

## 5 LIMITATIONS

A shortfall of the study was the fact that the effect on knowledge that could have been obtained through other sources, was not controlled for. Programmes on radio, television, other media and even live programmes presented in the communities with HIV / AIDS messages, are presently commonplace throughout South Africa. Although the multitude of advantages of all of these efforts is not negated, this could also have had an effect on the results observed in the post-intervention group over the study period. To control for this influence, a similar company where no intervention programme is offered, could have been used during the same study period. Limitations are the availability of such "twin" companies, as well as accessibility for the researcher to utilise employees for such a study.

## 6 DISCUSSION

**Beliefs:** There were significantly more positive beliefs about HIV / AIDS in the pre-intervention group than in the post-intervention group. Cultural traditions are profoundly engraved into the South African society, typical of the whole human race. Man finds it only too easy to sabotage external influences like intervention programmes from within, by the simple act of not changing his attitudes and ideas about things.<sup>10</sup> Unacceptable behaviour is not necessarily the result of specific events, but is influenced by the human mind.<sup>37</sup>

Changes that became more negative over a period of time were also observed in the military environment. There was a decline in the commitment to many of the normative aspects of military service, particularly the commitment to selfless service, if an analysis was made of the responses of junior officers serving at the South African Military Academy. This article also highlights trends of a similar nature observed in other countries. It further remarked that commitment to altruistic values depends upon reinforcement from society. Where this is not forthcoming, soldiers are not likely to view their service in the military as a calling.<sup>38</sup> This emphasises the need for a well-developed peer educator system to continually reintroduce the desired beliefs in their sphere of influence, as people will change when those around them are changing.<sup>14, 27</sup>

Furthermore, this observation might not be so critical for the desired changes in practices expected in the post-intervention group. Other studies have shown that the beliefs specified by social-cognitive models do not reliably predict sexual behaviour.<sup>13</sup> In yet another study conducted, inaccurate beliefs about the risks posed by casual social contact increased after an intervention, as did the belief that people with AIDS deserve their illness. Approximately one third of the respondents at the end of this telephonic survey expressed discomfort and negative feelings towards people with AIDS.<sup>20</sup>

**Transmission:** The general level of knowledge about HIV / AIDS was fairly high amongst the respondents, even in the pre-intervention group. This is noted

especially in the light that the majority of the employees (and therefore a high percentage of the respondents) are "blue collar" workers.

The study site is situated in the Gauteng Province of South Africa. The Gauteng Province has the second highest HIV positive rate in South Africa<sup>4</sup> and a similarly high rate could therefore be assumed for the respondents. Higher levels of knowledge about HIV / AIDS were found in other studies amongst respondents that were aware of their positive HIV status.<sup>22</sup> In contrast, HIV negative (or individuals not aware of their positive status) respondents tend to have lower levels of knowledge about the specific disease (in our study HIV / AIDS).<sup>22</sup> This observation could also have contributed to the observed fairly high knowledge levels of our study. In another study it was found that a high-risk (pertaining to HIV / AIDS) group scored statistically significantly better on knowledge than a low-risk group, further supporting this notion.<sup>39</sup> The present study confirms findings in other studies, namely, there was still inaccuracy regarding HIV / AIDS transmission myths or how HIV / AIDS cannot be transmitted.<sup>40</sup>

The significant increase in knowledge about HIV / AIDS transmission after the intervention is a strong motivation factor to sustain the intervention programme. Findings from other studies showed that if people perceive a mode of transmission to be responsible for a disease, they do take significant measures to protect themselves against the disease.<sup>16</sup> Even when researchers controlled for socio-economic status and other factors, they found that more educated HIV positive or diabetic patients were more likely to adhere to treatment and perform better self-

management of their disease. This adherence made them experience improvements in their self-reported general health.<sup>8</sup> It is essential, though, to always promote a culturally sensitive and appropriate HIV / AIDS health promotion programme in South Africa.<sup>40</sup>

**Perception of attitudes:** The more positive perception of attitudes towards people with HIV / AIDS in the post-intervention group took place over a relative short period of time. Other studies documented a lag or inertia of attitudes and practices over the usually faster improvement of knowledge levels, a seemingly “persistence factor” that seems to block or undo many therapies.<sup>15</sup> Interventions should be aimed to increase tolerance of persons living with HIV / AIDS among the general population. It is important to reintroduce the elements in the intervention programme that addressed attitudinal aspects amongst the employees on an ongoing basis. Re-enforcement is necessary since it has been proven that stigma reduction interventions appear to work, but usually only in the short term.<sup>41</sup>

**Attitudes towards HIV / AIDS people:** There were no significant differences between the pre and post-intervention groups on their attitudes towards people with HIV / AIDS. This is in keeping with other research that documented rejection and social stigma associated with HIV / AIDS.<sup>19, 22</sup> As was mentioned above, attitudinal aspects in training should in effect influence attitudes towards other persons with HIV / AIDS.<sup>19, 22, 41</sup> Interventions should also target health workers through role modelling, diffusion of training and discussions of discrimination and human rights. This has shown to significantly affect the perception of risk groups and behaviours,

perceived skills in treatment and counselling.<sup>42</sup> It also reduced fears and increased concern for people with HIV disease, improved the climate of treatment and prevention of HIV infection.<sup>42</sup>

