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EXPLORING THE RISK BEHAVIOUR OF LEARNERS IN A SOUTH AFRICAN PRIVATE CHRISTIAN SECONDARY SCHOOL

Abstract

Adolescent learners tend to express their independence by engaging in risky health behaviour inclusive of poor eating habits, smoking and alcohol consumption. The aim of this study was to assess whether adolescents attending a religious school that maintains strict discipline are less likely to engage in risky behaviour. Learners attending a private Christian school were asked to complete a health risk behavioural questionnaire, which measured attitudes toward eating habits, alcohol and drug use, participation in exercise and sexual activity, smoking habits and adherence to Christian values. The sample group consisted of 117 study participants distributed across all high school Grades. On balance, these learners were more conservative than others attending secular schools and most reported healthy eating habits; 92.3% consumed dairy products, 64.1% consumed more than two fruits and 81.2% more than two vegetables per day. More than 78% exercised regularly. Only 10.2% consumed alcohol, 3.4% smoked and 5.2% used recreational drugs. Of all learners, 93.2% indicated their Christian values as having a moderating impact on their lifestyle. The study concludes with the recommendation to investigate ways in which the strategies employed by this Christian school could be promoted to other schools given the finding that Christian values translate into positive health outcomes amongst adolescents. As it seems that the strict Christian education of these learners leads to less risky health behaviour, ways in which to promote this school's strategies to other schools could be investigated.

Keywords: alcohol intake, Christian lifestyle, food habits, learners, risk behaviour.

Opsomming

Tienerleerders sal dikwels hul onafhanklikheid in die vorm van onveilige gesondheidsgedrag soos byvoorbeeld swak eetgewoontes, rook and alkoholgebruik uitdruk. Die doelstelling van die studie was om te bepaal of 'n skool se streng dissipline, wat klem lê op Christelike beginsels, 'n invloed het op die voorkoming van onveilige gesondheidsgedrag. Alle leerders van 'n private Christelike hoërskool is versoek om vrywillig 'n vraelys wat hulle gedrag en houding aangaande eetgewoontes, alkohol- en dwelmgebruik, oefening, seksuele aktiwiteit, rook en Christelike waardes te bepaal. Die steekproefgrootte was 117 en het leerders van alle Grade (8 – 12) ingesluit. Die resultate dui daarop dat hierdie leerders meer konserwatief is as leerders in ander studies. Die meeste het gesonde eetgewoontes gehad; 92.3% gebruik suiwelprodukte, 64.1% eet meer as twee vrugte en 81.2% eet meer as twee groente per dag. Meer as 78% oefen gereeld. Net 10.2% gebruik alkohol, 3.4% rook en 5.2% het al dwelmmiddels gebruik. Van al die leerders het 93.2% geglo dat hulle Christelike waardes 'n invloed op hulle leefstyl het. Dit wil dus voorkom of die streng Christelike opvoeding van hierdie leerders tot minder onveilige gesondheidsgedrag lei en maniere om die skool se doelwitte by ander skole bekend te stel, behoort ondersoek te word.

Kernbegrippe: alkoholinnome, Christelike leefstyl, voedselgewoontes, leerders, gesondeheidsgedrag

1. Background

Risky behavioural patterns translating into poor health outcomes, inclusive of unhealthy eating habits, alcohol and drug use, smoking and a sedentary lifestyle, often continue into adulthood once established in childhood. These habits, if persisted in, can result in negative long-term implications, including adult morbidity and mortality (Fahlman, Dake, McCaughtry & Martin, 2008; Steptoe, Wardle, Culi, Bellisle, Zotti, Baranyai & Sanderman, 2002). Risky health behaviours tend to occur in combination with others, such as the combination of drug use and smoking, or alcohol use and early unprotected sexual activity with multiple partners. Such behaviours do not necessarily translate into immediate adverse health consequences, and adolescents – not seeing the effects – often fail to see the harm in continued risky health behaviour. Yet, over the long term, the results of poor health choices in adolescence may cause irreversible impairment in adulthood (March & Knol, 2010).

Children are often not included in health and nutrition surveys and therefore limited data on their dietary, drinking, smoking and exercise patterns are available (Best, Neufingerl, Van Geel, Van den Briel & Osendarp, 2010). The continued gathering of such data is critical, for where the behavioural patterns of school-aged learners are known, effective intervention strategies can be developed where appropriate.

