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VISUAL LEARNING APPROACHES TO  
HIV/AIDS EDUCATION

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# Visual Learning Approaches To HIV/AIDS Education

## Abstract

*Education is one of the cornerstones to any successful campaign to address the spread and impact of the AIDS epidemic. This is particularly relevant in Sub-Saharan Africa where HIV prevalence is highest in the world and resources are limited. Education is often associated with prevention messages focusing on ways of reducing the spread of the virus. Based on the argument that increased knowledge of HIV results in a reduction in stigma and increased Voluntary Counselling and Testing, this paper focuses on education that aims to increase biomedical knowledge about HIV/AIDS. This paper assesses a participatory workshop used to train HIV/AIDS educators and suggests that participatory approaches to HIV/AIDS education, such as drawing, role play, collage and other art-based activities, are powerful tools that engage participants and result in better understanding of the biology of HIV/AIDS, as well as larger social issues. The use of a Visual Body Map was central to the workshop and learning experience. A Visual Body Map is an educational tool and visual representation of the human body including each system in the body. Therefore this study also evaluates the efficacy of the Visual Body Map as an educational tool with the view to suggesting that visual learning is a highly effective approach to HIV/AIDS education, especially in contexts where formal schooling and literacy are limited.*

## Background

Recent investigations into the level of health care available at South African public hospitals across the country have revealed cases of serious mismanagement, lack of funding and gross under-staffing (Cullinan *et al*, 2006). This is coupled with a growth in medical privatization to the extent that over two-thirds of South African doctors work full-time in the private sector serving less than 20% of the population who have health insurance (Benatar, 2005). In place of race, an economic *apartheid* in health care is now experienced where those who can afford private care have access to more resources and superior services when compared to the poor who can only access the public sector. The

deterioration of public health care services further impedes efforts to handle the increasing burden of AIDS related illnesses (Cullinan *et al*, 2006).

Current calculations suggest that HIV patients will soon comprise 60-70% of hospital expenditure in medical wards (Palitza, 2006). This not only poses serious challenges for an already overburdened health care system, it also exacerbates the current inability of the Public Health Care system to keep up with the expense and demand for HAART. At present an estimated 983 000 South African citizens need Highly Active Antiretroviral Treatment (HAART), which means that fewer than 20% of people requiring treatment are receiving it (Hassan, 2006). Another argument notes that the South African National Treasury has increased fund allocation for HIV/AIDS, but this has not translated into service delivery (Nattrass, 2006a; Ndlovu & Daswa, 2006). Rather than a lack of funds, a lack of political will or commitment to a comprehensive plan of action has hampered the roll-out of HAART (Nattrass, 2006a). However, in December 2006, a breakthrough alliance was formed between government and civil society, including the Treatment Action Campaign (TAC). This points to a new era of collaboration and commitment in relation to the handling of the AIDS crisis in South Africa. The alliance has committed to work together on a Framework for the National Strategic Plan 2007-2011 and a renewed South African National AIDS Council in the early months of 2007 ([www.tac.org.za/index.html](http://www.tac.org.za/index.html)). This paper focuses on the training of TAC Treatment Literacy Practitioners (TLPs) and trainers within the bigger context of the need for Community Health Workers to assist in the roll-out of HAART in South Africa.

The nature of HAART requires that patients be prepared before going onto treatment and then monitored to prevent people from defaulting and developing resistance. Concerns about the lack of capacity in public health care, especially in rural areas with the highest HIV prevalence, were voiced at the time universal access to HAART was announced, and continue to be raised (Barron, 2003, Hassan, 2005). The number of clinics and hospitals that are able to administer HAART to their patients remains low, resulting in many people having to travel long distances to collect their medication (Hassan, 2005). Therefore, four years since universal access to HAART was announced, a chronic shortage of medical staff remains one of main factors slowing down the roll-out of antiretroviral therapy in South Africa (Ndlovu & Daswa, 2006, Cullinan *et al*, 2006)

In order to address the shortage of medical staff, a number of non-governmental and not-for-profit organisations have embarked on training lay people in communities to assist clinics with the care of HIV-positive people and the rollout of antiretroviral therapy in South Africa. This is in keeping with the UN

Millennium Project recommendations that stressed the important role played by members of communities to bridge the gaps between the services provided by the formal health care system and the realities of resource poor and remote communities (Abbatt, 2005). With direct reference to providing universal access to antiretroviral therapy, WHO and UNAIDS reiterated the need to scale up the training of Community Health Workers in order to achieve the '3 by 5' initiative's goals of providing 3 million AIDS patients with HAART by 2005 (WHO, 2003). This model of training lay people as Community Health Workers and home-based carers has continued to be held up as a key approach to assisting with the care of those affected by the AIDS epidemic, including the roll-out of antiretroviral treatment.

The merits of this de-centralised approach lie in utilising people in communities, as opposed to relying on far-away clinics and hospitals, and it has been recommended for the South African context. However, the Community Health Worker model overlooks the fact that both the AIDS-sick individuals and their communities are predominantly poor to start with and so already stretched resources such as food, fuel and money are further spread as members of the community step in to take care of those who are ill. Many proponents of the Community Health Worker model fail to acknowledge that depending on volunteers on a permanent basis to address what is essentially a failure of the formal Public Health Care system, is not only unsustainable but also inequitable. Whereas in Europe and North America people are paid to do such work, in Africa and other developing countries of the South it is often assumed they are willing to work for free or a small stipend. The idealistic view of people caring for members of their communities overlooks the material reality of those individuals and communities who are already struggling to survive, as well as the social and psychological aspects to providing on-going care for AIDS-sick patients.

Having drawn attention to this problem, it should also be stressed that if it were not for the commitment of people on the ground, many organisations currently involved in addressing issues related to HIV/AIDS would simply not exist. The Treatment Action Campaign (TAC), which relies largely on volunteers, is one such organisation that has played a vital role in campaigning for universal access to antiretroviral therapy<sup>1</sup>. Apart from their involvement in issues related to treatment, the TAC are also responsible for training Treatment Literacy Practitioners (TLPs) who play a key role in assisting clinics with their work. They also work as support group counsellors, Voluntary Counselling and

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<sup>1</sup> Apart from the TAC, other groups that have played critical roles in facilitating the roll-out of antiretroviral treatment in South Africa include MSF (Médecins sans Frontières, ARK (Absolute Return for Kids) and HOPE (HIV Outreach Program and Education).

Testing (VCT) counsellors, ‘treatment buddies’, peer educators, HIV/AIDS trainers and offer HIV education to schools and other organisations (Questionnaire administered to TAC workshop participants, 2006).

This paper focuses on the training of TAC Treatment Literacy Practitioners (TLPs) and trainers within the bigger context of the need for Community Health Workers to assist in the roll-out of HAART in South Africa. By evaluating the ‘train-the-trainer’ style workshop which was run with the group of Treatment Literacy trainers and educators from the TAC in November 2006, this paper also assesses the value and impact of participatory and visual learning methods for promoting effective HIV education. In addition, by probing attitudes and encouraging participants to share their experiences in clinics and their communities, this paper investigates the argument that knowledge about the biology of HIV is able to potentially reduce stigma and fear surrounding HIV/AIDS and increase Voluntary Counselling and Testing (Maughan-Brown, 2006, Herek, 2002, Herek et al, 2003). This argument reasons that with the reduction of stigma and increase in VCT, biomedical knowledge ultimately encourages people to make more informed health-related decisions including safer sexual behaviour.

## **Description Of The Workshop**

The workshop intended to expose the educators and trainers to participatory and visually-based approaches to HIV/AIDS education. In particular it focused on explaining the workings of the human body and how it is affected by HIV/AIDS. A Visual Body Map, which is an education tool representing all the systems in the human body on different layers of acetate was used within the workshop to demonstrate the anatomy of the human body and how the functions of each system are interrelated. This education tool will be referred to in the course of this paper as a Visual Body Map. During the workshop, participants also created life-size drawings based on the tracing of the outline of a human body. These drawings will be referred to as body map drawings and were produced in response to group exercises, as well as studying human anatomy as depicted in the Visual Body Map. In addition to human biology, the workshop also addressed issues such as social support, the challenges of disclosing HIV-positive status, the importance of nutrition and hygiene, and access and adherence to antiretroviral treatment.

The workshop was anticipated to serve the dual purpose of increasing the knowledge of people who work in the field and also being used either in training other educators, in clinics, schools and HIV-positive support groups. Following

the initial development of the workshop, a manual was written and distributed to all workshop participants to assist them in facilitating the workshop themselves. The manual was written so that the workshop can be run as a one or two day training, or split into hour long sessions which can be used in support groups and other learning contexts. The manual was also intended to serve as a reference book for people working in the field of HIV/AIDS, where they could check facts about the human body and HIV/AIDS in the 'Fact File' sections or use specific exercises as 'stand-alone' items to demonstrate certain concepts, such as HIV replication. In this way, workshop participants were encouraged to use the workshop training and manual as a source of ideas and approaches to adult HIV/AIDS education and to make it their own by adapting it to their daily work needs.

The creation of life-size body map drawings was a central focus of the learning experience in the workshop. As an introduction to the workshop, the facilitator had her body traced and invited all participants to draw and write all the information they knew about the human body directly onto the body map drawing. This exercise helped demonstrate how the creation of body map drawings can be used as a hands-on and participatory way of collecting and recording all the material and knowledge covered in the course of the workshop. It also proved a useful way of assessing the level of knowledge in the group and allowed the facilitator to note those areas needing more attention. Participants were moved into groups of four or five to work on a body map of their own. One person was chosen by the group to serve as the model to trace around and create the template that would be worked on in the course of the workshop.

