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Sports participation and drug use among young people in Mauritius

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ABSTRACT

The aim of this study was to investigate the relation between drug use and sports participation among young people (14–25 years old) living in Mauritius. Data were collected through a self-administered questionnaire from a stratified sample of young people residing in Mauritius. According to the results, the strongest predictor of reporting drug use was age, recording an odds ratio of 2.50 and showing a positive effect. Drug usage was a negative predictor, meaning that the more use of drug, the less sport activity. In addition, gender predicted the respondents' sports activity. This article concludes that sports can protect young people in Mauritius from getting into drug use, and policy-makers should focus more attention in tackling the gender disparities in sports participation.

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Adolescence; youth; drugs; sports; gender; Mauritius

Introduction

Mauritius is a small island state situated in the Indian Ocean, towards north-east of Madagascar. The island has a population of about 1.2 million, of which about 50% are females. The population of young people living in Mauritius could be estimated to be around 300,000 (about 50% females) representing approximately 25% of the total Mauritian population (Ministry of Youth & Sports-Mauritius, 2014). The country is often described as a multi-ethnic, multi-cultural and democratic state. The ethnic and religious compositions of Mauritius are reported as follows: Ethnicity: Indo-Mauritian 68%, Creole 27%, Sino-Mauritian 3%, Franco-Mauritian 2%; and Religion: Hindu 48.5%, Roman Catholic 26.3%, Muslim 17.3%, other Christian 6.4%, other .6%, none .7%, unspecified .1% (USAID, 2014).

Mauritius has evolved from being a mono-crop, sugarcane-based economy to a much-diversified one. While sugar production is declining in its relative importance, the economy of the country currently rests on tourism, textiles and financial services, and is expanding into other sectors such as fish processing and property development. Over the last decade, the country's economy has maintained an average GDP growth of about 4% owing to its good macroeconomic policies and strong institutions (Rambaree & Knez, 2016; Zafar, 2011). Side by side with its economic development, Mauritius has continuously tried to develop its welfare state, through universal welfare provisions such as free education, free health care and a gradual increase in the government expenditure on social protection schemes.

Over the last few decades, one of the major challenges of Mauritius has been about combating illicit drugs (thereafter referred to as drugs only) trafficking and usage in the country. As from 1982, the island is witnessing a rapid rise in the number of drug addicts. This rise is linked to an increase in drug

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trafficking from a sudden expansion of air and sea connections for industrial development (UNODC, 2010; Krug & Pollard, 2014). In the year 2010, the United Nations Office of Crime and Drugs had listed Mauritius fourth in the classification of opiate use per capita in the world – after Afghanistan, Iran and Costa Rica (UNODC, 2010). Currently, Mauritius is classified among those countries having the highest per capita rates of opiate use in the world (Krug & Pollard, 2014). It is estimated that between 17,000 and 18,000 people are injecting drug users in Mauritius (Johnston, Saumtally, Corceal, Mahadoo, & Oodally, 2011; Krug & Pollard, 2014; L'Express, 2017). According to a report from the Mauritius Police Force, in 2015, there were a total of 3468 drug offences, among which cannabis offences accounted for 66%, heroin offences for 22%, and New Psychoactive Substances (synthetic drugs) offences for 12% (as reported in Ministry of Health & Quality of Life – Mauritius, 2016, p. 11).

Drug use and drug trafficking in Mauritius have therefore become a major social problem and a hard nut to crack for the government and policy-makers (L'Express, 2017). In particular, the use of and harm caused by New Psychoactive Substances among young people have become a major concern in the country. In this connection, the National Drug Observatory Report (Ministry of Health & Quality of Life – Mauritius, 2016) reports:

Among 435 patients admitted for suspected New Psychoactive Substance use in public health institutions, in the first half of 2016, 2% were aged less than 15 years, 76% were aged 15–29 years and 22% were aged 40 years ... and over 8 secondary schools students were reported to have been involved in suspected drug use in schools. (pp. 14, 15)

