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**ANALYSIS AND INTERPRETATION OF THE PRE AND POST ASSESSMENT OF THE 2016
GRADE 8 OVSA SCHOOLS PROGRAMME**

By Dr Athamundh Dilraj (MRC)

METHOD OF ANALYSIS

Frequencies for the responses to each question (variable) were done at pre-assessment and post assessment. Proportions for the responses to each variable at pre-assessment were compared with that at post assessment. Statistical significance was determined using a p value of <0.05.

The overall performance of learners was assessed by the difference in the group score between pre- and post assessment. The group score was delineated at 50% i.e. either <50% or ≥50%. The assessment was based on 45 questions. Thus, all learners obtaining a score up to 22/45 were classified as <50% and those with 23/45 and over were classified as ≥50%.

Ndukwenhle participated in the pre-assessment but not in the post assessment. The number of learners at this school comprised just 2.9% of the total number and was retained in the pre-assessment analysis.

RESULTS

Demographics:

Number of learners:

At the 15 schools that participated in this programme, there were 2742 learners registered in the programme at the beginning of the year but only 2458 (89.6%) completed the pre-assessment. At post assessment, there were 2703 learners registered on the programme but only 2261 (83.6%) completed the assessment ***Gender:***

There were almost equal proportions of male and female learners at pre- and post assessment. At pre-assessment, 1281 (52.1%) of the learners were male and 1177 (47.9%) were female. At post-assessment, 1161 (51.3%) were male and 1100 (48.7%) were female.

Age:

The ages ranged from 11 to 20 years with a mean age of 14.1 SD 1.2 years. The majority (70%) of learners were 14 years and younger.

Overall result:

There was a significant improvement ($p < 0.01$) in the scores from pre- to post assessment overall for all schools combined. At pre-assessment, only 490/2458 (19.9%) scored 50% and above while 1496/2261 (66.2%) scored 50% and above at post assessment. Increases at post assessment in the proportion of learners that attained a score greater than 50% were seen at all schools. The greatest degree of change was seen at JG Zuma (14.6% to 92.2%) and Nomavimbela (2.3% to 62.8%).

A higher proportion of female learners at pre- and post assessment scored ≥50% (25.2% and 74.3%) compared to male learners (15.1 % and 58.5%), ($p < 0.01$).

A higher proportion of younger learners at pre- and post assessment scored $\geq 50\%$ (22.2% and 70.3%) compared to older learners (14.6 % and 56.2%), ($p < 0.01$).

SECTION 1: General Life skills

Gender role: There was a significant shift in the understanding of gender roles by learners, the largest being what society decided for boys and girls. This was 25.8% at pre-assessment and 50.7% at post assessment ($p < 0.01$). 38.1% at pre-assessment regarded gender roles to be the rights and responsibilities of young people. This proportion reduced a little at post assessment but remained high (27.0%). A fair proportion at pre- and post assessment (26.5% and 18% respectively) felt that gender roles were things that parents wanted done. A smaller proportion at pre-assessment (8.6 %) associated gender roles with violence against women and children, reducing to 3.7% at post assessment.

Values: The majority (62.9%) of learners at pre-assessment regarded values to be that which were important to them and guided them to make decisions. Significantly more (77.5%; $p < 0.01$) felt the same at post assessment. Fewer learners at post assessment (14.6%) indicated that values were things that boys and girls can do compared to pre-assessment (22.1%). Much smaller proportions of learners felt that values were things that people wanted them to do by force or just what boys were allowed to do.

Problem solving: At pre assessment, over half of the learners (55.6%) understood that ignoring a problem was not part of problem solving. This proportion rose significantly higher to 73.4% at post assessment ($p < 0.01$).

Acceptable for boy to hit girl? Most learners felt it was not acceptable for a boy to hit a girl. This was relatively unchanged from pre assessment (87.8%) to post assessment (92.5%).

Boy to provide condoms: Almost half (48.9%) of learners at pre assessment felt that it was both the boy's and girl's responsibility to provide condoms. This proportion rose significantly to 60.0% at post assessment ($p < 0.01$).

Condoms provide good protection: A very high proportion of learners at pre and post assessment (93.2% and 93.9% respectively) indicated that condoms provide good protection against getting HIV during sexual intercourse.

Sex and love: Most learners at pre assessment (73.9%) and an even higher proportion (85.91%) at post assessment indicated that they don't have to have sexual intercourse to show that they love their partner ($p < 0.01$).

