Other

5. To what ethnic group do you belong?

  o Xhosa

  o Afrikaans speaking white

  o Coloured

  o Other

Example:

From now on the questions in this questionnaire look as the following example:

1. Rugby is my favourite sport:

□ totally disagree   □ disagree   □ don't know   ■ agree   □ totally agree

Mark the answer that you think is best;

If you mark the answer **totally disagree**, this means that you hate rugby.

If you mark the answer **disagree**, this means that you think rugby is not that much fun.

If you mark the answer **don't know**, this means that you do not have an opinion on rugby.

If you mark the answer **agree**, this means that you like rugby but it is not your favourite sport.

If you mark the answer **totally agree**, this means that rugby is your favourite sport.

---

6. I shouldn't hug a HIV-infected person:

□ totally disagree   □ disagree   □ don't know   □ agree   □ totally agree

7. I shouldn't share my water bottle with people who are infected with HIV:

□ totally disagree   □ disagree   □ don't know   □ agree   □ totally agree

8. I shouldn't shake the hand of someone who is HIV-infected:

□ totally disagree   □ disagree   □ don't know   □ agree   □ totally agree

9. I should avoid people who are infected with HIV, so that I don't get the disease myself:

□ totally disagree   □ disagree   □ don't know   □ agree   □ totally agree

10. People who are infected with HIV have done something wrong:

□ totally disagree   □ disagree   □ don't know   □ agree   □ totally agree

11. I would be ashamed if I were HIV-infected:

□ totally disagree   □ disagree   □ don't know   □ agree   □ totally agree

Thank you very much for answering these questions! ☺

8.7   Text Versions

Text A

Your immune system and HIV

In your every day life your body is constantly exposed to viruses and bacteria. One virus that has been infecting more and more people around the world is HIV. This virus can cause a disease called AIDS. Do you know how you can get infected with HIV and how this affects your body?

Your immune system protects your body so that viruses and bacteria cannot harm you. This prevents you from getting sick. The white blood cells in your immune system take care of your health. Your immune system is active 24 hours a day, seven days a week.

If your skin has been damaged, for example by a needle, viruses can enter your bloodstream through this opening. It is in the bloodstream where the immune system really plays its role. As soon as a virus comes into your bloodstream, your immune system sends out chemical signals to the white blood cells. Depending upon the type of virus, the immune system will make antibodies that the white blood cells can use to get rid of the viruses.

The white blood cells in your immune system play a major role in the body's defence against viruses, bacteria, cancer cells, and poisons. There is one virus, however, that the immune system cannot defeat: HIV. HIV is different from other viruses; it infects the immune system itself. This prevents the immune system from working as effectively as it did before. Since the immune system of a HIV-infected person cannot protect the body properly, the person can get sick more easily. This makes the body weak. This weakening can be slowed down by medicine. However, even if no medication is taken, it usually takes years before the immune system can be completely destroyed by HIV. After the immune system has been destroyed, a person will eventually die.

Text B

Your immune system and HIV

In your every day life your body is constantly exposed to viruses and bacteria. One virus that has been infecting more and more people around the world is HIV. This virus can cause a disease called AIDS. Do you know how you can get infected with HIV and how this affects your body?

Your immune system acts as your body's army that attacks and destroys invaders such as viruses. It prevents you from getting sick. This army in your body has several lines of defence, for instance the white blood cell soldiers who take care of your health. The immune system army is on duty 24 hours a day, seven days a week.

If invaders get past the lines of defence, they can freely enter your body. This can happen when your skin has been damaged, for example by a needle. This creates an opening through which invaders can walk into your body and enter your bloodstream. In the bloodstream the immune system army really plays its role. As soon as a virus invader comes into your bloodstream, the army sends out signals to the white blood cells soldiers. They fight as hard as they can to defeat these virus invaders. The army will use certain weapons that can destroy the enemy. These weapons are called antibodies. For each invader the army uses a different weapon.

The white blood cell soldiers are the most important force of the immune system army. They are constantly patrolling your body, searching for invaders, such as viruses, bacteria, cancer cells, and poisons. However, there is one virus invader that the immune system army cannot defeat: HIV. The HIV invader is different from other invader viruses; besides attacking the body, it also attacks the immune system army itself. In an HIV-infected body there are invaders entering which the body cannot easily get rid of. This is because the army and the white blood cell soldiers have been weakened. Medicine generally slows down these invaders. However, even if no medication is taken, it usually takes years before the army can be completely overcome by these invaders. After the HIV invaders have defeated and destroyed the immune system army, a person will eventually die.

Your immune system and HIV

In your every day life your body is constantly exposed to viruses and bacteria. One virus that has been infecting more and more people around the world is HIV. This virus can cause a disease called AIDS. Do you know how you can get infected with HIV and how this affects your body?