The workshop extended over two days and was held in Community House in Salt River, Cape Town. The first day of the workshop focused on the systems of the human body. A series of exercises were completed enabling the participants to ask and answer questions about the functions of each system and how they work together. For example, when discussing the digestive system, the absorption of both nutrients and medication was explained in relation to diet and antiretroviral therapy. The Visual Body Map was used to demonstrate the way nutrients and medication leave the stomach and enter the blood and circulatory system. In this way the biology of the body was explained both generally and also with a specific focus on how HIV/AIDS affects it. Participants were encouraged to choose the level of detail they wanted to engage with the material and drove the learning process through their participation in the exercises. This knowledge was transferred onto the body map drawings or written up on large sheets of paper in front of the group. Other interactive exercises, such as role-play, were also used. For example, volunteers acted out the immune response using balloons as props that they labelled as the CD4, the CD8 and B-cells. A

fourth actor represented an influenza virus which the healthy immune system was able to successfully defend itself against. This was illustrated by popping the influenza virus balloon.

The second day focused on the ways in which HIV enters the body and how it attacks the immune system. HIV transmission was discussed and the group marked and labelled areas on their body maps where HIV can enter and wrote short descriptions of how the virus could be transmitted in each instance. A list of all the ways HIV cannot be transmitted, such as sharing a meal, was also compiled by the group. The differences between an influenza virus and the HI virus were used to explain how HIV reproduces and the reasons why it cannot be cured at present. An explanation of how antiretroviral therapy works and why the treatment regimen needs to be adhered to so strictly were demonstrated using drawings and the Visual Body Map. Opportunistic infections were discussed and all areas on the body that can be affected by such infections were clearly labelled, along with the treatment options available. By looking at their body map drawings it was easy to locate which parts of the body are affected by which illnesses and how best to treat them.

Nutrition and hygiene were also covered in exercises that involved cutting out items from advertisements from local supermarkets and adding them to the body map drawings. The overall emphasis of the workshop remained rooted in inexpensive and practical ways of ensuring a balanced diet and safe home environment in order to help prevent opportunistic infections. While building a biomedical understanding of HIV and AIDS, the workshop also covered important issues such as ways of accessing social support and the challenges of disclosing HIV-positive status. Many of the participants had been trained as counsellors and so these exercises aimed to provide them with tools to assist people in problem-solving real life challenges, such as disclosing HIV-positive status to a family member in order to access antiretroviral treatment.

In this way the workshop provided biomedical information about HIV/AIDS, addressed important social issues and gave practical tools and suggestions to solving everyday challenges. The workshop centred on the use of visual material and exercises to present the biological content and then consolidate the learning process. By using participatory approaches the workshop engaged participants in the learning experience and encouraged them to develop practical knowledge relevant to their work environments.

## HIV/AIDS Education In Context

The use of body map drawings as an interactive approach to adult education draws loosely on the model of Participatory Action Research and the theories of 'critical consciousness' and 'transformational learning' (Freire, 1997; Mezirow, 2000). Various forms of mapping as a visualisation technique have long been employed in social science research (Cornwall, 2002; De Koning & Martin, 1996). The 'bottom-up' approach of Participatory Research has often used mapping as a tool for accessing local knowledge (Cornwall & Jewkes, 1995). This workshop employs the technique of body map drawing in a similar way, but moves beyond just recalling the participants existing knowledge to building on their understanding with the inclusion of new information. This participatory approach to education supports the development of 'critical consciousness' within adult learners and is built on the premise that '[l]iberating education consists of acts of cognition, not transferrals of information.' (Freire, 1997:60).

Knowledge of human biology and HIV/AIDS was developed through problem solving exercises and visual demonstrations (including drawing, writing and labelling body maps). All these approaches are participatory and interactive in design and aim to actively involve participants in the learning experience. This approach to adult education allows adults to demonstrate their understanding and build on their existing knowledge with the facilitator filling in any gaps and clarifying misunderstandings. This participatory approach also enabled the group to drive the learning experience by focusing on the needs defined by their working environments. In this way the workshop aimed to give the participants information and tools they would be able to use immediately in their work.

The emphasis on visually engaging with the biology of the human body aimed to make the material accessible and as concrete as possible. The merits of teaching human biology in this way lie in the clarity that visual representations provide. Free from language and the problems inherent in translation, visual learning is proposed as a practical method of transferring biomedical information in a way that participants can relate directly to their experience of health and illness in both their lives and those of their clients. The workshop aimed to develop the participants' understanding of issues relating to HIV/AIDS in such a way that they would be able to train other people in the field. The emphasis of the workshop was on exposing the participants to new participatory approaches to teaching that would consolidate their knowledge, as well as expose them to tools and techniques they could use as trainers.

Current theories suggest that increased knowledge about HIV and AIDS, especially understanding how HIV is transmitted, reduces stigma and results in

increased VCT (Maughan-Brown, 2006, Herek, 2002, Herek et al, 2003). Once people know their HIV status it is more likely that they will be able to make more informed decisions about their health (Herek et al, 2003). The link between knowledge and changes in lifestyle, health decision making, including sexual behaviour, is considered central to combating the spread of the epidemic. The efficacy of education campaigns together with access to HAART is demonstrated in the case of MSF's involvement in Khayelitsha where a study conducted by the Centre for AIDS Development, Research and Evaluation (CADRE) and the South African Department of Health recorded the highest levels in South Africa of self-reported condom use at last sexual intercourse, willingness to use a female condom, and consent to an HIV test (MSF, 2003). Another South African study recorded that six out of ten young men and women say that they have changed their behaviour because of HIV/AIDS (*Uncut*, Issue 40, 2006 p. 10). However, a recent study conducted by the University of South Africa revealed an increase in HIV prevalence in the wealthier and better educated sector of the South African population, which is in direct contrast to the former argument. This study also suggests that the main factors fuelling the growth of HIV infection is apathy or the false belief of not being in an 'at risk' group (Bodibe, 2007). It could be argued that HIV/AIDS education could rectify these problematic understandings if they specifically targeted perceptions of 'at risk' groups and behaviour.

Another consideration is the argument that knowledge about HIV/AIDS does not always enable individuals to make the kind of decisions that protect their sexual health, because they are constrained by the social and economic environments in which they live. This argument suggests that while education is key, the emphasis should be on creating 'health-enabling communities', as well as equipping individuals with the relevant knowledge (Campbell, 2003). With regard to education and behaviour change it is important to problematize the simple assumption that knowledge allows people to protect themselves from HIV infection. This apports blame which is not only harmful to HIV-positive individuals, but also inhibits efforts to limit the spread of the epidemic in that it overlooks the greater societal and economic forces that can control people's lives. Small group discussion exercises in the participatory workshop enabled participants to debate issues and potentially develop more in-depth understanding and find possible solutions. Dialogue is considered as one of the merits of participatory education in that it fosters problem solving through emulating real-life situations (Mezirow & Associates, 2000).

The literature on participatory and visual adult education methods suggests that this approach to learning could potentially contribute to effective HIV education in the South African context. This is particularly pertinent given South Africa's

history of social, economic, political and educational inequality where illiteracy and poor education are combined with socio-economic contexts that contribute to the spread of disease, including HIV/AIDS (Hlongwane, 2003). The literature on the potential of biomedical knowledge in reducing stigma and increasing VCT affirms the need for increased information about human biology as part of HIV education.

## Research Methodology

The workshop was developed over a period of eight months and written up in the form of a manual before it was conducted with the group from the TAC. The research methods included observation of the workshop participants, administering questionnaires and conducting semi-structured focus group interviews on completion of the workshop. A predominantly qualitative approach was adopted, with the exception of some quantitative data collected in the questionnaire. The author researched, developed, facilitated and evaluated the workshop. While some approaches to project evaluation recommend that an outside group or individual conduct the assessment (Rossi *et al*, 2004), in this case the evaluation process formed an integral part of the development of the workshop and changes were immediately made to the manual as a result. In the course of the workshop, participant observation enabled the facilitator to record responses to the workshop while it was in progress. These observations also contributed to changes in the workshop structure and content. The value of participant observation lay in the immediate and unmediated responses to the workshop content. For example, if participants did not understand or see the value in a particular exercise it was immediately apparent and alternatives had to be found either in reworking the exercise or replacing it.

Thirteen of the entire group of sixteen individuals attending the workshop took part in the voluntary questionnaire. The questionnaire was designed to collect information about the workshop participants including their educational background, previous training and work experience and their current work environments and practices. This data served to contextualise the participants as a group and as individuals so that their responses to the workshop could be more fully understood. The questionnaire also gathered details about their approaches to HIV/AIDS education and the techniques and tools they use to assist in explaining HIV/AIDS related information in their work. In particular, the questionnaire recorded if participatory approaches to adult education, such as singing, role-play and drawing were used by the workshop participants. This information was used to guide the content of the follow-up interviews that investigated the potential efficacy of participatory approaches to HIV/AIDS

education. The questionnaire was written in English and translated into Xhosa to limit errors due to language-based misunderstandings and give participants a choice of language. The questionnaire consisted almost exclusively of tick items, where the participants could tick multiple choice options.

Following the questionnaire, eleven participants agreed to voluntary group interviews. Pairs or small groups were chosen in place of individual interviews, in order to encourage informal discussion between participants and allow the interviewer to take on a listening role once each question was asked. Participants chose their interview partners or were grouped together according to when the participants were available to be interviewed. The interviews were conducted with two participants at a time, apart from one group of four and one individual 'catch-up' interview for a participant who had cancelled. It was important that the participants felt comfortable and saw the interview process more in terms of a conversation, as opposed to a 'test' of their knowledge or level of participation in the workshop. In the course of the workshop, the camaraderie and humour evident in the group suggested that they would be confident to express their views in small groups and pairs. This was confirmed in the way they challenged, corrected and supported each other's comments during the interviews.

The interviews were structured and each group answered the same questions, but the length and depth of the responses varied according to different participants. Like the questionnaire, the interviews also looked at the past training the participants had received, their current work experiences and their responses to the workshop. Participatory approaches to HIV/AIDS education were discussed, along with the use of visual teaching tools such as the Visual Body Map. The groups were asked whether or not they believed that learning about human biology assists people in developing a good understanding of HIV/AIDS and how to take better care of their health, including the uptake of and adherence to antiretroviral therapy. These questions aimed to assess the level of importance the participants attached to understanding human biology as part of successful HIV/AIDS education and were believed to be critical in terms of testing the relevance of the biological content of the workshop. Recommendations for any changes or gaps in the information provided in the workshop in its current format were also sought so that the workshop could be further developed and improved upon.