Section 2: General Health Information and human rights

WASH definition: While at pre-assessment, only a third (34.8%) of learners correctly defined WASH as Water Access, Sanitation and Hygiene, a significantly higher proportion (61.0%) ($p < 0.001$) were able to define this correctly at post assessment. In addition, a total of 29.3% of

learners at post assessment indicated that it stood for Water, Sanitation and Hygiene or Water, Sanitation and Health.

Hand hygiene: At pre-assessment, just of half (52.7%) of the learners indicated that hand hygiene should be performed after going to the toilet, before and after having direct contact with a patient or with items in the immediate vicinity of the patient and before preparing and eating food, breastfeeding, or feeding children or people living with HIV. This proportion rose significantly to 76% at post assessment ($p<0.01$).

Wash preventable diseases: Only a small proportion (16.9%) of learners at pre assessment knew that herpes was not one of the diseases that can be prevented by promoting WASH standards. This proportion rose significantly at post assessment to 35.5% ($p<0.01$). Almost half (47.3%) of learners at pre-assessment did not regard diarrhoea as a WASH preventable disease. This proportion reduced significantly ($p<0.01$) to just under one third (29.5%) at post assessment.

High risk of TB: Only 36% of learners at pre assessment knew that those at high risk of contracting TB were HIV positive people or HIV negative people with weak immune systems, TB contacts, the elderly, and children. This proportion rose significantly ($p<0.01$) to 60.7 at post assessment.

TB default risk: At pre assessment, about half (48.4%) of the learners knew that one could infect others and/or develop drug resistant TB as risks of defaulting on TB medication. A significantly higher proportion (68.5%; $p<0.01$) knew this at post assessment.

How TB is cured: More than half (58.3%) of the learners at pre-assessment knew that TB could only be cured by a specific anti-TB regimen. A significantly higher proportion (76.1%; $p<0.01$) indicated this at post assessment.

Main symptoms of TB: Less than one third (28.2%) of learners at pre-assessment correctly indicated that cough, fever, night sweats and weight loss were the main symptoms of TB. This proportion remained relatively unchanged at post assessment (30.5%). The majority chose options that included diarrhoea.

Effective way to protect from being infected: 39.8% of learners at pre-assessment correctly indicated that sexual abstinence, not sharing needles for any reason and using condoms at every sexual act were effective ways to protect oneself from being infected with HIV. This proportion rose significantly to 61.7% at post assessment ($p<0.01$).

STIs which are curable: 19.4% and 43.3% of learners at pre- and post assessment respectively correctly identified gonorrhea as a curable STI ($p<0.01$). 41.7% of learners at pre-assessment and 22.2 % at post assessment indicated that HIV was curable.

Risk for HIV dating older persons: A high proportion (79.5%) of learners at pre-assessment indicated that dating an older person put themselves at risk of contracting HIV. This remained relatively unchanged at post assessment (82.9%).

Using condoms correctly can prevent HIV transmission: 77.9% of learners at pre assessment and 78.6% at post assessment indicated that using condoms correctly can prevent HIV transmission

Washed condom can be used twice: 89.1% of learners at pre assessment and 90.8% at post assessment felt that a male condom that has been washed cannot be used safely twice.

Can tell person HIV infected by looks: A large proportion (69.6%) of learners at pre assessment and an even larger proportion (83.7%) at post assessment indicated that one could not tell whether a person was infected with HIV just by looking at the other person.

Major way HIV transmitted is by sexual intercourse: While most (75%) of the learners indicated at pre- assessment that the major way in which HIV was transmitted was by sexual intercourse, this proportion did not change much at post assessment (78.6%).

Cure for AIDS: Half of learners at pre assessment indicated that there was no cure for AIDS while the other half said it was curable. The proportion indicating that there was no cure rose significantly from 50.4% to 70.2% at post assessment ($p<0.01$).

HIV and AIDS the same: While 51.1% of learners at pre-assessment indicated that HIV and AIDS were not the same, a significantly higher proportion (76.5%) indicated so at post assessment ($p<0.01$).

Rights of people living with HIV: 81.1% and 85.5% of learners at pre- and post assessment respectively, felt that people living with HIV have the same rights as all other South Africans.

Infected for 5 years with HIV without getting AIDS: 47.4% of learners at pre-assessment and 66.8% at post assessment indicated that a person can be infected with HIV for 5 years or more without getting AIDS ($p<0.01$).

Eating healthy foods prevent getting HIV: A higher proportion of learners at post assessment (65.2%) indicated that eating healthy foods do not keep a person from getting HIV compared to pre-assessment (59.5%) ($p<0.01$).

Multiple partners increase HIV risk: A higher proportion of learners at post assessment (83.1%) indicated that having sex with more than one partner can increase a person's chance of being infected with HIV compared to pre assessment (77.6%) ($p<0.01$).