The private school where this study was conducted is known for its strict discipline and high quality education, with a curriculum that emphasises Christian values and principles. The primary aim of the study was to assess whether the combination of strict discipline and religious values contributes to the prevention of risky health behaviour among learners. The findings of this study can contribute to the improvement of educational methods and strategies designed to lower risky health behaviour among adolescents.

Christian values as discussed in this article, refer to values as implicitly mentioned and also implied in the Holy Bible (2007) and generally applied as “good family values” in modern-day conservative communities. In this article, it includes discipline, seeing the body as the temple of God by adhering to a healthy lifestyle that excludes regular consumption of food items that can negatively influence health, heavy drinking, smoking and low activity levels. It also includes abstinence from recreational drugs and sexual abstinence outside of marriage.

2. Literature review

The target group selected for participation in the study were all adolescents; a developmental life-stage associated with protracted behavioural experimentation, inclusive of risky behaviour. The age of the respondents, ranging from 13 to 19 years, aligns with Erikson’s stage of “identity versus role confusion”. According to Dunkel and Harbke (2017) the eight different development stages offer unique trials and tribulations during each life stage, resulting in important life changes. Each psychological stage presents specific psychological challenges or crises. How the individual responds to these challenges determines the degree of growth or emotional maturity acquired within that specific stage. During adolescence both sexual identity and social position are established. This stage is analogous with drastic bodily changes and signifies the crossover between childhood and adulthood (Gross, 1987).

Jones (2012) defines religion as both a means of social comparison and a system according to which worldviews are categorized; and categories tend to require the exclusion of elements that are inconsistent with the dominant worldview in the individual; hence Erikson’s terming of this stage as “identity versus role confusion”. Jones (2012) offers a poignant example in considering the issue of sexual orientation and how this aligns to religious values in considering the challenge of identity formation, and finds that this presents a serious challenge for adolescents in general and Christians in particular.

In seeking to explain the influence of Christian values on adolescent learners, this study focused on six behaviours used as the framework to explore how Christian values can affect specific adolescent behaviour. These include adolescent eating habits, alcohol and drug use, smoking habits, exercise and sexual activity. In particular, the study explored the adolescents' perceptions insofar their Christian values go and how these influence their lifestyle choices.

2.1 Eating habits of learners

The general decline in the quality of the diet of children, adolescents, and its close correlation with the increasing prevalence of obesity among these age groups has been observed over the last decades. The prevalence of overweight and obesity in the United States, for example, has doubled in the past 20 years, with 15.0% of children aged 6 to 19 years either at, or above the 95th percentile for body mass index (Krebs, Baker, Greer *et al.*, 2003 in Fahlman *et al.*, 2008:172). In South Africa, overweight rates have increased from 6.3% in 2002 to 11.0% in 2008 in adolescent males, and from 24.3% to 29.0% in adolescent females. Obesity rates increased from 1.6% in 2002 to 3.0% in 2008 in adolescent males and from 5.0% to 7.5% in adolescent females, irrespective of socio-economic category. Weight increases were higher in urban than in rural adolescents (Reddy, Resnicow, James, Funani, Kambaran, Omardien, Masuka, Sewpaul, Vaughan & MBewu, 2012:206). In addition, 60.0% of overweight youth had at least one risk factor for cardiovascular disease (Kibbe & Rich, 2003, in Fahlman *et al.*, 2008:217).

This increase in overweight, and especially obesity, puts adolescents at risk for the subsequent incidence of morbidities that had previously been associated with adults only. In addition, the nutritional status of school-aged children affects their health, cognition, and subsequently their educational achievement (Best *et al.*, 2010).

Although there is not much literature to compare the food habits of children, some data are available for South Africa and other countries. The following figures on the percentage of adolescents that frequently consume the various food groups were reported by the First South African National Youth Risk Behaviour Survey (FSANYRBS) (Reddy, 2008:3):

- fresh fruit (57.8%),
- vegetables (58.2%),
- dairy (44.9%),
- fast foods (38.8%).

Compared to, for example, the frequent consumption of food groups of university students (El Ansari *et al.*, 2011; Janse van Rensburg & Surujlal, 2013), these figures indicate a relatively good intake of food; however, a frequent intake of all food groups, except for fast foods, is preferable.

According to the 2011 Youth Risk Behaviour Surveillance System (YRBSS) Report on data representative of learners from Grade nine to twelve in public and private schools throughout the United States (CDC, 2013),

- 68.8% females and 63.5% males consumed less than two fruits per day,
- 73.9% females and 69.8% males consumed vegetables less than twice per day,
- 23% females and 11.8% males had not drunk milk over the previous seven days,
- 24% females and 31.4% males consumed sodas (carbonated cold drinks) at least once a day and
- 65.7% females and 59.5% males did not eat breakfast every day.