The interviews were conducted predominantly in English, with most respondents replying in isiXhosa for some questions if they felt they could express themselves better in their first language. Three respondents answered almost entirely in isiXhosa. The isiXhosa sections of the interviews were

subsequently translated by a bilingual isiXhosa speaker who was also present at the interviews and actively took part in asking questions and translating key words on the spot to assist the English speaking researcher. The workshop itself was conducted in English, Afrikaans and isiXhosa with instructions given in English and isiXhosa. Participants typically replied in English but spoke a mixture of languages in their groups while doing the exercises.

## **Description Of The Participants**

As HIV/AIDS trainers and educators the group was not a representative sample of the average South African person. The workshop participants were unique in many ways. Not only were they familiar with the material covered in the workshop, but as volunteers in an activist, non-government organisation they were also an exceptional group in terms of their attitudes to and knowledge of HIV/AIDS. This was reaffirmed in the questionnaire administered at the end of the workshop probing general knowledge, as opposed to what was specifically covered in the course of the workshop. In the section testing knowledge about HIV and AIDS, the group answered 86% of the questions correctly and with regards to knowledge about HAART, 97% of questions were correctly answered.

Based on this and other information gathered in both the questionnaire and the interviews the following description of the participants aims to provide a general sketch of the group including their educational backgrounds and training and work experience. This will help contextualise their responses to the workshop and its techniques. Their evaluation of the workshop is considered in the light of their past training, their experiences as TAC educators and their current needs in their work environments.

The group was made up of twelve women and one man. Of the thirteen participants, ten stated isiXhosa was their first language and three stated that their first language was Afrikaans. All the participants could read and write in English. Seven in the group were able to read three or more languages. This meant that most members of the group were able to communicate in at least two languages, with the level of competency varying from conversant to fluent. Ten out of the thirteen interview participants had been awarded a Matric or completed their final year of schooling. The remaining three had completed between eight and eleven years of schooling. This makes the group unique in a country where one in six adults is literate (Skills Share International, 2006). The fact that all of them had gone on to acquire further training as TAC educators and trainers demonstrates self-motivation and the aspiration for personal

development. Apart from training received from the TAC, some participants had also received training at Cape Technikon, University of South Africa (UNISA) and other NGO groups such as *Lovelife* and Community Health Evangelism. Other areas of expertise included computer courses, First Aid, home-based care, psychology, woman's leadership and radio work.

The majority of the group had worked or volunteered for the TAC for more than two years. Most of the group volunteer their services in return for a stipend of R1000 a month. In the context of high unemployment rates in South Africa, volunteering is seen as a way of potentially securing a job in the future. The length of the training provided by the TAC was typically a week long and provided on an annual basis, but other *ad hoc* workshops and training are also offered throughout the year. The TAC's Treatment Literacy curriculum provides information on many aspects of HIV/AIDS including opportunistic infections, nutrition, antiretroviral therapy and how these impact on the lives of people living with HIV. Training methods and approaches typically included lectures and tests, hands-on training and workshops that used drama, singing and role-play. In this way the TAC makes use of didactic and participatory learning techniques, as well as distributing educational posters, booklets, pamphlets and collaborating with Community Health Media Trust on the televised show *Beat It – Siyayinqoba*.

Given their level of formal education and the training they received from the TAC, the workshop participants were a unique group in the South African context. Apart from their knowledge of HIV/AIDS and HAART, the group's attitudes towards the virus and approaches to treatment also set them apart and clearly influenced their opinions on the workshop content. In particular, their support for a biomedical understanding of the human body in relation to HIV/AIDS is critical, especially in the light of the public debate that has plagued the South African government's response to the pandemic. The group's exposure to participatory approaches to education in the TAC training they had received also suggests that they would be more open to interactive techniques.

## **Discussion**

### **Attitudes Towards Human Biology And Health**

Despite the participants' previous HIV/AIDS training at the TAC and other organisations, in the course of the workshop and interviews it became apparent that most of the group still found human biology a challenge and especially

difficult to teach. This sentiment is demonstrated in the following interview responses where one participant, Christina<sup>2</sup>, said ‘Before your training, we also had that human body training, but it was so difficult I [don’t] even remember it now...’(Interview with Christina, November 2006). Another trainer, Chantal, spoke frankly of her experience:

‘...I went on four or five trainings and I couldn’t understand. I couldn’t really. [W]hen they started with the body I was like “No, I can’t... I can’t.” No really, I was struggling and many people are [still] struggling.’ (Interview with Chantal, November 2006).

Chantal was interviewed with Nolwazi who reiterated the challenges they had experienced with previous human body training in her statement:

‘...we are struggling because...the way the information was taught was very big [complicated] ...[They were] talking about ...all the types of bones and the joints. It was very confusing and all the people were running away.’ (Interview with Nolwazi, November 2006).

The group’s perception of human biology as a complex topic to understand and teach suggests a number of things. Firstly, it could be argued that the way in which the material was taught was incoherent and that the lack of understanding stems from poor teaching style. However, if one considers the high level of knowledge about HIV/AIDS and HAART demonstrated by the group in the questionnaire results, it is interesting to find that the same training that resulted in such thorough understanding of antiretroviral treatment was less successful with regards to human biology. It is also worth noting that all participants, except one, had taken biology as a school subject and eight had taken it to Matric level; this would suggest that they would at least have some biological knowledge to build on. Taking both these points into consideration it could be said that the teaching methods used in their previous training worked well for some topics, such as HAART, but not for human biology. This points to a need for alternative approaches to teaching human biology and the potential importance of visual representations of the human body that provide learners with accurate and simply presented information.

On the other hand, it could be argued that the reason the participants considered human biology difficult to understand is not because it was poorly taught, but rather because they did not see its relevance in terms of HIV/AIDS training.

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<sup>2</sup> All names used in this paper are pseudonyms, but refer to specific TAC Treatment Literacy Practitioners and trainers.

Perhaps the biomedical approach to understanding the human body as a number of different systems that perform certain functions within the body is not believed to be significant or even accurate according to traditional understandings of the causes of health and illness. In this case the resistance or difficulty associated with understanding and teaching human biology could be explained as a fundamental rejection of the biomedical approach to understanding the working of the body and subsequently ill health.

However, in both the questionnaire and the interviews, the exact opposite was encountered. In the questionnaire, all participants stated that learning about human biology would help people look after their health better. In the discussions in the interviews, participants consistently affirmed the need for understanding how the human body works, especially for people living with HIV. It stands to reason that if the participants believed in the importance of learning about the human body, but found it difficult to understand, the problem must lie in how the topic is taught and not in their attitude towards it.

When asked to explain why they believed human biology to be important, respondents would cite examples that linked biological knowledge with better understanding of the causes of ill health and subsequently a change in behaviour for the better. One respondent, Abulelwa, told a story to illustrate how better understanding of the causes of ill health would result in the patient being able to avoid the types of behaviour that caused it. She also suggested that doctors can be poor communicators of the source of illness to their patients. Abulelwa proposes that if doctors explained the cause of illnesses, patients would be better equipped to prevent it happening in the future. This implies the patient would need some biological knowledge to start with, but also suggests that this would be an empowering process. The story below illustrates Abulelwa's argument.

'I think it helps people [because]...they don't understand why they are ill. [T]hey go to the doctor...but the doctor won't tell you the reason why you are like this. Maybe you've got ill because of alcohol. The doctor will see the problem and will go give you pills that can cure that problem and then because you don't know anything...you won't know what causes that illness and you will go back and drink again...So the biology it helps, it helps too much.'  
(Interview with Abulelwa, November 2006).

The failure to explain the cause of ill health is closely linked to one of the underlying reasons why many black South Africans consult traditional healers in conjunction with seeking biomedical treatment. It has been argued that the reason for this dual approach is '...because western biomedicine is unable and

unwilling to offer explanations for the onset of illness, the ‘why me? why now?’ rationale which forms a crucial part of traditional understandings of health and healing.’ (Pretorius *et al*, 1993:18). While medical doctors could never replace the spiritual and counselling role played by many traditional healers, they could provide their patients with information that enables them to understand the causes of their illness. However, this is dependent on medical practitioner’s willingness to explain and the very real problem posed by time constraints in understaffed clinics and hospitals.

Discourse linking responsibility and health decision making is problematic because it apportions blame on those who are seen to be ‘irresponsible’ and thus deserving HIV infection. But if responsibility is seen in the light of providing people with knowledge that enables them to make more informed decisions, then it can be argued that in this instance responsibility can rather be understood as empowerment. However it remains important to acknowledge that individuals do not make decisions in isolation and that regardless of their knowledge they are often hampered by the nature of their sexual relationships and their socio-economic position. One participant called Jason enters directly into the discourse of responsibility and health in the following statement. He also emphasises the importance of a person accepting their HIV-positive status as part of the healing process.

‘The most important thing is...that person firstly needs to accept his status and then that person can be...more health wise, more involved, because he cannot put his health on someone else [shift the responsibility]. No, he has to take responsibility of his own health.’ (Interview with Jason, November 2006).

Another participant, Nolwazi emphasises the importance of knowing how the body works, both when healthy and when ill, as part of taking action. By foregrounding the necessity for individuals to have biomedical knowledge, she infers a shared responsibility between patient and medical practitioner. This also connects to a discursive shift, initiated by the World Health Organisation at the Alma Ata Conference in 1978 through the *Health for All* and *Public Health Care* initiatives, for ill people to be viewed by clinicians as clients (active) rather than patients (passive). Nolwazi suggests if a person can identify the potential reason or area that is causing them to feel unwell, they will ‘make a difference’ or seek medical attention earlier than if they did not have any knowledge about the body. This is particularly important for detecting HIV-positive status early, as opposed to when the patient is already in Stage 4 and when the chances of HAART being able to work effectively are lowest.