Infection with HIV after sex once: A higher proportion of learners at post assessment (79.1%) indicated that a person can get HIV even if he or she has unprotected sex with another person only once compared to pre assessment (70.3%), ($p<0.01$).

HIV infected person shows signs quickly: A higher proportion of learners at post assessment (64.9%) indicated that people who have been infected with HIV do not show serious signs quickly of being infected compared to pre assessment (47.4%) ($p<0.01$).

HIV test one week after sex: 35.2% and 50.5% of learners at pre-and post assessment respectively, indicated that a test for HIV one week after sex will not tell if he or she has HIV ($p<0.01$). .

Section 3: Sexual and reproductive health

Puberty: The majority of learners at pre and post assessment knew that puberty is a stage that a boy and girl go through as they change into adults, the proportion at post assessment being a little higher (85.1%) than at pre assessment (81.5%), ($p<0.01$).

Pregnancy before first menstruation: A significantly higher proportion of learners at post assessment (53.6%) indicated that a girl can get pregnant before her first menstruation compared to pre assessment (33.1%), ($p<0.01$).

Looking after someone with HIV/AIDS: The majority of learners at pre- and post assessment indicated that the best way to look after someone with HIV/AIDS was to make sure that they eat well and get other diseases treated quickly. The proportion indicating this was higher at post assessment (86.0%) compared to pre assessment (71.1%) ($p<0.01$).

Effective method of preventing pregnancy: At pre-assessment, 31.2% of learners indicated that consistent and correct condom use, birth control pills and sexual abstinence were effective ways of preventing pregnancy. This proportion increased to 51.7% at post assessment ($p<0.01$).

Section 4: Attitudes and Practices

Handling sores, genital discharge, or pain: There was little change from pre to post assessment in the proportions of learners in the way they would deal with sores on or in their private parts, unusual genital discharge or pain when urinating. Slightly more than half (53.5% at pre-assessment and 51.4% at post assessment) would go to the clinic or hospital while 30.7% at pre-assessment and 32.7% at post assessment would go to their parents. Few would go to their friend, teacher, a traditional healer or keep quiet and hope that the symptoms go away.

Who makes decision to use condom: The majority (68%) at pre-assessment indicated that both male and female would make the decision whether or not to use a condom during sex. This proportion increased at post assessment to 76.4% ($p<0.01$).

Partner does not want to use condom: A high proportion of learners at pre assessment (82.3%) and an even higher proportion at post assessment (87.4%) indicated that they would not have

sex if they wanted to use a condom, but their partner did not want to do so ($p<0.01$). 10.4% at post assessment indicated they will still have sex without it anyway.

Condom use at last sex act: The majority of learners at pre and post assessment (72.3% and 73.7% respectively) indicated that they did not have sex as yet. There was no difference between pre- and post assessment (11.2% and 10.5% respectively) of all learners who indicated that they did not use a condom at their last sex act.

Partner only wants to have sex: There was little difference between pre and post assessment in the way one would respond if their partner wanted to have sex, but they did not want to. Close to half (45.9%) of learners at pre-assessment and 48.4% at post assessment indicated that they would say NO firmly and leave straight away while 33.8% at pre-assessment and 34.4% at post assessment indicated that they would explain that they don't want to have sex and would then not have sex.

Tested for HIV: There was little difference between the proportions of all learners who tested for HIV (29.8% and 32.4%) at pre- and post assessment respectively. 14.3% at pre assessment and 16% at post assessment of all learners tested for HIV less than 6 months ago while 15.5% at pre assessment and 16.4% tested for HIV 6 months and more ago.

Why buy gifts: With respect to the reason for buying gifts, roughly a third chose each option at pre-assessment. 31.2% thought that he felt sorry for her and wanted to help out as a friend, 31.7% felt that she will like him and want to have sex with him and 35% felt that he knew that if he gave her the gifts, then she will not be able to refuse to have sex with him. At post assessment, more learners (42.8%) felt that if he gave her the gifts, she will not be able to refuse to have sex with him ($p<0.01$).

Accept/refuse gifts and/or sex: When learners were asked to place themselves in the role of the female, the majority of them indicated that they would refuse the gifts or accept the gifts but refuse to have sex. There was an increase from 43.9% to 48.3% ($p<0.01$) at pre- and post assessment respectively in learners who said they would refuse the gifts. There was a very small change in the proportion of learners between pre- and post assessment as to whether they would accept the gifts but refuse to have sex (39.2% to 37.3%) or have sex willingly or unwillingly (14.3% to 12.9%).