2.2 Alcohol use

According to Windle and Zucker (2010), adolescents who regularly consume alcohol are more likely to indulge in other risky behaviours, including smoking, recreational drug use and risky sexual behaviour. The authors reported that these adolescents are more likely to exhibit deviant behaviour, truancy and have academic difficulties. Liang, Flisher and Lombard (2007:166) also found a link between smoking, alcohol and substance abuse and bullying, with victims of bullying showing lower levels of such risky behaviour.

In a cross-sectional study in the Cape Town and Port Elizabeth areas, 12.5% females and 23.5% males screened positive for hazardous alcohol intake and males reported a higher frequency and consumption than females (Kaufman, Braunschweig, Feeney, Dringus, Weiss, Delany-Moretiwe & Ross, 2014:1668). According to the 2011 YRBSS Report, 37.9% females and 39.5% males had consumed alcohol at least one day during the 30 days preceding the survey (Brener *et al.*, 2013).

Hazardous and harmful alcohol use is associated with increased incidence of risky sexual risk behaviour and consequently an increased HIV risk in youth (Morojele, Nkosi, Kekwaletswe, Saban & Perry, 2013). The developmental phase of adolescence and, in many cases, the transition from childhood to adulthood tend to worsen problems such as regular intake of alcohol (Wagner, 2009). Windle and Zucker (2010) found religious involvement to be an area where individual choice and context combine to moderate alcohol use.

2.3 Recreational drugs

Substance abuse during adolescence can have long-term negative health consequences (Chilenski & Greenberg, 2009), apart from the more immediate negative consequences such as insomnia, depression and hallucinations that can have a negative effect on school performance, school attendance and risk behaviour. The use of drugs and alcohol also impairs decision-making abilities and reduces self-control, increasing the probability of making poor choices and the risk of injury and other risky forms of behaviour (March & Knol, 2010).

South African data, according to the FSANYRBS (Reddy, 2008:2), indicated that 18.6% of Western Cape learners have used marijuana, that is often the introductory drug that leads to abuse of other drugs. Data of the American 2011 YRBSS Report indicated that 20.1% females and 25.9% males had used marijuana at least once in the 30 days preceding the survey (Eaton *et al.*, 2012:20).

2.4 Exercise

Physical activity is an important contributory factor to energy expenditure in youth and leads to improved cardiovascular and metabolic fitness as well as enhanced bone health (Janssen & LeBlanc, 2010; Tremblay, Colley, Saunders, Healy & Owen, 2010). The level of physical activity tends to fall significantly from school to tertiary level and females tend to be less active than males (Smith & Faadiel Essop, 2009). A sedentary lifestyle is independently associated with obesity and metabolic risk (Tremblay *et al.*, 2010; Ekelund, Brage, Froberg, Harro, Anderssen, Sardinha, Riddoch & Andersen, 2006).

Results of a systematic review indicated that sedentary behaviours, as measured by total time of television viewing, were associated with lower fruit and vegetable intake and higher consumption of energy-dense snacks, drinks and fast foods (Pearson & Biddle, 2011). Recent information on the amount of hours that adolescents spend in front of the television in South Africa is not available. The 2011 American YRBSS Report indicated that 17.7% females and 10% males did not participate in physical activity during the seven days preceding the survey and that 31.6% of the females and 33.3% of the males watched television for three hours or more on a school day (Brener *et al.*, 2013).

2.5 Sexual behaviour

The prevalence of HIV and sexually transmitted diseases in South Africa remains among the highest in the world (Kaufman *et al.*, 2014). A cross-sectional study was conducted by Kaufman *et al.* (2014:1663) on 4 485 mainly black learners at 46 secondary schools in informal settlements in Cape Town and Port Elizabeth in 2012 to estimate the prevalence of sexual risk behaviour and hazardous alcohol use. Approximately double the number of males than females reported to have had sex and 730 males (39.9%) and 268 females (11.8%) reported having had two or more sexual partners in the last year.

South African data according to the FSANYRBS (Reddy, 2008:2) indicated that 41.1% of adolescents had sex and 16.4% either have been pregnant or made someone pregnant. Data of the American 2011 YRBSS indicated that 45.6% females and 49.2% males in the study had ever had sex (Eaton *et al.*, 2012; 24).