‘They must know their bodies because if they don’t know their bodies [they] can’t even notice there is something wrong with [their] body ... they must know their bodies without illnesses, how their lungs function, how their heart functions and then they will make a difference when [they have] infections ...’ (Interview with Nolwazi, November 2006).

The following two participants, Nobahle and Noluvuyo, also listed understanding the body as central to maintaining health. They focus less on the idea of responsibility and more on understanding the body and HIV on a cellular level. In both cases the participants make reference to the relevance of knowing how the body works regardless of a person’s HIV status. This would suggest that apart from empowering people living with HIV, the knowledge about how the human body functions also helps medicalize HIV by framing it as a physiological disease. This contrasts with other ways of explaining HIV/AIDS, such as superstitions surrounding being cursed or the false science of the Dr. Rath Health Foundation<sup>3</sup> and other groups and individuals selling vitamins or cures for AIDS<sup>4</sup>.

‘Firstly understanding how your body works, then how HIV affects you, then which of those places are affected...And also you must understand [what] a CD4 count is. Not only people living with HIV have a CD4, because all people have got CD4 cells...and they must also know how the cells work ...’ (Interview with Nobahle, November 2006).

‘The first thing is understanding the human body, whether you are HIV-positive or negative... so people don’t start thinking about the illnesses of the body [only] when they have HIV...[They must know] the difference between other germs and HIV...[and that] all the organs are made up...of different cells, of millions of cells...If you don’t eat healthy, this is what happens to your cells and this is what happens to your organs.’ (Interview with Noluvuyo, November 2006).

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<sup>3</sup> The Dr. Rath Health Foundation urged people to stop HAART and buy their vitamin products to cure AIDS, as well as heart disease, cancer and other chronic diseases. UNAIDS, UNICEF and WHO, together with South African organisations such as the TAC, have condemned Rath’s unregistered and unethical medical practices operating in Cape Town townships. The foundation has appeared in court on a number of occasions and is now banned from operating in South Africa.

<sup>4</sup> Apart from Matthias Rath, other individuals have also promoted products that claim to cure AIDS. These include Zeblon Gwala (*Ubhejane*), Tine van der Maas (garlic remedies) and Steven Leivers (Secomet).

Despite the fact that none of the interview questions directly mentioned cells, independently of each other the participants continually referred to an awareness of cells as an important part of learning about the human body and how HIV affects it. For example, in answer to the most important things a person should know about HIV, Nolwazi replied:

‘The cells...how do they work...without HIV and with HIV...Our immune system is our body’s defence so if you have a compromised immune system you are at high risk of getting infections...so they must know their cells...’ (Interview with Nolwazi, November 2006).

The value the participants placed on developing an understanding of cells is interesting to note, especially since one of the challenges of the workshop was developing an understanding of cells as the basic building block of the human body. The value of having this level of detailed knowledge was even questioned by the author while developing the workshop and writing the manual. However, the nature of the HI virus and the way in which it enters the CD4 cell in order to reproduce demands some understanding of the concept of cells before a person can grasp how antiretroviral therapy works. It is also important since a patient has to attend ongoing check-up tests that measure their CD4 count<sup>5</sup> and Viral Load<sup>6</sup>. In the case of the CD4 Count, if the test result is 200 or below it is recommended that the patient start HAART. Knowledge of a person’s CD4 count can save their life. For this reason information on cells was included in the workshop.

In order to introduce and illustrate the concept of cells in the workshop each group was given an envelope containing pieces of a picture cut from a newspaper or magazine. As a group they had to rearrange the pieces in order to see the complete image. This was used to explain the way cells fit together in a particular way in order to build up the organs in the body. The organs work together in specific systems to carry out the functions of the human body. When answering what exercises they believed to be most useful, seven participants listed the ‘puzzle’ exercise. The apparent success of this exercise suggests that visual representations are very powerful tools when educating people about

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<sup>5</sup> A CD4 count test is used to measure the number of CD4 T-lymphocytes in the blood. A drop in CD4 count shows that the immune system is weakening. A healthy person’s CD4 count rests at around 1200. In South Africa HAART is recommended when a person’s CD4 count is 200 or below.

<sup>6</sup> A Viral Load test measures the number of HIV copies in a millilitre of blood. A high viral load (from 5,000 to 10,000 copies) shows that HIV is successfully reproducing. A low viral load (200 – 500 copies) usually indicates that HAART is working effectively and that the immune system is getting stronger.

biological concepts. Abulelwa further explained how this puzzle exercise helped develop her understanding of the nature of cells.

‘I enjoy the cells...the way you start...[with] the puzzle...So we actually understand now that cells cannot work alone, they are actually in groups.’ (Interview with Abulelwa, November 2006).

Knowledge of the body made up of cells also helped develop an understanding of the inter-related nature of the human body. Noluvuyo emphasises the need for people to understand this concept and also the importance of the facilitator to make the links apparent in the course of the training. This highlights the importance of not only covering the topic of cells in training, but also teaching it in an accessible way.

‘...as long as the facilitator links it, people will understand it. That these cells...need energy to help us fight the infections and to carry oxygen...[E]nergy comes from food, so without food the cells won’t be able to function, therefore the organs won’t be able to function. So as long as that can be linked so people don’t forget...that there is a link between everything that happens in your body because it is a co-ordinated system.’ (Interview with Noluvuyo, November 2006).

In discussing the responses of the participants to the biological content of the workshop and their attitudes towards human biology, it is clear that they attribute the understanding of the human body with improved health. It is apparent that the group of participants value knowledge about the human body and how it works. However it is also worth noting that the majority of the group come from a culture with a different way of understanding health and illness that is not based on biomedicine. This means that they have come to know and believe in the importance of biologically understanding the workings of the human body in terms of living healthily with HIV. This does not discount nor negate the importance of traditional approaches to health and the role they can continue to play in addressing the AIDS epidemic. The fact that some of the workshop participants had themselves been involved in running a collaborative workshop with traditional healers suggests that the participants support the need to acknowledge both biomedical and traditional healers’ approaches to addressing HIV/AIDS. Noluvuyo draws attention to both the fact that many people, including Xhosa and other indigenous groups, do not know a lot about traditional medicine and rely on ‘myths and stereotypes’ to form an opinion. She also emphasises the fact that many people use traditional medicine and therefore it is essential to work together with traditional healers.

‘[I]t was challenging because we don’t know much about traditional healers. We think we know, we have so much myths and stereotypes about them...[T]raining...was more than training for traditional healers, it was a training for us as well...[W]hat unites all of us [TLPs and traditional healers] [is that] HIV-positive people consult all of [us]...others for spiritual healing or others for physical healing...And we cannot deny that ...most of us, 80% use traditional medicine and that is why we need traditional healers in the training.’ (Interview with Noluvuyo, November 2006).

The ability to move between, or at least acknowledge the role of different approaches to understanding health was also demonstrated in the workshop and the body map drawings. When discussing the treatment of opportunistic infections, the participants listed home remedies, such as plain yoghurt for mild thrush or the core of a pineapple to help stop diarrhoea, alongside antibiotics and other allopathic medication. Another observation is that despite being told they could write in the language of their choice, all writing on the body map drawings was in English. One reason for this could be the dominance of English as a scientific language and the high level of biomedical content in the workshop. Participants indicated that it was easier for them to use English when explaining human biology and medical approaches to treating HIV/AIDS.

The participants’ attitudes towards human biology have been discussed in relation to examples they provided illustrating a link between biomedical knowledge and patients being able to take better care of their health. The discussion of difficulties and challenges they have had in the past in learning about human biology and their continual efforts to find accessible ways of explaining it to people in their work were also covered. The value of biological knowledge of the human body was linked to patients being able to notice when something was wrong and to seek medical attention earlier. The role of traditional approaches to healing in the context of HIV/AIDS was also discussed, as well as the importance of understanding the cellular nature of the human body. Issues surrounding responsibility and knowledge and the ability to make health-enhancing decisions were also considered with reference to increased biological knowledge.

# Knowledge Of Human Biology And Attitudes Towards HAART

Apart from looking at the attitudes of the participants towards biomedical approaches to understanding the human body, the interviews also probed the degree to which this knowledge could potentially encourage people to access HAART if needed. In the following statement Nolwazi links knowledge of what is happening inside a person's body with the ability to better understand how a disease or illness like HIV will affect their health in the future. She suggests that this knowledge of the progression of HIV would encourage a person to go on antiretroviral therapy.

'If a person doesn't know what exactly is happening inside, doesn't know biology...it is not important for [them to go] on treatment...So if you know everything...then you [will] say "Ok, I am this and that [HIV-positive], I must go for treatment...because this is what is going to happen when I am not taking my treatment".' (Interview with Nolwazi, November 2006).

Zanele expresses a more practical understanding of the relationship between biology, health and HAART. In her example, she suggests quite simply that a person will believe that antiretroviral therapy works if they experience improved health and are able to return to the same state of health and fitness they experienced before they fell ill.

'[M]aybe I was very sick and so on, then I started ARVs and now I can see that I am the same person [I used to be before I fell ill]. Those things I used to do, I can still do them.' (Interview with Zanele, November 2006).

When discussing the potential role biology can play in increasing the uptake of HAART, Nolwazi returns to the need to understand the nature of cells when educating people about antiretroviral treatment.

'...if a person is HIV-positive you must teach the person about cells because antiretrovirals...work with cells...[W]hen we are doing ARVs we [TAC] usually draw the HIV and the CD4 cell and explain how HIV enters the CD4 cell and then after that show the people how antiretrovirals stop the multiplication...' (Interview with Nolwazi, November 2006).

