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Leisure Boredom and Substance Use Among High School Students in South Africa

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The purpose of this study was to determine the extent of leisure boredom, and investigate the relationship between leisure boredom, substance use and demographic variables among high school students in Cape Town, South Africa. 621 students from 39 high schools selected through a multistage cluster sampling procedure completed a questionnaire which measured substance use and demographic information, and included the Leisure Boredom Scale (LBS). Using generalized estimating equation models, leisure boredom was modeled on the demographic variables, and substance use indicators on leisure boredom. Although no significant association between leisure boredom and substance use was found, girls reported significantly higher leisure boredom than did boys. Also, Black and Colored students reported significantly higher leisure boredom than White students. This finding may be partly attributed to socio-economic status, as race is still a strong indicator for socio-economic status in South Africa. The findings imply that there is a need for leisure education programs for adolescents which are developmentally and socio-culturally appropriate.

KEYWORDS: *Adolescence, age, gender, race, leisure boredom, Leisure Boredom Scale, South Africa, substance use.*

Introduction

There is a distinct paucity of leisure research in developing countries such as South Africa. Because of this country's unique historical, political and socio-cultural context, it is important that culturally relevant research be undertaken in order to establish knowledge that has implications for leisure policies and service provision. Furthermore, one cannot assume that

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research findings from studies carried out in developed countries can be generalized to people living within the context of a developing country, particularly South Africa with its history of apartheid.

Substance use among adolescents, who comprise 21% of the South African population (Dickson-Tetteh & Ladha, 2000), is an increasing problem in South Africa. A study of 2,930 school-going adolescents reported prevalence rates for previous month (or recent) substance use to be 31% for alcohol, 27% for tobacco, and 7% for cannabis (Flisher, Parry, Evans, Muller, & Lombard, 2003). The average age of people treated for cannabis abuse is 19-24 years, and the majority are male (Myers & Parry, 2003). A study of 7,340 high school students in Cape Town found evidence for a syndrome of adolescent risk behaviour which included alcohol and drug use, having experienced sexual intercourse, general deviance, suicidal behaviour and behaviour that exposed the adolescent to injury (Flisher, Ziervogel, Chalton, Leger, & Robertson, 1996). There is a need for further investigation into problems related to substance abuse among adolescents because of the threats to personal health and well being, as well as the demands placed on health, welfare and education systems that have implications for society and the economy in general.

Boredom has been found to be related to substance abuse (Iso-Ahola & Crowley, 1991; Ziervogel, Ahmed, Flisher, & Robertson, 1998); however, no previous research in South Africa has investigated the extent of leisure boredom among adolescents. Furthermore, the association between leisure boredom, demographic factors and substance use has not been determined. The purpose of this study was to examine the relationship between leisure boredom, cultural and demographic characteristics and substance use among high-school students. The study was conducted in Cape Town, one of South Africa's largest cities where people from a diverse range of ethnic, cultural and socio-economic groups reside. The following research questions were addressed. First, what is the extent of leisure boredom experienced by high school students? Second, is there an association between leisure boredom, gender, age and race? Third, is there an association between leisure boredom and substance use?

Literature Review

Leisure Boredom in Relation to Race, Gender, and Age

Social learning theory proposed that behavior is determined by an interaction between social and environmental influences, and cognitive mediators such as beliefs and self-efficacy (Bandura, 1986). It is therefore important to consider how factors such as race, gender and age influence leisure boredom. Philipp (1998) urged researchers investigating adolescent leisure not to ignore the influence of both gender and race, since these have been shown to impact young people's leisure preferences (Busser, Hyams, & Carruthers, 1996; Shinew, Floyd, & Parry, 2004). McMeeking and Purkayastha (1995) studied three groups of adolescents from urban (inner-city), subur-

ban and semi-rural settings and found a complex interplay between leisure constraints, race/ethnicity, socio-economic status, age and gender. These constraints could have resulted in less than optimal leisure experiences, and may have contributed to feelings of dissatisfaction and boredom. In South Africa, a legacy of apartheid and racial discrimination has meant that many adolescents presently living in impoverished social and environmental contexts are Black and Colored.[1] This implies that race continues to be a strong indicator for socio-economic status in South Africa.