*Practical:* The post-intervention group had significantly better knowledge of high-

**Risk:** Too many respondents perceived themselves to be vulnerable to contracting HIV / AIDS in both intervention groups. The significant increase in knowledge about risk of contracting HIV / AIDS from the pre to post-intervention groups was heartening. Previous studies have shown that knowledge about risk factors for contracting a disease considerably reduce the risk of infection.<sup>16, 43</sup> On the other hand, psychological models which specify how behaviour is shaped by socially shared beliefs can be used as a basis for HIV-preventive education.<sup>10</sup> An application of these social-cognitive models undoubtedly represents a useful advance over simple information provision campaigns, which assume that increased knowledge will automatically promote behaviour change.<sup>19</sup> In some research it was shown that increased condom use rather than abstinence, non-penetrative sex or reduction in partner turnover offered the most promising approach to infection control.<sup>10, 11, 12</sup> By contrast the Ugandan study showed that an approach based on moral ethics embraced by each and everyone (even at presidential level), turned around the HIV / AIDS epidemic for the whole country.<sup>17</sup>

*verbal skills that are least developed in the population and that are the most*

Social-cognitive models propose that measures of individuals' health-related beliefs can predict whether or not they will take preventive action. The measures specified include individuals' intentions and their beliefs concerning their susceptibility to a health threat, its severity, the benefits and barriers associated with precautions, the

degree to which others (such as their peers) approve of preventive measures, and their perceived ability to take precautions (self-efficacy).<sup>10, 14, 44</sup>

**Practices:** The post-intervention group had significantly better knowledge of high-risk practices for contracting HIV / AIDS. There were, however, no significant differences between the pre and post-intervention groups in their usage of and beliefs about condoms.

Studies conducted on reasons for non-use of condoms highlight situational constraints, especially substance use before intercourse and unplanned sexual encounters.<sup>11</sup> Specific measures have to be included in studies to explain and predict accurately why people do or do not engage in HIV-preventive behaviour, particularly to understand why those with seemingly appropriate beliefs and intentions do not act accordingly.<sup>10, 13</sup> As pointed out above, condom-related beliefs may not predict condom use, whereas previous practice may be a more powerful determinant of sexual behaviour. Sexually transmitted disease patients in China had low levels of HIV / AIDS and engaged in high-risk behaviours. The majority of patients reported having had multiple sex partners. When having sex, few men and no women reported always using condoms.<sup>45</sup> 'Condom negotiation skills' involve verbal skills that are least developed in the inexperienced and most difficult to apply to an unfamiliar partner. Furthermore, couples in which women had greater influence on sexual negotiation were more likely to practice contraception. Sexual social training skills must therefore empower young women to challenge and

dismantle powerful gender role constraints. The free availability of condoms will thus be enhanced through individual training in skills.<sup>10, 12</sup>

**Influence from significant others:** The post-intervention group was significantly more influenced than the pre-intervention group by their significant others.

The effectiveness of inter-personal communication has been highlighted as a dominant factor for promotion of activities in other studies.<sup>46</sup> It is therefore a strong encouragement for the sustaining of peer educators,<sup>22, 30</sup> especially since they have such a strong influence on other members in their sphere of influence.<sup>30</sup> They are also likely to spend more time and have an emotional bond with their client. This bond seems to aid rather than impede the whole process.<sup>47</sup> It has to be emphasised that health education should not be targeted at 'the masses'.<sup>30</sup>

Improvement in health in industrial society now depends more on appropriate life-styles than on curative care and to join the move away from curative care towards prevention.<sup>29, 30</sup> Part of this move has been the recognition that communities have indigenous, lay skills to help themselves. Families, traditional practitioners and other community members first deal with most health problems. Those are the people who should be helped and supported by re-building lost confidence in them.<sup>10, 12, 29</sup>

Strong evidence exists that improvement in health comes more through changes in life-styles than through spending additional money on traditional curative services, especially amongst the opinion leaders of our societies.<sup>30</sup> This is even more relevant

for HIV / AIDS, since no cure presently is available for this dreaded disease. There should thus be a greater focus on health promotion, rather than disease treatment.<sup>30</sup>

**Information routes:** In the pre-intervention group personal contact came out as the most preferred way of receiving information about HIV / AIDS. Although the post-intervention group voted it as the third most preferred route, the percentages of the other two more preferred routes (printed materials and TV) were only slightly higher.