Despite the confidence the participants placed in biomedical knowledge and how this knowledge could ultimately result in the belief in the efficacy of HAART, the participants also referred to a range of factors that deter people from taking the medication. Fear of the side effects of antiretroviral therapy was a dominant theme. This was partly attributed to the South African government's ambivalent stance on HAART projected in the media. It was also believed to be linked to incorrect information and exaggerated stories circulating in communities about the seriousness of the side-effects of HAART. In particular, damage to the liver was believed to be so severe that it would stop working within a few years (Interview with Noluvuyo, November 2006). Further deterrents pertained to the clinical requirements that HIV-positive people have to agree to before starting ARVs. These include disclosure to at least one person, and certain lifestyle changes, such as reducing or cutting out the intake of alcohol or eating before taking medication. The strength of the medication and the need for lifetime commitment were further concerns. Christina raised the following issues.

'I think because of the wrong information they get...people are still scared about ARVs because it's a drug...[T]hat same day when you start on ARVs it is a lifetime. You are married with ARVs then. But for those maybe who drink...who use ARVs, [we] always tell them don't drink because...it can affect your liver. Or "don't do this and don't do that" and I think it's because of that they are scared to use to ARVs.' (Interview with Christina, November 2006).

The importance of preparing patients adequately before they go on to HAART was raised by some participants. In particular they stressed the importance of discussing potential side-effects with patients so that they would know what to expect and would be able to identify any strange symptoms as a reaction to the medication. The importance of immediately returning to the clinic and either changing treatment regimens or taking other medication to ease the side-effects was also stressed. Thandiwe talks about the need to forewarn patients and equip them with all the possible information in the following statement.

'By giving education we must tell them about everything they must expect when they are taking ARV treatment, like side-effects, because other reasons why people fear to use ARVs is because of the side-effects.' (Interview with Thandiwe, November 2006).

The fear of the side effects was also linked to seeing desperately ill people on HAART. One of the obstacles in South Africa to effectively administering antiretroviral therapy is that patients often only discover their HIV-positive

status once they are already seriously ill. By this stage they are already experiencing Stage 4 illnesses and their immune system is seriously compromised with a very low CD4 count (Cullinan, 2005). While HAART can and does work with patients who are this ill, it can take longer to see improvement in their health and patients who start HAART when their CD4 counts are very low have increased chances of opportunistic infections and potentially death (Floridia *et al*, 2002, Beresford, 2006). Noluvuyo talked about the issue of seeing people on HAART in the advanced stages of AIDS and how this contributes to fears of side-effects.

‘[F]or instance if I took home ARVs today and I...[saw] somebody who ha[s] been on ARVs for four or three months...[and they are] sick...I will say to myself “No I am not going to take ARVs”...So that is my first priority to teach people about the side effects so they cannot be scared and think ‘I am going to die’.’ (Interview with Noluvuyo, November 2006).

When asked what patients should know before they go onto HAART Abulelwa emphasised that all medication has side-effects including regular painkillers. She also suggested that people join an ARV support group so they can speak to other patients on treatment and realise they are not alone in experiencing both physical and emotional repercussions.

‘[E]very pill have its own side effects. Even *Grandpa’s*<sup>7</sup>...cannot cure you at that moment...ARVs do [their] course, but slowly and maybe you’ve got side-effects...So you have to be aware of it and then we can go to ARV support group...maybe other people will say “Hey, I have got this and this and then how did you prevent it?”. And then they are going to tell you “No, I went to the doctor and found this pill”...It helps the process. It helps people to accept their status and it helps people to not stop taking ARVs...if you stay with the ARV support group you can actually understand that it’s not only me who got this side-effect, everyone has got it.’ (Interview with Abulelwa, November 2007).

Apart from the issue of side-effects another very real concern that arose in the interviews was the issue of disclosure. This is particularly relevant because of the current requirement that in order to access HAART a person has to disclose their status to one member of their household or another ‘treatment buddie’. Private disclosure is encouraged by organisations such as MSF and ARK as part

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<sup>7</sup> *Grandpa’s* is a South African brand of pain killer.

of a 'patient centred adherence program' as a way of ensuring social support (UN Integrated Regional Information Networks, 2003, [www.arkonline.org](http://www.arkonline.org)). Noluvuyo further explained common problems that people experience in relation to private disclosure.

'Some people think that you have to disclose to people even if you are not ready...Especially people who tested late and who don't have the...[time] to think about it [disclosure] before you start ARVs. You have to tell someone because you are sick and you have to start ARVs...[O]ne month is not enough...but ARVs force people to that situation that you have to disclose to someone...[I]t is [also] an adherence issue because you don't want to forget ... people's experiences with TB, people default and all that. But at the same time, some people would rather not take ARVs just because they are scared of telling other people...' (Interview with Noluvuyo, November 2006).

It is interesting to note that Noluvuyo mentioned the past experience of patients struggling to adhere to TB treatment. While she supported the need for 'treatment buddies' for HAART patients, she also drew attention to the reality of the situation where people would rather compromise their health than have to disclose. This suggests that HIV stigma is still a serious obstacle, despite the numerous public campaigns aimed at reducing stigma in South Africa, such as the Department of Health's *Khokamani* project and *Lovelife*.

Noluvuyo went on to discuss the issue of many people seeking traditional remedies. The reasons for this include the false belief that there are no side effects to traditional medicine. Another very real consideration is that it allows a person to seek help without having to acknowledge or disclose their HIV-positive status. Noluvuyo's argument that preparation for going on HAART is a process that should begin the day a person discovers their HIV-positive status is critical. It is interesting that she also suggests that if a person wants to try other approaches and remedies, such as traditional healing, they should do so, in order to ensure that when the time comes for them to go on HAART they are ready and committed to that course of action. She went on to suggest that trying alternative healing approaches could enable people to adhere better, since they would have personally eliminated the other treatment options.

'[A] person will rather go for traditional medicine, because people believe that [traditional medicines] have no side effects and [if you take] the ARVs in ten years time your liver will be damage[d]. You know that people do exaggerate ARVs out there and also lack of

information...so it's more important for the person who is going to take ARVs to be more empowered than anything and I think start from the day you are diagnosed with HIV up to the day you begin ARVs...I think preparation has to start early so the person can make the choice. If you're wanting to take ARVs you can try all these other *goetis* [things] you want to try now so that by the time you want to take ARVs you are committed and ready for ARVs.' (Interview with Noluvuyo, November 2006).

This argument emphasises the need for more information and education about HAART, including providing people with biological knowledge of the human body. It also suggests that traditional healing practices cannot be ignored and a way of allowing patients to choose to move between biomedicine and traditional healing should be found (Wreford, 2005). The fact that many South Africans already consult both traditional and medical doctors (Mills, 2005, Natrass, 2005) validates Noluvuyo's argument. It has also been argued that this move between traditional and biomedical approaches to treating HIV-positive patients is dependent on the patient communicating their HIV-positive status, their medical history and the medication they are on to both traditional healers and medical staff in clinics. This is especially important for patients on HAART, because studies have revealed that the African potato and *Sutherlandia* (cancer bush) inhibit the absorption of antiretroviral therapy (Hooper-Box, 2005).

Having discussed the arguments surrounding traditional healing and issues of disclosure it is important to consider the impact of HIV/AIDS stigma. This has already been touched on in terms of people opting not to take HAART rather than having to disclose their HIV-positive status. In the course of the interviews, workshop participants were questioned on their perceptions of the relationship between knowledge of human biology and people's attitudes towards HIV and AIDS. They were asked to draw on their experience as TLPs in clinics and other education settings, as well as from their lives in their communities.

## **Knowledge Of Human Biology And HIV/AIDS Stigma**

The issue of stigma and fear surrounding HIV/AIDS was directly addressed in both the questionnaire and in the interviews. All respondents supported the idea that learning about human biology reduced stigma and fear about HIV/AIDS. In the interviews, the word 'stigma' was purposely not used by the interviewer, because it was hoped that asking about perceptions about fear surrounding HIV and AIDS would enable participants to talk more broadly. Some participants

did reply using the word 'stigma' and yet the majority of the respondents spoke about the ways in which knowledge reduces fear and discrimination around HIV/AIDS. They spoke more generally about discrimination, and the fear of potential discrimination, experienced by both HIV-positive people and the greater community including HIV-negative people. In response to whether he thought that knowledge about the human body would help people be less fearful about HIV, Jason's reply was particularly positive.

'I think maybe that will be even the breakthrough to stop the new infection rate...because people...can see "Wow, so this is how HIV gets into your body, this is how it grows, and ...this is how your HIV goes to AIDS and your CD4 count drops"...' (Interview with Jason, November 2006).

Jason went on to argue that knowledge of the biology of HIV was important in correcting people's perceptions of what an HIV-positive person should look like. This is critical in addressing one of the aspects of HIV stigma because it rectifies the perception that if someone is HIV-positive they are immediately AIDS-sick and promotes the possibility of 'positive living' where HIV-positive people are able to live productive and healthy lives. Jason argued that because he looked healthy often people either did not believe that he was HIV-positive, or did not see HIV as a serious health threat. He believed that this misunderstanding arose from the fact that often people did not know the difference between HIV and AIDS and they also did not understand that HIV is a virus that affects the body and undermines the immune system. The link between understanding HIV as a virus that compromises the immune system and ultimately results in AIDS and the reduction of stigma is further illustrated in the following story told by Jason.

'...and then this morning there was this lady...in the train and she asked me "Why are you wearing a HIV-positive t-shirt?" [She said] she would never wear a[n] HIV-positive t-shirt in a train and I ask[ed] her "Why? Do I look sick?". And she said "No, but it doesn't seem you are HIV-positive" and then I told her "Don't judge a book by its cover."...[T]hen when I told her "I am HIV-positive"...She wanted to know more ... but then she said ...she didn't know [that I was HIV-positive], but from now on she will have much better understanding and she will respect people living with HIV.' (Interview with Jason, November 2006).

Later in the interview when asked how he thought knowledge of biology might improve people's health, Jason argued that awareness of health problems should

include all illnesses and not just HIV. He also implied that greater understanding would encourage debate and allow people to address health related issues more openly. When seen in conjunction with Jason's previous statements regarding stigma, this openness would, in his opinion, undoubtedly work towards decreasing the shame and discrimination associated with HIV/AIDS.