Caldwell and Darling (1999) found that boredom was influenced by the reason that adolescents engaged in leisure activities being that they "want to", "have to", or "have nothing else to do" (p. 111). Similarly, previous studies have provided evidence of adolescents engaging in leisure activities because they feel they have to, or because there is nothing else to do (Møller, 1991; Wegner & Magner, 2002). A nationwide survey of the leisure prospects of 1,200 Black youth aged 16 to 24 years living in urban 'township' areas in South Africa was carried out in the late 1980's during the height of the apartheid era. Results indicated that as many as one-third of the youths in the survey reported feeling excessively bored. The greatest leisure constraint for these youths was "semi-leisure" activities, defined as ". . . time-off from work activities that is consumed by activities one feels obliged to do" (Møller, 1991, p. 9). In other words, youths engaged in semi-leisure activities such as education-related activities and youth groups because they felt they "had to," which may have contributed to their experience of boredom in leisure time.

In a recent study of the leisure experiences of Black and Colored adolescents living in a socially impoverished area of South Africa, Wegner and Magner (2002) found that opportunities to become involved in healthy leisure activities were restricted by the lack of leisure resources within the environment. Many of these young people spent their time sitting around in groups outside and on the streets (i.e. hanging out) because they had nothing else to do, thus contributing to the experience of leisure boredom and increasing the potential for risk behaviors such as substance use to occur. The results of a study of 3,052 South African adolescents indicated that Black and Indian boys spent more time hanging out (12% and 9% of daily time respectively) than White boys (5%) (Kaufman, Clark, Manzini, & May, 2002). The authors defined hanging out as "doing nothing, hanging out at the mall or street corner, or going to bars or parties" (Kaufman, et al., p. 14). Similarly, young women in rural Australia reported high levels of leisure boredom (Patterson, Pegg, & Dobson-Patterson, 2000), which supported the findings of Jones (1992) who concluded that few community recreation resources in rural Australia catered to young women's interests, and there was nothing for them to do.

[1]The Population Registration Act of 1950, which was repealed in 1991, divided the population of South Africa into Black (African), White, Indian, and Colored (derived from Asian, European, Khoisan, and African ancestry). The social effects of this act are still present and for this reason statistics in this paper are presented according to race where appropriate.

The influence of gender on leisure experiences, with particular focus on the constraints experienced by girls, has been highlighted in several studies. Culp (1998) found that gender stereotypes, peer relationships, self concept, opportunities, accessibility and safety issues imposed restrictions on adolescent girls' participation in outdoor recreation. Girls use a complex decision-making process to choose their recreational spaces based on situational body image (impact of a particular audience and situation on body image), as well as factors relating to physical context (such as security and safety) and control (such as access, time use, and personal space) (Kandy, 2000; Kandy, 2001). Raymore, Godbey, and Crawford (1994) examined the influence of self-esteem, gender and socio-economic status on perceptions of leisure constraints among 363 grade 12 students in Toronto, Canada. They found that girls had significantly lower self-esteem than boys, and reported higher levels of constraints. Furthermore, the results indicated that adolescents from lower socio-economic backgrounds perceived greater leisure constraints.

Because socialising is a favourite adolescent leisure activity worldwide (Barnard & Alers, 1996; Møller, 1991; Shaw, Caldwell, & Kleiber, 1996; Shaw, Kleiber, & Caldwell, 1995), activities that restrict opportunities to socialise may contribute to feelings of boredom. Time-use studies are useful to understand how young people use their time and provide evidence that social control mechanisms influence leisure boredom, particularly in the case of girls. Girls spent more of their free time engaged in domestic chores such as cooking and caring for younger children, and tended to have less time available for leisure activities than boys and fewer opportunities to socialise with friends (Møller, 1991; Shaw, et al., 1995). Kaufman, et al. (2002) found that Black and Indian girls spent about twice as much time as boys performing unpaid work. In a study of 73 grade 10 students in Canada, Shaw, et al. (1996) found that female students spent more time in obligatory activities than male students, including more time at school, doing home work, and chores. In addition, female students tended to experience more time stress than male students (in other words, girls felt they had too many things to do and not enough time to do them). Girls reported less choice in their discretionary activities and felt pressure from parents, friends and boyfriends to participate in certain activities.