Schools can play a major role in changing individual values and group norms and reinforcing norms against unsafe sex (Best *et al.*, 2010).

2.6 Smoking

Porter, Johnson and Petrillo (2009) reported that more than 80% of students who smoked started smoking as adolescents, presenting adolescence as the ideal window for intervention to prevent later adverse health outcomes.

Results of the FSANYRBS (Reddy, 2008:2) indicated that 37.7% of learners in Western Cape schools were smokers (the national average is 21.1%). Males were found to smoke more than females and black learners were the least likely to be smokers.

American adolescents seem to smoke more; according to the 2011 YRBSS Report, with 42.9% of the females and 46.3% of the males in the study having at least tried to smoke before and 16.1% of the females and 19.9% of the males have smoked on at least one day of the 30 days before the research was done (Eaton *et al.*, 2012:13).

3. Methods

In this study, a cross-sectional descriptive study was conducted in 2013 at a secondary private Christian school in the Western Cape with the aim to establish the health risk behaviour of learners. Given the religious and disciplinarian character of the school, learners here receive more religious and ethical education than in public schools. This paper focuses on the results of a part of a questionnaire that was based on the YRBSS (Centre for Disease Control (CDC), 2013) that had been tested for reliability and validity in previous studies (Brener, Billy & Grady, 2013). The assumption that dietary concerns, alcohol and drug use, physical activity, sexual activity and smoking influence risk behaviour in adolescents, derive from the approach taken in these previous studies and upheld in the current study.

Adaptations to the closed question YRBSS questionnaire were made to allow for local languages and other changes (for example, including local products and customs), relevant to the South African context. The suitability of the changes to the questionnaire was tested in a pilot study in July 2013 on 18 Grade eleven learners of the school, *inter alia* also to determine the time needed to complete the questionnaire. Learner input on the suitability of the survey instrument was sought during the pilot study, which resulted in the inclusion of local habits and behaviours specific to the respondents' social and school environment. The questionnaire took 15 minutes to complete. The results of the pilot study were not included in the final study.

For the purpose of this study,

- *dietary intake* was described according to the frequency of eating dairy products, fruit, vegetables, breakfast, take-away foods, water, sodas and energy drinks,
- *alcohol consumption* was described according to the frequency of consumption, frequency of intoxication and people with whom alcohol was consumed,
- learners were asked whether they *used drugs* and if they did, in whose presence they used it,
- *exercise behaviour* was determined by asking learners about the frequency of and reasons for exercise,
- *sexual practices* were determined by asking learners whether they had had sex, used condoms and had been abused,
- learners were asked whether they *smoked* and in whose presence they smoked.

All learners who were present on one specific day were asked to complete the questionnaire at the same time during a register class, to ensure that they could not influence each other. Respondents were told that their participation was voluntary, and those who chose to participate were asked to sign a letter of consent and given the assurance that their responses were both anonymous and confidential. The researcher was not present in the register class to ensure that learners did not feel that they were under pressure to complete the questionnaire. Of the 164 learners present, 149 completed the questionnaire (91%), but only 117 (71%) questionnaires were included in the final study, as the balance of the questionnaires was unsatisfactory. To further assure the learners of confidentiality, anonymity and to encourage honesty and prevent embarrassment in answering, the questionnaire staff were asked not to assist or interfere with the learners while they completed the questionnaire

Two experienced capturers, who verified each other's work, captured the data which was then analysed with SPSS (version 21). Descriptive statistics (frequencies and percentages) were used and sub-group comparisons (such as gender and Grade comparisons) were made using cross tabulation. The Pearson chi-squared test was used to test for statistically significant ($p < 0.05$) relationships between categorical variables and Cramer's V to indicate the practical significance where a statistically significant relationship was found.

Approval for the research was obtained from the headmaster of the secondary school as well as the Research and Ethics Committee of The Private Hotel School (the institution where one of the researchers studied at the time).

4. Results

The demographic composition of the sample in terms of gender, race and Grade is presented in Table 1. The 117 learners who completed the questionnaire were spread among all Grades from Grades eight to twelve and were representative of the total number of learners in each Grade, except for the males in Grade Ten, who all preferred not to complete the questionnaire. Although there were approximately the same number of males and females in the school, the fact that the Grade Ten males chose not to complete the questionnaire, resulted in more females (56.4%) than males in the study sample. The Grade Ten males did not declare their reason for non-participation.