Consequently, young people have become a main target for combating drug use in Mauritius. According to a report from the Ministry of Youth and Sports, the use of marijuana, heroin, psychotropic drugs and ecstasy has increased among young people in Mauritius (Ministry of Youth & Sports-Mauritius, 2014). A study undertaken in 2008 by the National AIDS Secretariat and Rogers Group, among a sample of 1000 Mauritian young people of 15–24 years old, reported that 20% of the sample declared taking 'soft drugs' (cannabis/marijuana/gandia/oral medication) while 4% admitted that they take 'hard drugs' (cocaine/ heroin/subutex/ecstasy) (WHO, 2013). Another study undertaken in 2011 reported that, 10.9% of people who injected drugs were under the age of 24, which represented an increase from the 2009 survey results of 6.7% (Krug & Pollard, 2014).

The Ministry of Youth and Sports with the support of various stakeholders such as parents and teachers is fully engaged in combating against drug which is becoming more complex with the emergence of New Psychoactive Drugs in Mauritius (Government of Mauritius, 2016). In almost all societies, the well-being of young people is promoted through health enhancing activities, such as sports and recreational activities. However, the strength of relationship between sports participation and drug usage varies both within and across different populations, as well as between different sociocultural contexts (Rambaree & Auchoybur, 2009).

Within this context, this study investigates the relation between sports participation and drug use among young people living in Mauritius. This article therefore answers the following specific research questions regarding young people in Mauritius: (a) what factors predict their drug use reporting; (b) what factors predict their sports activity; and, (c) what kind of relationship exist between their drug use reporting and sports participation.

Drugs and sports in society

Some social scientists consider drug usage – as well as participation in sports – as social phenomena related to a myriad of sociocultural factors. They identify sociocultural factors, such as gender, ethnicity, poverty, and marginalisation to explain drug usage and sports participation among different section of human population. In particular, they argue that sociocultural factors play an important role in the initiation and maintenance of drug use (Jiloha, 2009; Kwan, Bobko, Faulkner, Donnelly, & Cairney, 2014), as well as in sports participation (Wilson, 2002).

From this perspective, the 'Providing Alternatives' model, which comprises sports and artistic activities with the goal of promoting a healthy lifestyle to keep young people away from drugs is considered

as a promising preventative model in working with young people (Moreira, Vóvio, & De Micheli, 2015). For instance, Mellanby, Rees, and Tripp (2000) opine that programmes for young people using sports to promote drug prevention and community engagement can have important effects on the outcome. In a similar vein, Lisha, Crano, and Delucchi (2014), conclude that youth involved in sports are less likely to use marijuana over time. Moreover, Pate, Trost, Levin, and Dowda (2000) report that, youth who participate in organized sports at school or in their communities are less likely to engage in drug use than non-sports participants. In addition, the Canadian Centre on Substance Abuse (2014) report that sport participation, in general, is associated with an increased experience with alcohol use, while it appears to be protective against most drug use. From a systematic review of longitudinal studies, Kwan et al. (2014) find that sport participation is positively associated with decreased drug use (80%).

To maintain a positive correlation between drug abuse and sport activity is yet problematic; several factors influence this relationship. Studies from different sociocultural contexts report mixed relationship between sports participation and drug usage among young people (Rambaree & Auchoybur, 2009). Similarly, Clark, Camire, Wade, and Cairney (2015) posit that, '... when we look critically at the evidence linking sport to positive development, the results are often mixed' (p. 224). For instance, it is commonly known that some elite athletes use illicit drugs to enhance their performances (Creado & Reardon, 2016). In this sense, it is argued that sociocultural variables such as, gender, class and status, have profound effect on drug use among both sports participants and non-participants (McCrystal, Higgins, & Percy, 2007; Jiloha, 2009; Kloos, Weller, Chan, & Weller, 2009; Abdu-Raheem, 2013). Thus, in order to have a better understanding on sports participation and drug usage within a context, it becomes important to focus on the socio-economic and cultural factors prevailing within that particular context.