Caldwell and Baldwin (2005) examined constraints to adolescent leisure from a developmental perspective. Based on an ecological model, they proposed that personal and environmental factors interact in a reciprocal fashion on the adolescent's selection of leisure activities, and perception and negotiation of leisure constraints. Therefore, factors such as age, developmental stage, motivation and context all play a role in the adolescent's leisure participation. Early adolescence is not only a time of intense physical changes, but also marks the beginning of high school which requires that adolescents deal with a multitude of new experiences and challenges. The Carnegie Council on Adolescent Development (1992) found that participation in structured activities such as after-school programs and sports tended

to drop at about the age of 13 years. Others have noted a general decrease in physical activity after 13 years of age, most notably among girls (Gordon-Larsen, McMurray, & Popkin, 1999). Because of their age, younger adolescents might be faced with leisure constraints such as restricted independence due to lack of available transportation (McMeeking & Purkayastha, 1995) and greater parental monitoring (Caldwell & Darling, 1999). Results of an Australian study that examined how leisure boredom differed among adolescents living in urban and rural areas indicated that in rural areas younger adolescents experienced greater leisure boredom than older adolescents (Gordon & Caltabiano, 1996). This was because the adolescents perceived that there was not enough to do.

Substance Use, Leisure and Boredom

It is globally acknowledged that adolescence is a time of high-risk for experimenting with health-compromising behaviors such as alcohol and drug use. Numerous factors can be associated with adolescent substance use. Gilvarry (2000) provided a detailed review of the contextual, social, family, genetic, peer and individual factors associated with increased risk of substance abuse in adolescents. Of specific interest to the present study is the association between substance use, leisure and boredom.

More often than not, substance use by adolescents is leisure related in that it is engaged in voluntarily for pleasure and occurs during free time in leisure-like settings. Parker, Aldridge, and Measham (1998) tracked 700 14-year-olds in Britain over a five-year period and found that alcohol was an established part of young people's leisure time. Most young people drank because it was pleasurable and formed part of celebrating with family and socialising with friends. The authors attributed the increase in recreational or party drugs such as ecstasy and amphetamines to the emergence of the 'rave' dance music scene during the 1990s. Alcohol and party drugs have become central components in youth party culture in both Europe and America (Schensul & Carafat, 2004). In situations such as parties or raves where adolescents perceived parental monitoring to be low or where adolescents spent time with peers who used substances, the risk of substance use was increased (Caldwell & Darling, 1999). Cato (1992) investigated motives for adolescents' use of drugs and their participation in leisure. Results showed no significant overall association between the pleasures sought in recreational pursuits and those found in drug usage. However, the prevalence of drug usage was lower than the national norm, and participants seemed to recognize the value of leisure. Based on social learning theory, Cato attributed this to the fact that many of the students' parents were university, college or school staff, and to the existence of a dominant system of norms which valued "achievement, pursuit of excellence, sports and recreation" (p. 300).

Boredom has been shown to play a role in adolescent substance use. Youth who felt bored and used leisure as a means of rejecting adult structure

were more likely to engage in undesirable health behaviors such as smoking cigarettes and abusing alcohol (Caldwell & Smith, 1995). Ziervogel, et al. (1998) used qualitative methods to identify and gain insight into the social context of alcohol misuse in South African adolescent male binge drinkers. One of the most significant motives for the boys' use of alcohol was that it alleviated boredom. Boredom arose ". . . primarily from a lack of participation in other activities and alcohol drinking was therefore perceived as an enjoyable, time-consuming activity to indulge in" (Ziervogel et al., 1998, p. 30). Iso-Ahola and Weissinger (1990) looked specifically at the experience of boredom during leisure, and defined leisure boredom as ". . . the subjective perception that available leisure experiences are not sufficient to instrumentally satisfy needs for optimal arousal" (p. 4). Adolescents diagnosed with substance abuse according to the criteria of the Diagnostic and Statistical Manual of Mental Disorders 4th Edition (American Psychiatric Association, 1994) were more likely to experience leisure boredom than non-substance abusers (Iso-Ahola & Crowley, 1991). This was despite the finding that substance abusers had a significantly higher total leisure participation score than non-substance abusers. The authors attributed this to the sensation-seeking personalities of substance abusers who satisfied their need for optimal arousal by pursuing leisure activities, but then became bored quickly due to their personality disposition. Significant two-way interaction effects between sensation-seeking, leisure boredom, and self-esteem were found for substance use (Gordon & Caltabiano, 1996). Among adolescents living in urban Australia, those who scored higher on both sensation seeking and leisure boredom engaged most heavily in substance use. However, among rural adolescents, the heaviest substance users had low self esteem and scored lower on leisure boredom.