Table 1: Demographic data of learners at a private Christian school

Grade	Number of learners	% of learners
8	31	26.5
9	31	26.5
10	12	10.3
11	19	16.2
12	24	20.5
TOTAL	117	100
Gender	Number of learners	% of learners
Male	51	43.6
Female	66	56.4
TOTAL	117	100
Race	Number of learners	% of learners
White	79	67.5
Black	10	8.5
Coloured	21	17.9
Indian and Asian	7	0.9
TOTAL	117	100
Living arrangements	Number of learners	% of learners
Both parents	79	67.5
One of the parents	34	29.1
None of the parents	4	3.4
TOTAL	117	100

67.5% of respondents were white, which is reflective of the majority white student body at the school. Most learners (67.5%) indicated that they resided with both parents. The eating habits of the males and females are compared in Figure 1. The first three items on the x-axis of Figure 1 refer to the consumption of food groups that are indicative of a balanced food intake. Nearly all learners reported healthy eating habits, although fruit intake could improve. Dairy products (such as milk, yoghurt, maas and cheese) were regularly consumed by 92.3% of the learners, 64.1% consumed two or more fruits per day and 81.2% consumed more than two vegetables per day.

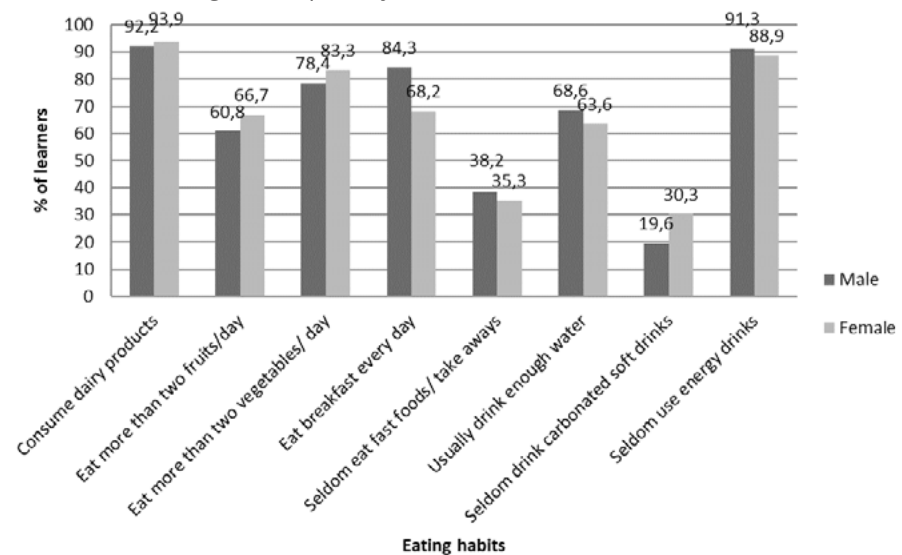


Figure 1: Eating habits of learners

Two test items concentrated on meal patterns, with 75.2% of the learners consuming breakfast every day, while 62.4% consumed take-away foods regularly or occasionally. Although breakfast consumption was high, females reported a significantly lower breakfast intake than males. The Pearson chi-squared test was used to test for statistically significant ($p < 0.05$) relationships between categorical variables and Cramer's V to indicate the practical significance where a statistically significant relationship was found.

The last three items in Figure 1 refer to the non-alcoholic liquid intake of the learners. Total liquid intake was good, but 34.2% of learners indicated that they seldom or never drank more than four glasses of water per day while 74.3% drank soda drinks (such as Coca Cola®, Fanta® or Sprite®). Only 10.3% consumed energy drinks (such as Red Bull®).

The consumption of sodas was higher in Grades Eight and Nine (87.1% and 83.9%, respectively) compared to the other Grades (with an average of 62.0 % of the learners in Grades Ten to Twelve). The Chi-square test indicated that these differences were statistically significant (Chi-square=9.93; $df=4$; $p=0.042$) and Cramer's V (0.29) indicated that this finding was of medium practical significance (since 0.29 is very close to 0.30). More males compared to females (80.4% and 69.7%, respectively) often consumed sodas, but this finding was not statistically significant (Chi-square=1.73; $df=1$; $p=0.189$) and of small practical significance (Cramer's V=0.12).