Zazi could become pregnant: The majority of learners felt that Zazi could become pregnant by having unprotected sex just once, with the proportion of this being higher at post assessment (91.2%) compared to pre-assessment (85.4%) ($p<0.01$).

STIs: More learners at pre- and post assessment indicated that Azile and Zazi could both become infected with an STI. However, a greater proportion of learners felt that Zazi was more likely to become infected with an STI (77.8% and 83.4% at pre- and post assessment respectively) than Azile (62.7% and 71.6% at pre-and post assessment respectively) ($p<0.01$).

INTERPRETATION

Overall Scores

The significantly higher score obtained at post assessment indicates that the programme was successful overall in improving the knowledge of learners with respect to general life skills, general health information and rights as well as sexual and reproductive health. The improvement was consistent over all schools.

The higher score obtained by female learners is probably a reflection of a greater concern for their own health compared to male learners.

It is not clear why older learners performed worse than younger learners. One would expect older learners to have had a greater exposure to general health issues over the additional years and score better than they did. Theoretically, children older than 14 years should be in higher grades. It is possible that these older children were in grade 8 because they were slow learners and did not grasp concepts as easily, consequently scoring lower.

Section 1: General life skills

The significant shift in the understanding of gender roles seen by learners as what society decided for boys and girls may reflect that those learners are open to be guided by society. However, the large proportion that still regarded gender roles to be the rights and responsibilities of young people could indicate that they would want to have some independence in determining their role. While the proportion of learners regarding gender roles as violence against women and children was smaller and was halved post intervention, this still reflects the strong impact of the degree of violence that learners may be witnessing or experiencing at home and/or society. Nonetheless, most learners at pre- and post assessment felt it was not acceptable for a boy to hit a girl. The independence in decision making is also reflected in the shift in more learners indicating that values were things that were important to them to guide them to make decisions and not what people wanted them to do by force.

The significant increase at post assessment in the proportion of learners in their understanding of problem solving was that it was not ignoring the problem but constituted identifying a problem, understanding the problem, and thinking about possible solutions.

The significant increase in the proportion of learners at post assessment who felt that it was both the boys' and girls' responsibility to provide condoms reflects recognition of greater empowerment for females and that females must take control of their own health and lifestyle. While a very high proportion of learners at pre- and post assessment indicated that condoms provide good protection against getting HIV during sexual intercourse, the fact that 40% of learners at post assessment still felt that it was the boy's responsibility to provide condoms does leave the possibility of unsafe sex and consequent pregnancy or acquisition of STIs if the boy did not live up to his responsibility. There could also be the possibility of the fear of stigma in that a girl may not want to be seen acquiring or carrying a condom. This requires further exploration.

The indication by most learners at pre-assessment and an even higher proportion at post assessment that they don't have to have sexual intercourse to show that they love their partner is important in that recognizing the distinction between showing love and sex will have some impact on reducing unwanted pregnancies and acquisition of STIs.

Section 2: General Health Information and human rights

While over half the learners at post assessment were able to correctly define WASH as Water Access, Sanitation and Hygiene, a further third came close by stating that it had to do with Water, Sanitation and Health/Hygiene. Their understanding of performing hand hygiene after going to the toilet, before and after having direct contact with a patient or with items in the immediate

vicinity of the patient and before preparing and eating food, breastfeeding, or feeding children or people living with HIV was average at pre-assessment and improved at post-assessment. However, almost a third of the learners at post assessment did not regard diarrhoea, in particular, as a WASH preventable disease, indicating a need for them to develop a greater knowledge of diseases that can be prevented by promoting WASH standards.

The understanding by learners of risks related to TB increased from pre- to post assessment. At post assessment, more learners knew that HIV positive people or HIV negative people with weak immune systems, TB contacts, the elderly and children were at high risk of contracting TB. More learners at post assessment also knew that one could infect others and/or develop drug resistant TB as risks of defaulting on TB medication. While their understanding was good, in that specific anti-TB medication was required to cure TB, their knowledge about the main symptoms of TB remained poor at post assessment. This is the critical first step in recognising oneself or others at home or in the community as a TB suspect and greater attention needs to be given in improving knowledge in this area to reach the goal of reducing the incidence of TB.

More than four fifths of the learners at post assessment felt that PLWH had the same rights as all other South Africans. With South Africa being amongst the countries with the highest burden of HIV/AIDS, this attitude will help lift the many barriers to a significant segment of the population.

Though there was a high knowledge at pre-and post assessment of transmission of HIV by the sexual route on its own, the higher proportion of learners at post assessment correctly indicating that sexual abstinence, not sharing needles for any reason and using condoms at every sexual act as an effective way to protect themselves from being infected with HIV is a reflection of an increased understanding of routes of transmission and means of prevention.