In summary, evidence of an association between leisure boredom, gender, race, age, and substance use among adolescents has been reported in previous studies; however, no previous research has explored this phenomenon in the context of a developing country such as South Africa.

Method

Sample

The present study formed part of a larger study that determined the prevalence of substance use among a representative sample of high school students in Cape Town, South Africa (Flisher, et al., 2003). The study population was defined as all students in grades 8 and 11 attending public high schools in Cape Town. Schools were stratified according to postal (zip) code areas, and schools were selected such that the proportion of selected schools within a stratum was proportional to the total number of students in that stratum. Within each stratum, the probability of selection of a school was proportional to the number of students in the school. This strategy resulted in the selection of 39 urban schools which represented a range of socio-

economic (working, middle and upper class) and ethnic backgrounds. Forty students were randomly selected from two randomly selected classes from each participating grade. Additional five students were selected to replace absentees. This multistage sampling procedure produced a representative sample of 2,946 students for the larger study. From this sample, a sub-sample of 625 students was randomly selected who completed the Leisure Boredom Scale for the present study. The remaining students received other questionnaires not addressed in this paper.

Instruments

The instrument was a self-report questionnaire consisting of two parts. Part one contained items about demographic characteristics (grade, age, gender, race), as well as items about the use of various substances (e.g. tobacco, alcohol, cannabis, mandrax, ecstasy, crack). Only the first three substances were used as variables in the present study, as these substances are regarded as gateway drugs (Kandel, 2002) and form the initial part of a developmental sequence of substance use among Cape Town adolescents (Flisher, Parry, Muller, & Lombard, 2002). Students were asked whether they had ever used each of the substances, and if they had, whether they had done so in the previous year, and on how many days they had used the substance in the previous month. If a student had used a substance on one or more occasions in the previous month, the student was coded as having recently used the substance. Students were asked if they had used a fictitious drug called Derbisol. The five students who responded positively to this item were excluded from the study.

This questionnaire was used previously in a study of 7,340 high school students in Cape Town and subjected to extensive pilot studies in small groups and classrooms (Flisher, Ziervogel, Chalton, Leger & Robertson, 1993a). The test-retest reliability using Cohen's kappa was found to be 0.85 for cigarettes, 0.78 for alcohol and 0.80 for cannabis, while the observed agreement was 0.97 for mandrax, 0.97 for ecstasy and 0.98 for crack (Flisher et al., 2004).

Part two of the questionnaire was the Leisure Boredom Scale (LBS) (Iso-Ahola & Weissinger, 1990) which was used to measure ". . . individual differences in perceptions of boredom in leisure" (Iso-Ahola & Crowley, 1991, p. 264). The LBS consists of 16 items to which subjects responded on a 1-5 Likert scale (1 = strongly disagree to 5 = strongly agree). Total scores ranged from 16 (lowest boredom) to 80 (highest boredom) giving a range of 64 points. Reverse coding was used for seven of the items. Items asked about the quality of leisure experiences (e.g., "For me, leisure time just drags on and on", and "Leisure time is boring"), leisure activities (e.g., "I do not have many leisure activities available to me"), and skills (e.g., "In my leisure time, I usually don't like what I'm doing, but I don't know what else to do"). The LBS was adapted for the study by changing the wording in three items to

make it more understandable for South African adolescents. For example, the phrase ". . . *spinning my wheels* . . ." was changed to ". . . *bored and hanging around.*"

The reliability of the LBS was determined by considering test-retest reliability and internal consistency (Wegner, Flisher, Muller & Lombard, 2002). As part of a pilot study, the LBS was administered to the same learners on two occasions 10-14 days apart. Three measures of agreement were used to calculate test-retest reliability—Cohen's kappa (κ) (Fleiss, 1981), the observed agreement and the concordance correlation coefficient. Results showed that Cohen's Kappa fell into the moderate range for 7 items (range: 0.41 to 0.52) and the fair range for 2 items (range: 0.32 to 0.38). The observed agreement was preferred for 7 items (range: 38.8% to 66.6%). The concordance correlation on the LBS was 0.73 using a 95% confidence interval (0.64 to 0.82).