'People will be more aware of the TB, and the TB rate will also decrease and then people will know...[about] not only HIV [but] maybe other illnesses as well...and then we are going to get more questions out there from people and people will also speak more openly on these things.' (Interview with Jason, November 2006).

In contrast to Jason's attention on perceptions of the greater community, Thandiwe is more concerned with how knowledge about HIV helps people living with the virus to feel more in control of their health and gives them hope for the future. Her response is as follows:

'I think it reduces [fear of HIV/AIDS] because they teach you...how you can stop HIV from reproducing. At least somewhere, somehow you have that hope...[A]t least you can do something to avoid the reproduction in your body. I think to me it reduces stigma.' (Interview with Thandiwe, November 2006).

For Nobahle the importance of knowing more about HIV as a medical condition lies not only in the way that it enables those living with the disease to manage their health better, but also because it reveals that all people regardless of their HIV status are vulnerable to illnesses. In this way HIV is regarded as one of many illnesses that can affect the human body, as opposed to something attributed to a person's character or something they have brought upon themselves (Stein, 2003).

'You are not different. You tell them that other people who are not HIV-positive can get illnesses like opportunistic infections. People think that only people with HIV get them.' (Interview with Nobahle, November 2006).

This is reiterated by Zanele in her statement that illustrates ways in which the respondents believed that biological knowledge helps reduce fear and stigma. Underlying many of the responses is the assurance that all people, regardless of their HIV-positive status, share the same physical body and are prone to illness and disease.

‘For me when doing the human body it will reduce stigma because each and every person will know I have these body parts, there is no difference to a person who is having HIV, each and every person has the same body parts as I am having.’ (Interview with Zanele, November 2006).

Much of the discrimination experienced by people living with HIV/AIDS and their families is due to the fact that it is predominantly sexually transmitted in the South African context (Cameron, 2005). Nolwazi argues that knowledge of the biomedical aspects of HIV, including transmission of the virus, is important because it shifts the focus away from sex and moral judgement to an understanding of shared physiology and vulnerability to illness.

‘W]hen we do HIV education we just talk about sex...forgetting the basics of the transmission of HIV because people they have fears, because ...HIV was introduce[ed] in a way that if you have HIV that means you are sleeping around ...’ (Interview with Nolwazi, November 2006).

In this way Nolwazi identifies the problematic way sex has become the main association people have with HIV. Earlier in the interviews she and her interview partner, Sylvia, discussed the HIV education they did in schools as TAC members. Once again they argued that the teenagers, especially the boys, were only interested in discussing sex. This evolved into a discussion of the challenges that TAC Treatment Literacy Practitioners (TLPs) often face. A major concern was that most TLPs were women and that this further exacerbated the perception of HIV as a woman’s disease. Nolwazi spoke further on the difficulty women experience when discussing HIV with men and the consequent need for male TLPs.

‘We are trying to recruit men because it is very difficult to be a woman speaking to a man about HIV...it’s better to train a few men and let them go to other men.’ (Interview with Nolwazi, November 2006).

When asked what steps had been taken to recruit men in their communities the respondents discussed initiatives aimed at men, such as men’s support groups like *Positive Men United* and *Khululeka*. When discussing these two support groups, the respondents identified the need for ‘men only’ support groups, but also argued that men don’t want to ‘sit and talk’ and would rather be employed or active. They suggested that if support groups for men were more strongly centred on income generation they would be better attended. The respondents

also suggested that men in their communities defined themselves as breadwinners and that volunteering was not seen as 'proper' work and they would rather seek alternative, higher-paying work. This could be a contributing factor to the lack of male TLPs. Another reason was identified by Nolwazi when she spoke further about perceptions of HIV/AIDS as a woman's disease and the resulting challenge of recruiting men as educators, as well as encouraging men to join support groups.

'They started a thing called *POMU... Positive Men United*, but now they are going one by one, because they can go to a meeting and discuss and then when the men go back to the community it will be a fight because "Why are you going there? HIV is for women."... [W]e all have that vision of recruiting men, but how?' (Interview with Nolwazi, November 2006).

The challenge of changing perceptions of HIV/AIDS and recruiting men as HIV educators, to go for VCT and to join support groups has recently received attention due to the fact that men are far less likely to access HAART with the national proportion of men starting HAART only reaching around 30% (Cullinan, 2005, Nattrass, 2006c). The need for 'men-friendly' clinics has been identified as an important way of encouraging men to access health care and find out their status (Dlamini, 2006). While many HIV/AIDS projects and interventions in the past have sought to empower women with both knowledge and income generation, it has been acknowledged that this will only work if male partners are similarly empowered (Smart & Sherriff, 2006).

In this way the respondents acknowledged a number of factors contributing to fear and stigma around HIV/AIDS. The fact that people prefer to compromise their health and reject HAART, rather than disclose suggests that general stigma surrounding HIV/AIDS is still a very powerful force in the communities where they work. It is difficult to identify to what degree this behaviour is spurred more by perceptions of anticipated discrimination, as opposed to discrimination that they have personally experienced and yet the impact on their health decision making remains substantial. The labelling of HIV as a woman's disease was also discussed in terms of the low numbers of men accessing HAART, attending support groups, coming for VCT and also working as HIV educators. This was identified as a serious obstacle in terms of beating the spread of the pandemic. In conclusion, the need for job creation as part of improving the current socio-economic environment, alongside HIV/AIDS education remains the main challenge to not only reducing stigma, but ultimately preventing the spread of the epidemic.

# The Efficacy Of Visual And Participatory Approaches To HIV/AIDS Education

Up until this point the paper has discussed the workshop participants' opinions about the relationship between knowledge of human biology and HIV/AIDS, HAART, stigma and health decision making. It is now necessary to look more closely at the way the content of the workshop was presented and assess if the methods and techniques used were effective. The workshop was based on a participatory approach to adult education and in particular was focused on using visual education tools and techniques to increase biomedical knowledge about HIV/AIDS. As previously mentioned, a Visual Body Map was used together with the creation of body map drawings that allowed the participants to record all the information presented in the course of the workshop. The Visual Body Map education tool played an important role in the workshop by providing the participants with a simple and easily accessible visual presentation of the anatomy of the human body.

Both the questionnaire and the interviews were used to assess the trainers' opinions on visual approaches to presenting the biological content of the workshop. The questionnaire initially probed the participants' opinions on whether or not they believed seeing pictures of the anatomy of the human body helped people to better understand HIV/AIDS. Without exception the group replied with a positive answer. Following this lead, questions in the interviews specifically tried to uncover the reasons why the participants had responded in this way. They were also asked to provide examples that illustrated how the visuals would assist them in their work.

Noluvuyo discussed one of the most important reasons why visual representations of the body are such effective education tools. She argued that even if a person does not have any knowledge about the anatomy and biology of the human body they will be able to recognise certain things and be able to relate the new information directly to their body. She also referred directly to the different layers used in the Visual Body Map to represent each system in the body. Her assessment suggests that the Visual Body Map is an effective way of explaining the biology of the human body to someone with limited prior knowledge.

'It explains everything... [regardless of how much] you know because it is clearly shows all the levels. It starts from the beginning with a layer and then the second layer and you can still see the first one clearly. And also if you didn't understand your

body you can start recognising yourself because it resembles a person.’ (Interview with Noluvuyo, November 2006).

Nolwazi reiterated the need for using visual representations of the body in order to illustrate the concept of AIDS as a syndrome and also the difference between HIV and AIDS. She suggested that using visual representations of the body made it possible to demonstrate opportunistic infections and that this was central in explaining the shift from HIV to AIDS.

‘[W]e all know that AIDS is a syndrome...so if you draw a human body that means you are able to show the people everything...where are the opportunistic infections that build up to AIDS. So it is very simple for a person to understand, because...they do not know the difference between HIV and AIDS.’ (Interview with Noluvuyo, November 2006).

Nolwazi discussed the value of being able to assess what people know and what knowledge they are lacking. She referred to the first exercise where the entire group added all the information they knew about the human body to a single body map drawing. She reasoned that through using this visual approach to illustrate the different organs and how the systems function in the body, it is possible to explain the way they are inter-related and affected by opportunistic infections.

‘Using visual maps we are able to see things, what the participants know and what they don’t know [like in] the first exercise...[Y]ou are able to show the participants exactly how opportunistic infections [effect the] body organs...[and]...the different systems when we are doing the visual mapping...Then the person will see “Ok, if my immune system is not working that means other systems will be affected.”’ (Interview with Nolwazi, November 2006).

The simplicity of the Visual Body Map as an education tool is reiterated by Chantal. In a similar way to Noluvuyo and Nolwazi, she also emphasised the need to point to parts of the body and simply show people what lies inside the body. She claims that she would find it a useful tool in clinics and any other training that she does.

‘[B]ecause you sometimes educate people about their body or their immune system and sometimes people don’t actually understand what you are telling them or what you are saying about their bodies inside...That map will be very useful if you can use it in the clinics

or in any training...you can...show the person that is the thing that is wrong...' (Interview with Chantal, November 2006).

Nolwazi argued that visually recording all the information pertaining to HIV/AIDS and the human body on a body map drawing would be very useful in their further training sessions, because it brought together a range of issues related to HIV/AIDS including biomedical knowledge and social challenges.

'Everything is there with the body visual...even if you are talking about STIs...everything we are doing with HIV it starts there... because all the sessions they link. Opportunistic infections...vulnerability of women ...it also goes back to the human body ...[V]isual body mapping it is going to work with all our sessions.' (Interview with Nolwazi, November 2006).

Chantal suggested that using a visual representation of the human body to explain how HAART improves a patient's health would be an effective approach to combating the fears that people may have about antiretroviral therapy. In particular, she drew on the example of an HIV-positive person seeing a person with full blown AIDS and how this can affect their confidence in the efficacy of HAART.