The alcohol consumption, drug use and smoking behaviour of the learners are given in Figure 2. Only a small number of learners reported alcohol consumption (10.2%), smoking (3.4%) and drug use (5.2%). There was no statistically significant difference between the alcohol consumption of males and females (Chi-square=0.02; $df=1$; $p=0.887$) and the practical significance was small (Cramer's V=0.01) and 93.2% of the learners reported that they had never experienced being drunk. There was no statistically significant difference between the habits of the learners in the various Grades (Chi-square=4.19; $df=4$; $p=0.381$) and Cramer's V (0.19) indicated a small practical significance. There was a significant negative relationship between the beliefs of the learners that their Christian values were relevant to their lifestyles and the consumption of alcohol (Chi-square=16.15; $df=4$; $p = 0.003$) and Cramer's V (0.26) indicated that this finding was of small practical significance.

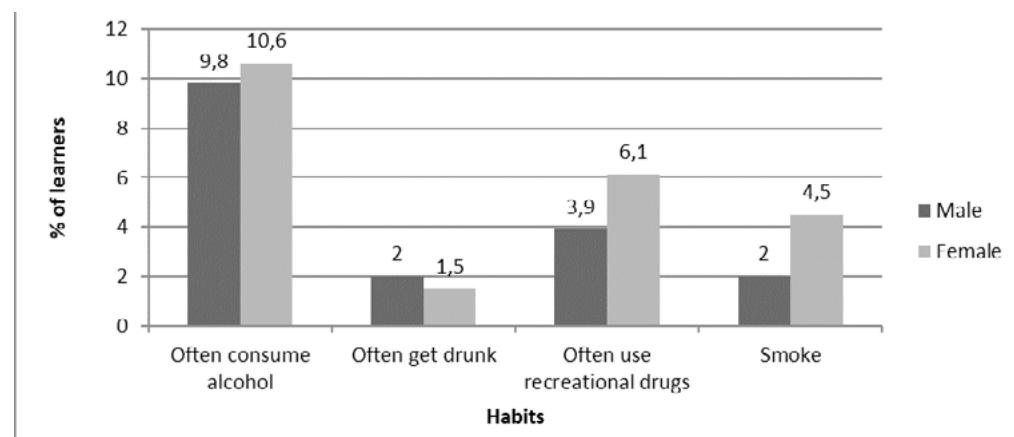


Figure 2: Alcohol and drug intake and smoking behaviour

Although more females reported the use of recreational drugs, there was no statistically significant difference between males and females (Chi-square=0.27; $df=1$; $p = 0.603$) with a Cramer's V of 0.05 indicating small practical significance.

All the learners (six) who reported drug use were in Grade Eleven. Only four learners indicated that they smoked. There was no statistically significant difference between the smoking habits of the males and females (Chi-square=0.58; $df=1$; $p = 0.446$) or between learners in different Grades (Chi-square=2.34; $df=4$; $p = 0.674$). Those who reported that they used recreational drugs did not smoke.

Approximately 79% of males and females reported that they exercised regularly (52.1%) or at least occasionally (26.5%). The main reason given for exercise was to keep fit (86.3%). There was no statistically significant difference between the males and females regarding regular exercise (Chi-square=0.002; df=1; $p = 0.963$) and between learners in the various Grades (Chi-square=3.78; df=4; $p = 0.436$). In order to determine a sedentary lifestyle, the frequency of watching television was used as an indicator, and 64.7 % of the males and 56.1% of the females indicated that they watched television on a daily basis. There was no statistically significant difference between males and females (Chi-square=0.90; df=1; $p = 0.344$) and between learners of different Grades (Chi-square=2.00; df=4; $p = 0.737$). The researchers did not enquire about the number of hours per day that learners watched television.

Only two females (Grade Eleven and Grade Twelve) indicated that they had had sex and none of them reported experiencing any sexual abuse or pregnancy. One of these learners lived with both parents and did not smoke, drink or take drugs, while the other learner lived with one parent only, consumed alcohol and took drugs. Given the small sample of two learners, no statistically credible conclusion could be reached on the behaviour of sexually active adolescents.