Internal consistency was calculated using Cronbach's alpha coefficient (α). Nunnally (1994) suggested that a reliability coefficient of 0.70 is acceptable. Cronbach's alpha coefficients for the LBS in the pilot study (test and re-test) were 0.76 and 0.87. For the main study, the questionnaire was translated into the other main languages spoken in Cape Town (Afrikaans and Xhosa) and then back-translated by other people who had these languages as their home language. Cronbach's alpha for the main study overall was 0.76; and for the translated questionnaires separately, Cronbach's alpha was 0.78 for the English version, 0.81 for the Afrikaans version, and 0.57 for the Xhosa version.

Procedure

The Research Ethics Committee at the Faculty of Health Sciences (University of Cape Town) approved the study. Permission for the study was obtained from the provincial Education Department and the principals of the selected schools. Although parental consent was not sought, the selected students gave their consent to participate. Students were informed that they had the right to decline to participate; however, there were no refusals. The questionnaires were administered during a normal school period, and took approximately 45 minutes to complete. Seating was arranged such that confidentiality was preserved. Students were not required to write their names or any other identification details on the questionnaires, thus remaining anonymous. Members of the research team administered the questionnaires with no school staff present.

Data Analysis

The analysis was done using Statistical Analysis Software (SAS Institute Inc., 1997). Descriptive data concerning the demographics of the sample, as well as prevalence rates for substance use were stratified according to gender, race and grade. Descriptive statistics for leisure boredom were classified by demographic variables (gender, grade and race) and substance use variables

(alcohol, tobacco and cannabis). Generalised estimation equations (GEE) were used to model the outcome on the predictors (Zeger & Liang, 1986). This linear regression model takes account of possible clustering due to students being sampled in schools. The leisure boredom outcome was modeled as a continuous outcome using the normal link function in GEE. Leisure boredom (the dependent variable) was modeled on gender, grade and race (the independent variables). Recent use (in the past month) of tobacco and alcohol, and lifetime use of cannabis were modeled on leisure boredom. The decision was made to use the variable "recent use" as there were no significant correlations between the number of days exposed to a substance in the past month and leisure boredom; therefore extending the model to take account of this would not make a difference. "Lifetime use" of cannabis was used because of the small number of users. The substance models were repeated, controlling for gender, grade, race and the interaction between gender and race. For the analysis, Leisure Boredom Scale scores were categorized from low boredom to high boredom with intervals in between (<=30, 31-40, 41-50, 51+).

Results

A total of 625 students completed questionnaires, including four Asian students. These four students were excluded as this subgroup was too small for meaningful analysis, and the analysis was confined to the remaining 621 students. Of these, 372 (59.9%) were female; 318 (51.2%) were in grade 11; 295 (47.4%) were Colored, 165 (26.6%) were Black and 150 (24.2%) were White. There were 22 missing responses for race and gender.

Prevalence rates for substance use in the previous month (recent use) were found to be higher among male students (31.8%, 33.2%, 8.1%) for alcohol, tobacco and cannabis respectively than female students (26.2%, 25.5%, 4.0%). Rates were higher among grade 11 students for the three substances (38.4%, 34.7%, 8.4%) respectively than grade 8 students (17.5%, 22.0%, 2.7%). Rates for all three substances were higher for White students (41.8%, 38.1%, 7.5%) than Colored students (28.9%, 33.9%, 6.6%) and lowest for Black students (14.5%, 9.8%, 2.1%). Alcohol was the most commonly used substance among Black and White students, while Colored students mainly used tobacco. Cannabis was the least used substance. These findings were consistent with similar South African studies (Flisher, Ziervogel, Chalton, Leger & Robertson, 1993b; Flisher et al., 2003; Madu & Matla, 2003).

The extent of leisure boredom among high school students is presented in Table 1 by means of LBS scores (mean, range and standard deviation) stratified by gender, grade and race. Using grade as a proxy for age, younger students (grade 8) on average scored higher on the LBS than older (grade 11) students, and females scored higher than males. Black students scored higher than Colored students, with White students scoring lowest.