'I think they will be less afraid because many people see someone...with full blown AIDS... and then they [ask] 'Am I going to be that way if I've got HIV?'. But as soon as you can show them that body [Visual Body Map] and put ARVs in that body they can see "No, this can work and it will work...because I know how to look after my body now."' (Interview with Chantal, November 2006).

When discussing the potential of visual education increasing biomedical understanding of the human body, Noluvuyo spoke about the importance of colour and the role that it can play in the learning process. Different colour pens and chalks were used in the creation of the body map drawings. The Visual Body Map is also colour coded to separate each system in the body, as well as the different organs. This use of colour not only allows for an easier visual reading of the Visual Body Map, but also enhances the learning experience through association with different colours used to illustrate certain aspects. The way Noluvuyo emphasised not only colour, but also the participatory and fun nature of the art making process, suggests that there are multiple advantages to using drawing as an education tool.

‘[B]ecause you used different colours in the body map, it makes it ...[easier to understand]...So the fact that you used different colours it made the thing more exciting and also...it brings out some child inside you [and] you enjoyed what we were learning...But also the fact that you work as a group with one body map, so...when one person is making a mistake you can be able to assist each other and that way we [are not] working alone.’ (Interview with Noluvuyo, November 2006).

By referring to group participation and the fun of using art techniques, Noluvuyo pointed to two of the key advantages of visual learning approaches. Art-based learning is an effective way of allowing participants to understand concepts and then reinforce their new knowledge through drawing-based exercises. The participatory nature of creating a group body map drawing further engages learners and allows participants to share their knowledge and assist each other in the learning process. This returns to the concept of ‘transformational learning’ where adult learners are encouraged to develop independent solutions and not rely on a teacher, or authority figure as a source of knowledge and guidance (Mezirow, 2000). This is particularly important in the context of a ‘train-the-trainer’ workshop where the participants are encouraged to use the workshops as a source of ideas which they can adapt and use in their work.

Jason emphasised the value of using techniques and exercises that encourage learners to interact and be involved in the learning process. He believed that participation would increase understanding and that often people are embarrassed to openly admit that they have not understood something. Group participation would enable the facilitator to monitor learners and also allow them to learn from others in their group without having to reveal that they do not know something.

‘...most of the time when you give or present a topic for some people, [they] will sit down and they will look at you and they get bored. [If you do a workshop]...you will interact with them and they will participate...[like] the one when the body...was drawn on the floor on a piece of cardboard...So people will not sit there and fall asleep or gossip tomorrow and say “You know what? I didn’t understand that.” Because you get people which will say “Yes, I understand it...” But in their minds they really don’t understand it...’ (Interview with Jason, November 2006).

In the interviews the participants were asked if they had any experience in using participatory approaches to HIV education and training. It emerged that singing and role-play were the most commonly used interactive exercises, whereas drawing remained largely neglected. Possible reasons for this were probed and the use of drawing as an educational tool, as demonstrated in the creation of the body map drawings, was discussed in terms of where it could be most effective. It was generally agreed that some of the individual exercises could be used in a variety of contexts, such as in clinics, training sessions and school presentations, but the creation of body map drawings needed time and space and was better suited to support group and youth group contexts. The issue of resources such as art materials and also the place to store them was another reason why drawing remained largely unused.

The reason for probing if participatory exercises had been used in past training was to assess how familiar the group was with interactive learning prior to taking part in the workshop. This would influence not only how the participants responded to the body map workshop, but also the extent to which they would potentially use it in the future. Apart from the obvious merits of interactive learning, such as ensuring that all individuals participate and feel their knowledge is valued, this approach is particularly relevant to HIV/AIDS education where the transferral of information ultimately aims to manifest in health-enhancing behaviour. By using participatory exercises that include problem-solving and role-play based on real life situations, the body map workshop strives to develop an understanding of both the biomedical aspects of the disease and also ways individuals can act on this knowledge.

In the interviews the participants affirmed the success of participatory approaches to HIV/AIDS education. They emphasised the simplicity of the exercises and that their success lay in the way they made the information accessible for a beginner learner. Nolwazi demonstrated this clearly in her response.

‘For the beginners, the puzzle thing is very interesting and then the balloon. The balloon role play for beginners...was very nice, because when we start with the advanced thing [for the] first time it confuses... [The exercise] when were pasting opportunistic infections and the treatment was very nice because it makes people understand which opportunistic infection affects the brain and other parts of the body...’ (Interview with Nolwazi, November 2006).

Abulelwa also selected the balloon exercise that demonstrated the differences between HIV and the other invading viruses or bacteria. She believed that it would help people understand why there is no cure for HIV/AIDS.

‘I would use the CD4 [exercise] because people actually want to understand why HIV is not curable...I [will] start with the TB one so they can see that TB can be curable...so that they can understand...the reason why HIV cannot be cured...I can actually use that one.’ (Interview with Abulelwa, November 2006).

Nolwazi was keen to explain the benefits of the exercises used to explain the function of the nervous system. A photocopy of a map was used to illustrate the similar structures of the nervous and circulatory systems and the way that nerves, arteries and veins can be compared to roads in the way they allow things to travel up and down them.

‘Let me speak about the [nervous] network...It was very good because people they don’t know exactly what the nerves do in their bodies... so the map is right and the candle one is obvious because you get burnt...[I]t is nice that workshop for beginners...’ (Interview with Nolwazi, November 2006).

Apart from those exercises focusing on human biology and how the body functions, other exercises looked at social support and challenges that HIV-positive people face. Nutrition was discussed in terms of eating a balanced diet consisting of inexpensive foods that are easily available. Chantal discussed the exercise that involved cutting food and hygiene products out of newspaper advertisements for local supermarkets. This exercise followed group discussion on the ways of keeping healthy and fit and focussed on lifestyle choices as a way of ensuring improved health. The simplicity of choosing pictures of food, as opposed to relying on language to explain what a healthy diet consists of once again relies on visual and interactive approaches to HIV-education.

‘The healthy eating, when we had to cut out the healthy stuff that we have to use for our body and...show the people [the] healthy thing[s] you can eat, but not the wine and cigarettes and other unhealthy things...’ (Interview with Chantal, November 2006).

In this way, the participants provided examples of those exercises they found particularly useful and also elaborated on the reasons why. The value of visual approaches (such as the body map drawings, the map exercise and the choice of food items from advertisements), together with education tools (such as the

Visual Body Map) have been emphasised in their responses. In a similar way, the participants also identified those aspects of participatory approaches to HIV education that they found particularly useful. Despite the positive support of visual and participatory material and methods, another important consideration is the opportunity that the participants will to implement or use these techniques in their work as TLPs and trainers. This will be addressed in the following section.

## Future Implementation Of The Workshop

Apart from assessing the participants' response to visual and participatory approaches, the questionnaires and interviews also probed the exact places and situations when the participants would be able to use the workshop. When asked if they thought they would be able to use the Visual Body Map in their work, the participants' response was overwhelmingly positive. In the questionnaire the entire group responded that they would use the Visual Body Map in their work, regardless of whether or not they currently used visual material. Of the total group of thirteen participants, three trainers indicated they would use the Visual Body Map two or three times a week, while the remaining nine answered they would use it every day of the week. This indicates a profound appreciation of the educational potential of visual material and also the need for more of it to be made available. Jason's response exemplifies this.

'I would use it in my own house, number one, to educate my kids. I will use it in the clinic, use it in trainings, [every]where I go...because I am doing one-to-one counselling as well and home visits to people living with HIV and [who are] on treatment. [I]t will be very useful to me.' (Interview with Jason, November 2006).

Abulelwa speaks of using the Visual Body Map in clinics and schools.

'No, I don't have that chart. I don't have a picture of the human body, but actually I can use it if I did have one. I can use it in schools [and clinics] because in...public clinics you've got all the people who don't understand that [human biology]. So I can actually use this to train students and also the nurses...' (Interview with Abulelwa, November 2006).

Her mention of nurses needing training is interesting. Later in the interview when asked what she and her interview partner would do if they were appointed as to assist the Minister of Health, the issue of training nurses and doctors about

HIV was raised again. Both interview participants held the opinion that medical staff did not know enough about HIV/AIDS. This is a startling finding and could be due to poor communication with patients by doctors and nurses. A more worrying answer could be that they have experienced or heard of cases where medical staff have not provided patients with the correct medication or diagnosis.

In contrast to Abulelwa, the majority of the trainers said that clinics would be too busy and cramped for using the Visual Body Map or body map drawings. Some suggested that a smaller A3-size chart was necessary. Others, like Nolwazi, suggested that both the Visual Body Map and the drawing exercises could be used in training and support groups.

‘So you cannot use it in the waiting area in the clinic set-up because they are many people walking up and down and then there is no space for putting our body maps...I think support groups and trainings...and also when we are invited by other organisations for presentations...then we can use it.’ (Interview with Nolwazi, November 2006).

While the degree to which each of the participants will be able to use the workshop or draw on exercises from it depends on where they work, as well as access to materials, the way that each participant was able to identify situations where they could use specific exercises suggests that they found the workshop informative and innovative. When discussing why they found certain exercises helpful, the ability to present information in a simple, yet accurate way using visual and/or participatory techniques was repeatedly identified as the key reason for its success.

## **Limitations And Recommendations**

In the interviews the participants were also asked to make recommendations and comment on any changes they felt would improve the workshop. Following the discussion of exercises they enjoyed and thought they would be able to use in their work, the trainers were also asked to comment on those exercises they found obscure, uninteresting or unhelpful.

On the whole the response was positive, with the exception of a drawing-based exercise that asked the participants to enlarge or magnify a section of their body map drawing in order to see the cellular make-up of the tissue. They were first shown an illustration of this that magnified the human heart in steps until a

single cell was revealed. The intention of this exercise was to demonstrate the way in which cells are like building blocks in the body. The participants found this exercise to be complicated and even confusing and argued that the puzzle exercise adequately explained the cellular nature of the body.