Since the post-intervention group cited information from TV as the most preferred information route, this will need to be addressed locally in companies but also on a wider scale. Around the world, large and powerful groups either directly control the media or strongly influence them. Unfortunately, those groups are often not interested in the media as means of improving health through health education. Their own vested interests may lead to wide spread dissemination, and acceptance of ideas and attitudes inimical to health,<sup>30</sup> often portraying certain life-styles as a manly or the charismatic thing to do.<sup>29</sup> Targets in the social action model are the policymakers, decision makers, pressure groups, consumer groups, or consumer associations, and volunteer organisations.<sup>29</sup>

It is important to involve peer educators in the planning and implementation of educational programmes.<sup>46</sup> Health educators should be involved in activities that steer away from the top-down, medical approach, looking at diseases; towards a



much broader way of helping people to change their environment.<sup>29</sup> Health education is something in which everyone can be involved.<sup>29</sup>

Successes with diseases (smallpox, yaws, malaria outside Africa) in the past have one thing in common: each depends on technology in which people themselves are hardly involved.<sup>30</sup> However, our successes to improve nutrition, eliminate smoking and now with HIV / AIDS, have been limited. To achieve success in these we depend on changes of habit and behaviour amongst those involved. Historically, we have relied on much communication coming from the doctor. For many reasons the doctor is a poor communicator to most patients.<sup>30</sup> Fortunately there are peer educators (or part-time health workers) who can communicate better, but they are still part of the health professionals.<sup>30</sup> As pointed out earlier, they should be chosen by their 'community' (fellow employees), usually more for their attitudes than their literacy or level of education.<sup>10, 11, 27, 30</sup> They remain responsible to their fellow employees.

One story related by a health educator in many ways encapsulates some of the ideas presented above. The health educator is standing on a riverbank when he hears a cry from the river. He rushes down to the waters' edge, pulls out a drowning person and gives him artificial respiration. He is delighted to see the person start to breathe again, when he hears another cry from the river. He hurries down to the water and once again rescues someone else from drowning, whom he then resuscitates. This goes on the whole day. He never has a chance to do anything else because he is continually rushing down to the river to rescue these poor people from drowning.

He never had the time to go around the bend in the river to see who was pushing all these people in. What the story is trying to say is that we must determine not only who is pushing the people into the river, but also how and why they are being pushed, and what can be done to stop the problem. We must also assure that, if people are pushed in, they can swim.<sup>29</sup> Practitioners are busy people. They rarely have the luxury of sitting back and reflecting on their work, there is always something that must be done.<sup>48</sup>

## 7 CONCLUSIONS AND RECOMMENDATIONS

**Reliability:** According to Nunnally internal consistency (coefficient alpha) is regarded as the better estimate of reliability.<sup>35</sup> For hypothesized constructs reliabilities of 0.70 and higher will suffice.<sup>35</sup> As Nunnally notes,<sup>35</sup> the test-retest method is not recommended in the main for estimating reliability of the measures (p. 234); internal consistency (coefficient alpha) is regarded as a better estimate of reliability.

Amongst the pre-intervention group knowledge about transmission; perception of attitude towards a person with HIV / AIDS; risk of contracting HIV / AIDS; usage and beliefs about condoms; and influence from significant others were all found to be reliable scales (> 0.70).

With the post-intervention group the same elements (transmission, perception of attitudes, risk, condom beliefs and influence from significant others) as well as beliefs around HIV / AIDS were found to be reliable scales (> 0.70).

HIV / AIDS.

**Hypotheses:** The following hypotheses were tested: (1) Knowledge, attitudes and practices are positively related; (2) Women have more knowledge about HIV / AIDS than men; (3) Language affects knowledge, attitudes and practices; (4) Race affects knowledge, attitudes and practices; and (5) Age is related to knowledge, attitudes and practices. All the hypotheses received partial support in either or both the pre and post-intervention groups.

## **7 CONCLUSIONS AND RECOMMENDATIONS**

### **7.1 Conclusions**

- 7.1.1 The intervention programme, as demonstrated by the KAP questionnaires, significantly improved the knowledge levels of transmission; perception of attitudes towards a person with HIV / AIDS; knowledge about high-risk practices; and openness to be influenced by significant others.
- 7.1.2 The captive audience of employees grouped together as peers seemed to be an ideal platform to launch intervention programmes.
- 7.1.3 Hypotheses 1, 3 and 4 received partial support in both intervention groups, but hypothesis 2 and 5 only in the pre-intervention group.

### **7.2 Recommendations**

- 7.2.1 Every responsible employer should get involved in preventing the spread of HIV / AIDS.

- 7.2.2 Peer educators should form part of every intervention programme in the fight against HIV / AIDS.
- 7.2.3 The peer educator system should be utilised to establish ownership by the employees to the point where they eventually remark: "We have done it ourselves".<sup>30</sup>
- 7.2.4 Regular contact between the professional nurse and the peer educators should be maintained throughout; this is necessary to ensure: trust of fellow employees in the knowledge of their peer educators; the ultimate success of the peer educator system; and a 'bottom-up' approach.<sup>16, 30</sup>
- 7.2.5 In order to evaluate intervention effects, it is recommended that pre and post-intervention testing with KAP questionnaires be conducted.
- 7.2.6 Intervention programmes should not only focus on increasing knowledge levels, but also on skills training, particularly communication in relationships.
- 7.2.7 It is very important that condoms should be freely available to limit unprotected sexual encounters.