Results of the GEE analysis for the association between leisure boredom and gender, grade and race are shown in Table 2. Leisure boredom (the dependent variable) was modeled on gender, grade and race and their in-

TABLE 1
Leisure Boredom Scale Scores, Stratified by Gender, Grade and Race (N = 621)

	Males				Females				Total			
	n (%)	Mean	Range	SD	n (%)	Mean	Range	SD	n (%)	Mean	Range	SD
Grade 8 (n = 303)												
Black	21 (28.0)	45.10	27-60	7.94	51 (68.0)	46.33	28-59	6.71	75 (96.0)*	46.25	27-60	6.83
Colored	58 (40.0)	43.50	19-58	8.53	85 (58.6)	45.15	27-59	6.72	145 (98.6)*	44.45	19-59	7.47
White	39 (52.0)	37.39	23-72	8.41	35 (46.6)	40.06	23-64	9.74	75 (98.6)*	38.83	23-72	9.39
Total	118 (40.0)				171 (58.0)				295 (98.0)*			
Grade 11 (n = 318)												
Black	29 (32.2)	41.14	25-59	8.84	60 (66.6)	44.55	24-60	6.93	90 (98.8)*	43.57	24-60	7.62
Colored	56 (37.3)	41.50	27-66	8.78	90 (60.0)	42.49	20-76	9.96	150 (97.3)*	42.28	20-76	9.68
White	33 (44.0)	36.61	16-62	10.88	42 (56.0)	39.57	19-58	9.24	75 (100.0)	38.08	16-62	9.92
Total	118 (37.5)				192 (60.9)				315 (98.4)*			

*<100% due to missing responses

TABLE 2
Results of GEE Analysis (with Normal Link) for the Association between Leisure Boredom and Demographic Variables (N = 621)

	Coeff.	Std. Error	p-value
Gender (n = 599*)			
Male	−2.01	0.67	.003
Grade (n = 599*)			
8	1.99	1.03	.055
Race (n = 599*)			
Colored	4.84	1.00	<.000
Black	6.13	1.17	<.000

*22 missing responses

teractions (the independent variables). Only the main effects model is reported since none of the interactions were significant. The LBS mean score was two points higher for female students compared to male students, which represents a 3.0% difference. This was statistically significant ($p = .003$). The mean score for grade 8 students was two points (3.0%) higher than for grade 11 students, which was marginally significant ($p = .055$). Compared to White students the leisure boredom mean score for Black students was six points higher (9.6%) and for Colored students the difference was five points (7.5%). The race effect was statistically significant ($p < .000$).

Associations between leisure boredom and substance use are reported in Table 3 as odds ratios, confidence intervals, p-values and the significance of leisure boredom as a factor in the model. Odds ratios (OR) were relative to students scoring 30 or less on the LBS, with an OR of 1 indicating no risk. Overall, results showed no significant association between leisure boredom and substance use. However it was interesting to note that for all three substances the students who scored in the 41-50 range of leisure boredom had the lowest OR. For recent alcohol use the reduction in risk was significant for this group relative to the students who scored below 30 ($p = .003$). The LBS seemed to indicate a non-linear aspect of risk for substance use.

Discussion

The Extent of Leisure Boredom and its Association with Race, Gender and Age

This study is the first to document the extent of leisure boredom, and its association with demographic factors and substance use among adolescents living in a developing country, in this case South Africa. However, the present study has certain limitations which need to be considered. First, the sample was limited to school-going adolescents living in an urban part of South Africa. Thus, we do not know the extent to which the results are generalizable to rural areas or to adolescents who have dropped out of

TABLE 3
Substance Use and Leisure Boredom (Adjusted for Gender, Grade, Race and the Interaction between Gender and Race) (N = 621)

Recent smoking (157 smokers in 550* students) †Leisure Boredom	n (%)	Odds Ratio	Lower Limit	Upper Limit	p-value
<=30	21 (13.4)	1.000	—	—	
31-40	52 (33.1)	0.728	0.368	1.442	.363
41-50	56 (35.7)	0.677	0.328	1.398	.292
51+	28 (17.8)	0.832	0.405	1.709	.616
Factor					.751
Recent alcohol (150 drinkers in 549* students) Leisure Boredom	n (%)	Odds Ratio	Lower Limit	Upper Limit	p-value
<=30	26 (17.3)	1.000	—	—	
31-40	56 (37.3)	0.571	0.279	1.168	.125
41-50	42 (28.0)	0.340	0.165	0.701	.003
51+	26 (17.3)	0.588	0.259	1.336	.205
Factor					.062
Cannabis life time use (65 users in 528*** students) Leisure Boredom	n (%)	Odds Ratio	Lower Limit	Upper Limit	p-value
<=30	9 (13.9)	1.000	—	—	
31-40	26 (40.0)	1.106	0.527	2.321	.790
41-50	20 (30.8)	0.852	0.415	1.746	.661
51+	10 (15.4)	1.070	0.525	2.182	.853
Factor					.881

*71 missing responses for tobacco use
**72 missing responses for alcohol use
***93 missing responses for cannabis use
†Leisure Boredom Scale scores categorized as <=30, 31-40, 41-50, 51+, with lower scores indicating lower leisure boredom

school. There may well be differences in the way that these young people experience their leisure time. Second, the cross-sectional nature of the study provided only a momentary view of leisure boredom, and did not allow for any comparison or follow-up over time.