There is a boxer in your body called **I**mmune **S**ystem, but everybody calls him **IS**. In order to protect your body from sickness, he fights mean boxers such as viruses who have negative influences on your body. **IS** has several helpers who help him fight other boxers. These helpers are called White Blood Cells, and they take care of your health. **IS** is always prepared to fight, 24 hours a day, seven days a week.

If a mean boxer wants to fight **IS**, he first has to get into your body. This can happen when your skin is damaged, for example by a needle. This creates an opening through which mean boxers can enter your body and fight **IS**. Inside every body there is a boxing ring where **IS** really likes to fight as hard as he can. This boxing ring is called the bloodstream. As soon as a mean boxer tries to enter this ring, your body warns **IS's** White Blood Cell helpers so they can help **IS** to prepare for the fight. **IS** uses different boxing gloves to fight mean boxers. These gloves are called antibodies. For each opponent **IS** uses a different kind of boxing gloves.

The White Blood Cell helpers play a major role in protecting your body. They constantly walk around, searching for mean boxers such as Virus, Bacteria, Cancer Cell, and Poison. There is one mean boxer, however, that **IS** cannot defeat: HIV. The boxer HIV is different from other mean boxers: he is much stronger and more mean. HIV harms **IS** so he can not fight as hard as he could before. In an HIV-infected body there are mean boxers trying to fight IS. IS cannot easily defeat them, because he and his white blood cell helpers are weakened. Medicine generally strengthens them. However, even if no medication is taken, it will usually take years before **IS** is defeated by HIV. After HIV knocks out **IS**, a person will eventually die.

Text D

Your immune system and HIV

In your every day life your body is constantly exposed to viruses and bacteria. One virus that has been infecting more and more people around the world is HIV. This virus can cause a disease called AIDS. Do you know how you can get infected with HIV and how this affects your body?

When you are in your house you feel safe because the security system protects you from burglars. There is also a security system in your body called the immune system. This system protects and warns your body when viruses want to enter. It prevents you from getting sick. The white blood cell security guards are part of the security system and help to protect you from burglars. The security system works 24 hours a day, seven days a week.

If you leave a window open in your house or someone messes with the security system, it creates an opening through which a burglar can come in. A similar thing can happen to your body: your skin can be damaged, for example by a needle. Through this opening uninvited viruses can enter your immune system like burglars. When the burglar gets into your house, the security system really plays its role. This is the same as when viruses come into your bloodstream. As soon as a virus breaks into your body, the security system gives signals to the white blood cell security guards. They will use certain weapons that can catch burglars. These weapons are called antibodies. For each burglar they use a different weapon.

The white blood cell security guards play a major role in protecting your body from burglars; they are constantly searching for burglars such as Bacteria, Virus, Cancer Cell and Poison. There is one burglar, however, that can get into your house without the security system warning you immediately. This burglar is called HIV. He is different from other burglars, because he breaks down the security system. In an HIV-infected body, there are burglars coming in which the body cannot easily get rid of because the security system is damaged and the white blood cell security guards are weakened. Medicine generally slows down these burglaries. However, even if no medication is taken, it usually takes years before the white blood cell security guards and the security system can be completely overcome by HIV. After HIV completely overcomes the security system and the security guards, a person will eventually die.

Text E

Your immune system and HIV

In your every day life your body is constantly exposed to viruses and bacteria. One virus that has been infecting more and more people around the world is HIV. This virus can cause a disease called AIDS. Do you know how you can get infected with HIV and how this affects your body?

You do not want a fire to ruin your home. To prevent this from happening, there is a fire station nearby. There is also a fire station in your body called the immune system. This system protects your body when viruses want to enter. It prevents you from getting sick. The white blood cell fire fighters work for the fire station and protect you from fires. The fire station is available 24 hours a day, seven days a week.

If you are not careful with your body, a fire could occur. This can happen when your skin is damaged, for example by a needle. This creates an opening through which uninvited viruses can enter your body and cause trouble just like a fire. As soon as a fire occurs in your home, signals are sent to the fire station. Your body's fire station works in the same way. The station warns the white blood cell fire fighters. They will come to help you put out the fire. They will use certain tools to do this. These tools are called antibodies. For each fire the fire fighters use a different tool.

The white blood cell fire fighters play a major role in protecting your home. They are constantly searching for causes of fire such as Bacteria, Virus, Cancer Cells and Poison. There is one fire, however, that is hard to put out: HIV. HIV is different from other fires; it harms the fire fighters. Because of this, fire fighters can not do their job as quickly as they could before. Inside the HIV-infected person fire fighters are always trying to get rid of fires. They cannot stop the fires immediately because they are weakened. Medicine generally slows down these fires. However, even if no medication is taken, it usually takes years before the fires kill all the fire fighters. After HIV has burned down the fire station and its fire fighters, a person will die.