Learners were questioned on the strengths of their beliefs and to what extent the school's ethos affected their behaviour, to establish to what extent a Christian lifestyle would moderate risky health behaviour. The responses are given in Figure 3. The school's influence was reported as strong, as 48.7% of the learners indicated that the example of a Christian lifestyle as given by the school prevents them from making the wrong choices, while 36.8% indicated that it occasionally prevented them from making the wrong choices. There was no statistically significant difference between the answers of the learners in various Grades (Chi-square=5.41; df=8; $p = 0.713$). All the females and most of the males indicated that Christian values were relevant to their lifestyle. There was not a statistically significant difference (Chi-square=5.84; df=2; $p=0.054$) between the responses of the females and the males, but due to the Grade Ten males who did not complete the questionnaire, it is difficult to draw a conclusion in this regard. There was, however, no statistically significant difference between the perceptions of the learners in different Grades (Chi-square=7.73; df=8; $p = 0.461$). There is, therefore, an indication that Christian values have an influence on the lifestyles of the learners, as 93.2% of the learners answered that their Christian beliefs were strong enough to influence their decisions. All learners who felt that Christian values were relevant to their lifestyle also indicated that their Christian beliefs influenced their decisions.

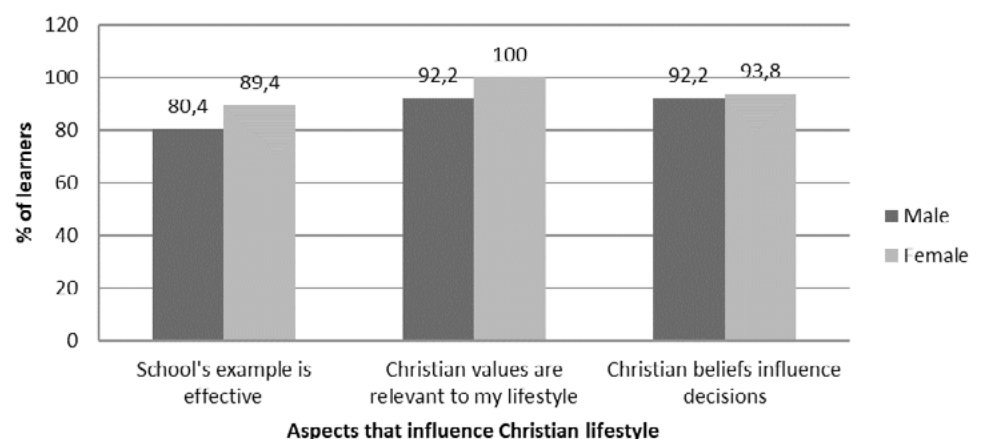


Figure 3: Influence of a Christian lifestyle

5. Discussion

As the learners were predominantly white, it limits the study's ability of any race comparisons. Similarly, the failure of the male respondents in Grade Ten to complete the questionnaire also skews the results. These learners were not asked to give a reason for their non-completion, and while inferences can be made, no specific conclusions can be reached at this stage. It is, however, likely that presented with the peer pressure that comes with an overwhelmingly Christian surrounding, they may have chosen not to report behaviour that conflicted with these norms.

Compared to the findings of other studies (both the FSANYRBS [Reddy, 2008] and the YRBSS [CDC, 2013]), the eating habits of these learners were more balanced in terms of food groups. The researchers did not determine weight or body mass index (BMI) and no data on the prevalence of obesity are presented; some food choices, such as the excessive consumption of soda, may well lead to weight gain and should be monitored. Learners' activity levels compared well with those reported in the YRBSS study (CDC, 2013). There is, however, a high percentage of learners that watch television on a daily basis and that may indicate that they are not active enough to use all the energy provided by their diet.

67.5% of learners lived at home with both their parents and this may contribute to their stable diets. Only 51.2% reported that their dietary choices were influenced by their peers, despite adolescence being associated with strong peer pressure, (Chilensky & Greenberg, 2009). The statistically significant difference between the number of females and males who consumed breakfast ($p = 0.045$) is consistent with the finding that young people tend to skip breakfast. The presented motivation for this tendency is that adolescent females, in particular, are more weight-conscious, as also indicated by their lower consumption rates of sugary sodas compared to the male respondents (Yahia *et al.*, 2008). Given the metabolic consequences of skipping breakfast and its long-term impact on weight gain, schools should consider including dietary advice in their life-orientation classes.

Compared to the incidence of alcohol intake in other studies, the consumption of alcohol is low in this study. Kaufman *et al.* (2014:1668) reported in a South African study that twice the number of males consumed alcohol regularly compared to females (23.5% vs 12.5%). The number of learners who occasionally or often consume alcohol in this study is also much lower than the figures reported in the American YRBSS report (39.5% for males and 37.9% for females) (CDC, 2013). Only one male and one female indicated that they often became intoxicated. There was a statistically significant difference ($p = 0.002$) between the learners in Grades Eleven and Twelve who reported that alcohol was usually available at the parties that they went to than younger learners. As the female who confessed becoming intoxicated was one of the two who reported having sex, it is advisable that an intervention should be considered given the increased propensity to engage in risky sexual behaviour when under the influence (Morojele *et al.* 2013).