Nevertheless, the study provides evidence that school-going adolescents in South Africa are experiencing leisure boredom; this is relatively higher in Black and Colored adolescents, in females, and in younger (grade 8 compared to grade 11) adolescents. As in studies done elsewhere in the world (Busser et al., 1996; Philipp, 1998; McMeeking & Purkayastha, 1995; Shinew et al., 2004), the present study clearly indicates that race, gender and age are associated with leisure boredom. The uniqueness of South Africa's history demands that these findings be understood by considering cultural and

socio-economic factors, as well as social control mechanisms which manifest in this particular context. Gilbert and Walker (2002) argued that the combination of high levels of inequality, low levels of social capital, and increased vulnerability (especially among females) contributed to the fast progression of HIV/AIDS in South Africa. It can be argued that these same factors most likely apply in the present study too.

Why are Black and Colored adolescents experiencing higher levels of leisure boredom than White adolescents? A residual affect of South Africa's apartheid system (pre-1994) and the racial discrimination and inequality that occurred, has left the vast majority of Black and Colored people still living in impoverished environments. While great efforts are being made to improve the living conditions of these individuals, many areas remain under-resourced and socially disadvantaged. Leisure and recreational facilities are often non-existent, non-functioning or unaffordable, and most schools are unable to offer after-school or extracurricular programs (Wegner & Magner, 2002). As a result of poverty and unemployment, families may not regard leisure as a priority and may be unable to provide for leisure-related expenses. Therefore, young people who live in these areas may lack opportunities to explore and become involved in productive, meaningful leisure activities. The fact that these adolescents spend much of their free time in the afternoons and over weekends "hanging around" (Kaufman, et al., 2002; Wegner & Magner, 2002) may be as a result of having nothing else to do, thus contributing to leisure boredom (Caldwell, Darling, Payne, & Dowdy, 1999). Also, as Møller (1991) suggested, it may be that Black and Colored adolescents engage in more "serious leisure" pursuits such as religious youth groups or spending time in the library in an effort to promote self-development, thus possibly contributing to feelings of boredom during leisure time. Because of the experience of leisure boredom and the lack of opportunities for leisure, these adolescents may be unwitting roleplayers within a vicious cycle whereby they are unaware of available and existing leisure resources (though admittedly insufficient), and/or lack the skills necessary to effectively utilize resources or create their own. However, very little is known about the type of leisure activities engaged in by adolescents living in impoverished areas, their perceptions of leisure constraints, and their perceived self-efficacy towards establishing their own leisure resources. Future research will need to address these topics.

The school of thought that proposes boredom as a social construction may further help explain the higher levels of leisure boredom among Black and Colored adolescents. This approach argues that boredom is an emotion that is not linked to a specific situation, but is rather seated within the social tensions of cultural settings (Larson & Richards, 1991). Larson and Richards (1991, p. 422) referred to this as a "resistance model" and argued that boredom can be linked to oppositionalism and anger. Based on the resistance model, the leisure boredom experienced by Black and Colored adolescents may be regarded as an expression of their anger and opposition towards the historical system of apartheid which might have left many of them feeling

disempowered and disadvantaged. This may be compounded by living in poor socio-economic conditions and having to deal with the many hardships brought about by poverty. The feeling of boredom may be pervasive, affecting all aspects of their lives and not just specifically related to leisure. However, these are assumptions and future research would need to investigate adolescents' (particularly those living in impoverished contexts) experiences of boredom both as a state related to particular activities, and as a trait related to individual dispositions.

The high levels of crime and violence that plague South Africa (Simpson, 1998) may result in increased parental monitoring and adolescents being restricted to their homes, especially in the case of girls and younger adolescents. Apart from the issue of parental concerns about their safety, girls may experience other leisure constraints due to having less time available for leisure activities than boys. Previous South African studies have shown that girls spend more of their free time engaged in domestic chores, such as cooking, and caring for younger children (Kaufman, et al., 2002; Møller, 1991). Where this is the case, girls may have less exposure to leisure opportunities than boys, and feel greater time stress, thus contributing to greater leisure boredom. Girls who lack self esteem may not have the confidence and the assertiveness to pursue their desired leisure activities.