Apart from individual exercises and their educative potential, the limitations of the workshop as a whole were also discussed. Chantal argued that although she had enjoyed the workshop, she was not sure if drawing would be effective with all people when she said ‘I think people can express them more if they do drama or something. Because many people they can’t express them[selves] very easy[ily] on a piece of paper.’ (Interview with Chantal, November 2006). She was the only person to make this observation and yet it is valid, especially if the lack of art education in many public schools is taken into consideration. While many of the workshop participants and the communities they work in may not be familiar with drawing and other visual arts, visual representations of the human body in the form of the Visual Body Map and the creation of body map drawings were consistently considered very effective education tools by the group.

The main concern that many of the participants had was the cost of the materials. While the cost of the workshop was kept low with the use of brown pattern card, chalk and thick colour pens, it has to be acknowledged that even this is beyond the means of most trainers if it has to come from their own pockets. The brown card was considered to be the major expense, despite other options including flattened cardboard boxes and newsprint. Jason reaffirmed the concern over the expense of the materials, while offering useful suggestions.

‘If we have a budget for it [the brown card] and know where to get it or the organisation we are working with, if they are prepared to provide it, then I don’t think it would be a problem. But if it had to come out of our own pocket, yes, then it will [be a problem]...[We could use] the newspapers (print) we are [already] using...I think it would cost less and ...maybe in the future...we can think of that whiteboard thing where you have different markers...’ (Interview with Jason, November 2006).

Another potential problem posed by the participants was, even though the drawing materials such as the chalk and thick colour pens could be used repeatedly, they would be stolen. This response also applied to suggestions of hanging the Visual Body Map in clinics or pinning up their body map drawings.

‘To buy the card and stuff because after each training people take those things, they don’t give it back...everything they take...even if they are not going to use them...’ (Interview with Noluvuyo, November 2006).

Apart from practical concerns about the running of the workshop, other recommendations made by the trainers included the addition of more information on some of the topics already covered in the workshop, as well as the inclusion of other issues that were not addressed at all. Suggestions included adding more information about sexually transmitted infections (STIs), antiretroviral therapy regimens and where and how to access social grants and legal advice. In the interviews many of the trainers spoke of their experiences in clinics and the repeated need for STIs to be covered. The obvious link between other STIs and HIV made this a pertinent recommendation and changes will be made to the manual. Apart from STIs some of the participants felt that while HAART and how it works on a cellular level was well explained in the workshop, more information about the different kinds of antiretroviral treatment available and the side-effects associated with them should be added. They suggested that a list be compiled and added to the manual clearly laying out the different treatment regimens currently available. Jason’s response also included more information on HAART for children.

‘Yes, especially with... the first line regimen, the second line regimen and also for kids...because people is thinking...the kid is also going to swallow it but it [the pills and tablets are] too big.’ (Interview with Jason, November 2006).

Jason went on to suggest that a visual chart demonstrating how HIV enters the CD4 cell and replicates, as well as how HAART slows down this process, would be a very useful education tool. He emphasised the value of the layers found in the Visual Body Map and proposed that layers of acetate would also be effective when explaining the lifecycle of HIV.

‘If you can even on a later stage...have the HIV life cycle...[I]f we can work on something whereby in the same way that you have the body map, you have an HIV where you can also flip with the see-through [acetate sheets] where [you can]...also show people.’ (Interview with Jason, November 2006).

Other useful recommendations included more clearly defining what a balanced and healthy diet consists of. Suggestions included writing up a daily allowance

of different food groups as explained below. This information will be further researched and added to the workshop manual.

‘...if you talk about a healthy diet people will tell you bread and rice and beans, but they don’t know what protein it actually contains, what minerals it contains. And if you talk about 5 dark colour vegetables they will tell you even an apple is a dark colour...so [with] nutrition...maybe [add] a bit more.’ (Interview with Jason, November 2006).

Two topics that were not covered in the workshop were how and where to access social grants and legal advice. Only Jason made these two suggestions, but both will be further researched and possibly added to the workshop manual because they are important and closely linked to other topics covered in the course of the workshop, such as stigma and nutrition. At this stage, a referral list with names and contact details of government, NGO and CBO and other organisations or groups offering assistance with social and legal advice, will possibly be added to the manual.

‘...people still don’t know where to go when they are discriminated against and which ways to...get...grants and things like that...because sometimes people [think]. “Now I am HIV-positive...where now?”. Then they think “Oh, this is a dead life”. They don’t know there [are] other routes that they can still go to.’(Interview with Jason, November 2006).

The recommendations made by the participants will be further researched and incorporated into the next version of the workshop manual. Their suggestions were valued not only because of their experience as educators and trainers, but also their understanding of issues pertinent to their communities. Apart from improving the workshop, their input and advice is important in that it gives the participants joint ownership of the workshop and encourages them to further adapt and develop it in their work.

## **Conclusion**

In the course of researching and developing the workshop, a number of issues regarding ways of teaching the human body and HIV/AIDS were addressed. The intention of the workshop was to expose trainers and community health workers to participatory and visually based approaches to HIV/AIDS education

that they could use in their work. The aim of the workshop was to increase biomedical knowledge of HIV/AIDS, while contextualizing this knowledge within the lived realities of South African educators and trainers and the people they work with. One of the key concerns was presenting the biological content of the workshop in a way that participants could easily grasp, as well as teach once the workshop was completed. The challenge was to create simple, yet accurate exercises that could be replicated by the workshop participants. The use of the Visual Body Map was central to the workshop and without this tool, the workshop would not only be a completely different workshop, but also a less effective one. In many respects this workshop was devised to provide trainers, educators and community health workers with a series of exercises and approaches to how they could potentially use the Visual Body Map in their work. Many of trainers have the relevant knowledge, but are not familiar with participatory or visual ways of teaching human biology as part of HIV education.

This paper has discussed the use of visual and participatory approaches to teaching human biology and how it relates to HIV/AIDS education. Apart from the way the Visual Body Map was used to present human anatomy, the paper has also described the creation of body map drawings and most of the exercises in the manual. In particular, this paper has focused on the responses of the workshop participants to the methods and techniques used in the workshop. In addition to evaluating the educative potential of the workshop, this paper has also attempted to assess the level of importance attached to biomedical knowledge in relation to HIV/AIDS.

In the process of discussing a biological understanding of the body, three key areas were probed. The first question was whether or not increased knowledge of the human body would help people develop a better understanding of HIV/AIDS. The second topic looked at whether or not knowledge of human biology could potentially increase the uptake of and adherence to HAART. Lastly, the participants were asked, based on their experience, if they thought a biomedical understanding of the human body and HIV/AIDS could reduce fear and stigma surrounding the disease. In the questionnaire, all participants replied positively to the value of visual learning techniques used in the workshop. In the course of the interviews, most participants were able to elaborate on why they believed this to be true. While this paper does not suggest that this is representative of the general population, it is worth noting in the discussion of this particular group of HIV/AIDS trainers and the impact that they have on their communities and the people they work with.

One of the continuing concerns about HIV/AIDS education is whether or not it actually results in behaviour change. Past studies have shown that despite people knowing how HIV is transmitted, there is little change in their sexual decision making. (Campbell, 2003; Campbell & MacPhail, 2002). However, I would argue that knowledge about HIV/AIDS needs to extend beyond awareness of transmission and risky sexual behaviour to include accurate facts about the human body and health. The link between knowledge about the body and behaviour change is documented in a study on public responses to seeing displays of the human body. Subsequent to learning more about the human body, the study recorded increased awareness and written commitments to changes in lifestyle choices in the visitor's book (Vom Lehn, 2006). HIV education needs to provide people with information that increases their ability to make informed decisions, as well as developing an awareness of how social and economic environments can limit their choices. While large social issues, such as job creation and reducing gender-based violence, lie well beyond the scope of this workshop, it does seek to develop a holistic understanding of HIV/AIDS.

This paper has discussed the limitations of knowledge about HIV/AIDS by taking into account the socio-economic realities which shape the lives of the majority of South Africans. But it also supports the argument that accurate information remains the starting point to reducing the spread of the HIV, as well as providing better treatment for those living with the virus. Without knowledge about the human body and the biological nature of HIV and AIDS, people are unable to take any informed action regarding their health. In response to the question if education can impact on reducing the spread of the epidemic, Sizwekazi's reply is a welcome voice of hope and affirmation in the belief that education can bring about change. Responding to whether or not the TLP's had seen any improvements since they had started educating people in clinics and support groups, Sizwekazi states:

‘Yes, since I told you that we are working with stats. Every quarter we ask for the VCT clinic statistics and STIs and TB, everything we educate about...[P]eople go do VCT and people do identify their STIs, people know what they have...and know their treatment so they know their bodies and the statistics [cases of STIs and TB] and are going down.’ (Interview with Sizwekazi, November 2006).

Apart from education, another key issue to reducing the spread of the epidemic is developing open and supportive communities where people living with HIV are not discriminated against. As discussed above, many of the workshop participants believed that increased knowledge about HIV and the human body would result in a decrease in fear and stigma. This affirms the role of education

while also re-emphasising the destructive nature of stigma and how it continues to impede the spread of knowledge, Voluntary Counselling and Testing and the uptake of HAART. Jason clearly demonstrates the importance of creating a culture of openness, as opposed to silence.

‘I will say people in the work place, in the communities, need to take a stand and say “Yes, I am HIV-positive, I am living positive.” People need to come out and speak more about it...[W]e can educate as long as we want, but as long as we don’t get people to talk it’s [HIV/AIDS] still not going to go [away]...’ (Interview with Jason, November 2006)

This workshop aims to contribute to developing a culture of understanding around HIV/AIDS, which will encourage openness, VCT, the uptake of HAART and ultimately result in safer sexual behaviour. Central to this aim is the need for increased biomedical knowledge that emphasises HIV/AIDS as a disease and a virus removing it from the realm of moral judgement and superstition, as well as providing people with the relevant knowledge on how to protect themselves from HIV. This biomedical approach does not deny the importance and existence of alternative understandings of health and illness, such as traditional healing, but aims to provide people with knowledge that will increase their choices and enable them to make more informed decisions about their health.

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