Efficacy of a HIV intervention in the workplace, as measured by KAP (knowledge, attitudes and practices) questionnaires: a before and after study

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Dissertation to fulfil the requirements for completion of a Masters degree in Community Health (MMed (Civ))

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Efficacy of a HIV intervention in the workplace, as measured by KAP (knowledge, attitudes and practices) questionnaires: a before and after study

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I declare that the dissertation, which I hereby submit for the degree MMed (Community Health) at the University of Pretoria, is my own work and has not previously been submitted by me for a degree at another university.

W W Rossouw

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LIST OF ACRONYMS AND DEFINITIONS

AIDS	**A**cquired **I**mmunity **D**eficiency **S**yndrome. This syndrome manifests itself as the final stages of HIV infection.
HIV	(**H**uman **I**mmuno-deficiency **V**irus) - the virus that causes AIDS.[1]
Virus	A microbiological organism that is the smallest and most basic of known organisms.
HIV-infected employee	An employee who proves positive (in a laboratory test) of HIV infection.
Immune system	The part of the body whose function is to defend the body against invading harmful organisms and foreign bodies.
HI virus (causes AIDS)	The virus survives in bodily fluids such as blood, semen, saliva and tears. To date no case has been reported where AIDS was transmitted from either saliva or tears. All proven cases of the disease have been caused by the transmission of semen or blood. An HIV-infected employee can transmit the virus to others although no symptoms are apparent.[2] The HI-virus is very weak and cannot survive for long in the open.
STD	**S**exually **T**ransmitted **D**isease.
Bisexual	Sometimes sex with male, sometimes female partner(s).
Heterosexual	Only having sex with opposite sex.
Homosexual	Sex with partner(s) of same sex.

SUMMARY

Aim: The overall aim of the study was to evaluate the efficacy of an intervention programme in combating HIV / AIDS in the workplace, using KAP questionnaires to evaluate changes before and after the intervention. A refractory industry, manufacturing heat resistant bricks, was targeted.

Objectives: The specific objectives were to: (1) establish the baseline knowledge, attitudes and practices profile of the company's employees; (2) ascertain the reliability of the measures encapsulated in the questionnaires; (3) roll-out the full intervention programme; and (4) determine the knowledge, attitudes and practices profile of the company's employees after 6 months of the intervention.

Methodology: A structured questionnaire, with a respondent information leaflet and consent form, was designed to obtain information on: demographic characteristics, general knowledge, attitudes and practices regarding HIV / AIDS. An English questionnaire was distributed to each employee, 150 in total, together with their salary slips, before the intervention was initiated. A repeat questionnaire was distributed six months later. For illiterate employees, or those having difficulty in understanding certain terminology, venues were arranged where small groups were given help in completing the questionnaire. Transparencies on an overhead projector were used in assisting the completion of questionnaires, thus still ensuring confidentiality.

A research assistant was trained as a fieldworker to administer the questionnaires at the end of February 2003 and the end of August 2003.

Descriptive statistics were the first step for data analysis. Thereafter, the reliability (internal consistency) analyses were conducted on all scales. T tests were used to ascertain demographic effects and pre and post-intervention effects on knowledge, attitudes and practices. Pearson product-moment correlation coefficients and one-way analysis of variance (ANOVA), with Bonferroni adjustments for multiple comparisons, tested group effects.

The results of the questionnaire were analysed and presented to management to keep them abreast of the progress. A summary of the responses to each question was used as an aid in guiding health education. The rest of the roll-out programme involved the drawing up of a policy on HIV / AIDS in the workplace, training of peer educators, health education with the use amongst others of videos, posters and pamphlets, putting up condom dispensers in ablution blocks and effectively treating sexually transmitted diseases.

The same questionnaire was administered after 6 months to evaluate to what extent, if any, the rollout programme improved knowledge, attitudes and practices. Questions that did not discriminate and were not reliable in the first questionnaire were not included in the second.

Results: Sixty-four questionnaires were returned from the 150 that were handed out at the end of February 2003 (42.7%). Ninety-six of the 150 questionnaires were returned after the second round of questionnaires, handed out at the end of August 2003 (64%).

Demographic Information: In the pre-intervention group the mean age of male respondents was 37.7 years (sd = 9.3) and 39.9 years (sd = 11.2) for the female respondents. There were no significant differences in age between males and females ($p > 0.05$). In the post-intervention group the mean age of male respondents was 38.8 years (sd = 9.3) and 44.4 years (sd = 6.8) for the female respondents. There were no significant differences in age between males and females ($p > 0.05$).

Beliefs of Respondents: There was a significant decrease ($p < 0.05$) in the level of positive beliefs about HIV / AIDS after the intervention.

Transmission Knowledge of Respondents: The post-intervention group had significantly better transmission knowledge ($p < 0.01$) about HIV / AIDS.

Avoidance: There were no significant differences ($p > 0.05$) about avoidance found between the pre and post-intervention groups.

Perceived attitudes of others: The post-intervention group had significantly better perceptions of attitudes of others ($p = 0.01$).

Attitudes towards people with HIV / AIDS: There were no significant differences between the pre and post-intervention groups on their attitudes towards people with HIV / AIDS ($p > 0.05$).

Practices: The post-intervention group had significantly better knowledge of high-risk practices for contracting HIV / AIDS ($p < 0.01$). There were, however, no significant differences between the pre and post-intervention groups in their usage of and beliefs about condoms ($p > 0.05$).

Influence from significant others: The post-intervention group was significantly more influenced ($p = 0.01$) than the pre-intervention group by their significant others.

Reliability: Several scales were found to be usable and varied from acceptable to very good. These were knowledge about transmission; knowledge about high-risk practices; condom usage and beliefs; and significant others in the pre-intervention group. In the post-intervention group the scales were beliefs; knowledge about transmission; perception of attitudes; knowledge about high-risk practices; condom usage and beliefs; and significant others.

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.

Conclusions: The intervention programme, as was demonstrated by the KAP questionnaires, significantly improved the knowledge levels of transmission; perceptions of attitudes towards people with HIV / AIDS; knowledge about high-risk practices; and openness to be influenced by significant others.

The captive audience of employees grouped together as peers seemed to be an ideal platform to launch intervention programmes.

Hypotheses 1, 3 and 4 received partial support in both intervention groups, but hypotheses 2 and 5 only in the pre-intervention group.

Recommendations: Every responsible employer should get involved in preventing the spread of HIV / AIDS.

Peer educators should form part of every intervention programme in the fight against HIV / AIDS.

The peer educator system should be utilised to establish ownership by the employees.

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.

In order to evaluate intervention effects, it is recommended that pre and post-intervention testing with KAP questionnaires be conducted.

Intervention programmes should not only focus on increasing knowledge levels, but also on skills training, particularly communication in relationships.

It is very important that condoms should be freely available to limit unprotected sexual encounters.