As reported in the literature review, Windle and Zucker (2010) found religious adherence to be an area where individual choice and context combine to produce choices consistent with the prevailing set of norms; in this case Christianity. In this study, 93.2% of the learners indicated that their Christian beliefs were usually or occasionally strong enough to influence their decisions, which might explain the lower incidence of alcohol and drug use, smoking and sexual activity; as these behaviours are not generally deemed acceptable in a Christian context.

Drug use in particular produces adverse health outcomes (Chilensky & Greenberg, 2009; March & Knol, 2010). The low number of learners (5.1%) in this study who occasionally (1.7%) or often (3.4%) used drugs is encouraging in comparison to the 18.6% of learners using marijuana, as reported by the South African study of the Medical Research Council (2008) and the even higher percentage reported by the American YRBSS report (20.1%

for females and 25.9% for males) (CDC, 2013). Only 6.9% of the learners indicated that drugs were available at the parties they attended. This provides a further indication that the Christian values and beliefs positively influence the decision-making of the learners in this study.

It is generally accepted that smoking has many negative health and lifestyle effects and it is one of the top ten risk factors leading to disease and injury in developing nations (Hindin, 2003 in Steyl & Phillips, 2011) and increased the likelihood of drug use (Steyl & Phillips, 2011). The low number of learners in this study that smoked (3.4%) could therefore be regarded as positive. If compared to the results of the FSANYRBS (Reddy, 2008:2) of 37.7% of learners in Western Cape schools that were found to be smokers and the American data in the 2011 YRBSS report (CDC, 2013) that indicated that 16.1% females and 19.9% males have smoked, the results of this study are very encouraging. These results are an indication that a high percentage of learners (85.5%) who believed that Christian values were relevant to their lifestyles did practice these beliefs and their beliefs do influence their decisions.

The advantages of an active lifestyle and enough exercise are well documented, as briefly mentioned in the literature review (Janssen & LeBlanc, 2010; Tremblay *et al.*, 2010). The number of learners who reported to do regular exercise (78.6%) is similar in comparison with the 2011 American YRBSS report (17.7% females and 10% males did not participate in physical activity during the last seven days before the survey). No suitable South African data were found to compare the results of this study with. The learners did not report on the number of hours that they watched television per day, but 26.5% indicated that they usually watched television every day and 33.3% indicated that they occasionally watched television every day (e.g. during school holidays). In comparison, 31.6% of the females and 33.3% of the males watched television for three hours or more on a school day in the 2011 YRBSS study (CDC, 2013).

The high number of learner responses indicating the positive influence of the school on their Christian lifestyles, their perception that Christian values are relevant to their lifestyles, and that their Christian beliefs are strong enough to influence their decisions, indicates that the specific private school practices do in fact contribute to the prevention of risky health behaviour among learners. However, the strength of the parental influence must also be noted given that most of these learners also indicated that their parents' influence also impacted their lives and informed their choices.

6. Conclusions

The findings of this study indicate that strict discipline and a curriculum that accentuates Christian values and principles in a school that offers high quality education can contribute to the prevention of risky health behaviour among learners. It emphasizes the need for interventions in school-aged children and more high-quality research to assess the factors that can contribute to improving adolescent behaviour in schools.

Results of the study can be used to plan further research and expand the various educational strategies and methods that are used at this specific school to encourage Christian values and responsible behaviour in learners.

7. Limitations

As none of the Grade Ten males wanted to complete the questionnaire, it is an indication of the amount of peer pressure on the learners and may thus be an indication that they deviate from the normal practices of the other learners. This must therefore be taken into consideration in the interpretation of the results.

The learners of the specific private Christian school are predominantly white and from an urban and fairly affluent socio-economic background. Generalizations cannot be made to include other schools and races and results from studies done in rural areas and lower socio-economic areas cannot be extrapolated to this study.

Due to the strict discipline in the school and the relatively small number of learners, learners may have felt that they could not give honest answers to all questions. Even though the questionnaire was answered anonymously and measures were taken to put the learners at ease and keep the answers anonymous, the teachers know the learners well and learners may have felt that the teachers would have reacted negatively towards them if they gave answers that showed more risky behaviour.

8. References

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