Apart from the social and environmental factors that may influence younger adolescents' participation in leisure, the higher degree of leisure boredom could also be attributed to their stage of development. Younger adolescents may be restricted from engaging in leisure by factors such as parental control, unaffordable costs, transportation difficulties, being too young, and the influence of peers (Caldwell & Baldwin, 2005). Furthermore, younger adolescents may have more unstructured time available after school and on weekends than older adolescents who may have homework, extramural activities, and domestic chores which structure much of their free time. A large amount of unstructured free time could contribute to feelings of boredom especially if the adolescent does not have the skills and/or resources to use this time constructively.

Association between Leisure Boredom and Substance Use

There was no significant relationship between leisure boredom and substance use. However, it is interesting to note the inverse relationship between substance use and leisure boredom that emerged. White adolescents reported higher substance use but lower leisure boredom; conversely, Black adolescents reported lower substance use but higher leisure boredom, with Colored students falling in the middle for both substance use and leisure boredom. Roger's (1995) theory of diffusion of innovations proposed that diffusion is the process by which an innovation is communicated through certain channels over time among the members of a social system. Possibly having access to greater disposable income than their Black and Colored peers might help explain why White students are engaging more frequently

in the use and abuse of substances; however, the prevalence of substance use is expected to level out among all race groups over time due to the diffusion of innovations effect. In contrast to the majority of Black and Colored adolescents who may be experiencing greater levels of leisure boredom for the reasons given previously, many White adolescents live in better resourced areas and attend schools which offer structured after-school and a variety of extracurricular sports and leisure programs. They may be more able to explore, participate, and become skilled in a wider range of leisure pursuits, therefore experiencing leisure time as being less boring than Black and Colored students. So, whilst White adolescents are using more drugs, they are experiencing lower leisure boredom.

Implications for Future Research, Policies and Practice

The findings of this research have implications for researchers, policy makers and service providers. There is a need for further research into adolescent leisure in South African and other developing countries, with a particular focus on adolescents living in impoverished conditions. Because of the impact of contextual factors on adolescents' leisure experiences, it would be logical to adopt an ecological approach to future research. The present study has given rise to a number of research questions. First, what is the nature and scope of leisure activities engaged in by adolescents? Second, what are the constraints to adolescent engagement in leisure activities? Third, what perceptions do adolescents have regarding their self-efficacy towards establishing leisure resources? Fourth, what are adolescents' experiences of boredom as a state and/or a trait? Fifth, how does leisure boredom change over time as the adolescent develops? Finally, how is leisure boredom associated with school dropout?

A factor that has not been explored in the present study but is also very important is parental influences on adolescents' leisure participation. Parents are regarded as important role models for developing children's leisure pursuits (Hutchinson, Baldwin, & Caldwell, 2003; Robertson, 1999), and it is quite possible that in impoverished situations parents might not have the time, the financial resources and/or the skills to encourage their children's participation in leisure. Future research should investigate parental influences on adolescent leisure experiences by determining factors such as parental leisure participation, self determination, satisfaction, intrinsic motivation and boredom.

Clearly, this study indicates the need for leisure service providers in South Africa to focus their efforts on Black and Colored adolescents living in impoverished and under-resourced areas. In addition, attention should also be given to girls and younger adolescents in general. This is difficult to do without having supportive policies in place. The Departments of Education, Sport and Culture need to take cognizance of this research in order to raise awareness about the extent of leisure boredom among adolescents. This will help inform relevant policies that address the issue of leisure, sport and

recreation in schools and community settings. Strategies for developing leisure resources and leisure programs need to be devised. Leisure education programs should be developmentally and socio-culturally appropriate (World Leisure and Recreation Association, 2003). A good example of a school-based program is the TimeWise: Taking Charge of Free Time curriculum (Caldwell, 2004), which was found to be effective in increasing students' awareness and interest in leisure activities, as well as enabling students to select and participate in leisure activities despite constraints. There is scope for programs such as TimeWise to be adapted for use with adolescents living in South Africa and other developing countries (Caldwell. Smith, Wegner, Vergnani, Mpofu, Flisher, & Mathews 2004).

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