The increased understanding that gonorrhoea is curable means that more learners should feel comfortable to seek treatment. While the proportion of learners indicating that HIV was curable dropped to about a fifth at post assessment, this misconception in these learners may impact on their behavior. It is critical that they understand that lifelong treatment will be required if they do get infected.

There was generally a good knowledge about HIV transmission with a high proportion of learners at pre-and post assessment indicating that sex was the major route of HIV transmission. Knowledge of the risk of contracting HIV by dating older persons, preventing HIV transmission by using condoms correctly or not using washed condoms was high at pre assessment. Thus, little difference could be seen at post assessment. However, more learners understood that a person could get HIV even if he or she had unprotected sex with another person only once and that the risk increased if they had multiple partners. Furthermore, more learners at post assessment acknowledged that eating healthy foods do not keep a person from getting HIV.

The higher proportion of learners at post assessment indicating that one could not tell whether a person was infected with HIV just by looking at the other person or that an HIV infected person may not show symptoms early or that a person can be infected with HIV for 5 years or more without getting AIDS suggests that learners are aware that a healthy-looking person may still pose a risk of transmitting HIV. However, while the proportion increased at post assessment in those who thought that a test within a week of having sex could not tell whether or not a person had contracted HIV, half of the learners still did not know that. Learners need to be made aware of the window period for HIV testing.

While more learners at post assessment knew that HIV and AIDS are not the same, some confusion still exists. This basic difference between the two needs to be understood clearly in order for learners to be able to deal with issues related to each.

Section 3: Sexual and reproductive health knowledge

The majority of learners at pre and post assessment knew that puberty is a stage that a boy and girl go through as they change into adults. While a significantly higher proportion of learners at post assessment indicated that a girl could get pregnant before her first menstruation, this proportion was less than half. Thus, this still poses a fair risk of pregnancy at an early age if unprotected sex takes place.

While some learners at pre and post assessment indicated pills, sexual abstinence and consistent and correct condom use individually as effective methods of preventing pregnancy, the biggest shift from pre- to post assessment was seen in learners who indicated that all 3 above measures as effective. However, the proportion indicating all 3 measures was only half. This still poses a fair risk for pregnancy and leaves much room for knowledge in this regard.

While learners acknowledged that eating healthy foods do not keep a person from getting HIV, a high proportion of learners at post assessment indicated that the best way to look after someone with HIV/AIDS was to make sure that they eat well and get other diseases treated quickly. This shows an understanding of improving/maintaining a strong immunity to prevent new infections and to reduce the morbidity from existing diseases.

Section 4: Attitudes and Practices

While there was little change from pre- to post assessment in the proportions of learners in the way they would deal with sores on or in their private parts, unusual genital discharge or pain when urinating, almost all the learners would seek help from someone instead of keeping quiet and hoping that the symptoms go away. Most would go to the clinic/hospital or their parents. Few would go to their teacher, a friend or a traditional healer.

With respect to condom use, more learners at post assessment felt that the partner should have a greater say in this regard. Learners indicated that both male and female should make the decision whether or not to use a condom during sex. The higher proportion of learners at post assessment indicating that they would not have sex if they wanted to use a condom, but their partner did not want to do so, is encouraging with respect to prevention of pregnancy and transmission of STIs. It would be interesting to explore the role of power dynamics in the relationships of who indicated that they will still have sex without it anyway.

While a very high proportion of learners at pre- and post assessment indicated that condoms provide good protection against getting HIV during sexual intercourse, there is still room for a change in their behaviour. A quarter of learners indicated that they had sex. However, there was little change in condom usage over the assessment period amongst these learners. It is of great concern that close to half of these learners did not use a condom at their last sexual act, exposing themselves to unwanted pregnancies and/or STIs.

The shift at post assessment, where more learners felt that she will not be able to refuse having sex with him if he gave her the gifts, shows that these learners realise that they will be putting themselves in a vulnerable position. Thus, when learners were asked to place themselves in the role of the female, most of them indicated that they would refuse the gifts.

The high proportion of learners who felt that Zazi could become pregnant by having unprotected sex just once shows that learners have a good understanding about pregnancy and are aware of the dangers of unprotected sex. The awareness extended to STIs where more learners at post assessment indicated that both could become infected with STIs.

CONCLUSIONS

This programme was successful overall in improving the knowledge of learners with respect to general life skills, general health information and rights as well as sexual and reproductive health as suggested by the significantly higher scores obtained at post assessment for most questions. However, some of the knowledge does not appear to have resulted in attitude or behavior change. Thus, greater emphasis needs to be placed on how this knowledge can be translated into behaviour modification.