Method

Participants and procedure

This article is based on data from a youth survey that were completed in December 2015. Volunteers – working either as teachers in secondary schools or youth officers at the Ministry of Youth and Sports – collected data from both rural and urban parts of the island of Mauritius under the supervision of the first author. A stratified sample of young people living in Mauritius by sex and location (urban or rural) was designed. The research team carefully followed ethical considerations, such as informed voluntary participation, consents of all stakeholders and anonymous reporting. A pilot test with 20 questionnaires was undertaken with minor changes made in the final self-administered questionnaire.

Statistical treatment

For this study, linear and logistic regression analysis, as well as Multivariate Analysis of Variance (MANOVA) were carried out. Participants' use or non-use of drugs and participation in sports activities were the dependent variables, while gender, age, perceived health, ethnicity and attitudes towards drugs constituted the independent variables. In total, 454 questionnaires (x 39 questions) were analysed, which well exceeded the requirement of at least 15 individuals per predictor in regression analysis (Osborne, 2017).

Instruments

Participants' background: The background instrument comprised five items about socio-demographic data including the respondent's age, gender, marital status, ethnicity and educational level.

Perceived physical fitness was measured by using a single item – 'How would you rate your health?'. This was assessed on a four-point scale that ranges from 1 (*Not healthy at all*) to 4 (*Very healthy*). Several studies using large samples have demonstrated the ability of a single item subjective health rating to detect variance in perceived health status (Mossey & Shapiro, 1982; Ware, Davies-Avery, & Donald, 1978). After reviewing almost 40 studies of general health perceptions, Ware et al. (1978) concluded

that such ratings appeared to be both reliable and reproducible. For the purpose of the present study, the response options were collapsed into two categories – ‘Healthy’ and ‘Not Healthy’.

Measures of drug use: This part of the questionnaire contained one single item. Participants were asked to indicate if they have used drugs for non-medical reason, which was state as: ‘Please indicate whether you have used any drug other than those prescribed for medical reasons’. This item was answered by participants using a –point five-Likert scale; 1 = *Never*, 2 = *Once only*, 3 = *A few times*, 4 = *Regularly*, 5 = *Almost all the time*. For the purpose of the present study, the response options were collapsed into two categories – ‘Yes’ and ‘No’.

Measures of sport activity: The items used in this paper came from a WHO cross-national survey of Health Behaviour in School- children (Currie, 1998). Sports participation was measured by asking the subjects questions, for example if they ‘Participate in sports/exercise in a club /association’, ‘Participate in sports/exercise in a club/association’, ‘Participate in activities organized by the Ministry of Youth and Sports’. The items were answered by the participants using a –point 5-Likert scale; 1 = *Daily*, 2 = *Weekly*, 3 = *Monthly*, 4 = *Yearly*, 5 = *Never*. For the purpose of the present study, the response options were both collapsed into two categories – ‘Yes’ and ‘No’. After the draft survey was reduced, calculated the internal consistency of the final survey. In the current study, the Cronbach alpha coefficient was .75, indicating that the test items or survey are consistent and seem to measure the same hypothetical construction or latent variable.

Knowledge, Attitudes and Beliefs (KAB) were based on Bryan, Moran, Farrell, and O’Brien (2000). The draft survey was reduced to 20 KAB questions and participants were asked to answer the questions regarding their attitudes to drug use, such as; ‘Our society is too tolerant towards drug users’, ‘Occasional use of cannabis is not really dangerous’, ‘It is normal that young people will try drugs at least once’, ‘Reports about the extent of drug usage amongst young people are exaggerated by the media’. The items were answered using a seven-point Likert scale; 1 = *Disagree strongly*, 2 = *Don’t agree*, 3 = *Agree strongly*, 4 = *Agree moderately*, 5 = *Agree slightly*, 6 = *Don’t know*, and 7 = *I don’t care*. For the purpose of the present study, the response options were collapsed into two categories, ‘Agree’ and ‘Disagree’. In the current study, the Cronbach alpha coefficient was .81.

Results

Respondent characteristics performed by descriptive and frequencies analysis. The majority of the 454 study participants with 65.6% were female, male 31.9%, transgender 1.5 and .9% missing data, with 77.3% were from age range of 14–18 and 22.7% from the age range of 19–25. Accordingly, participants had an educational levels ranging from: Incomplete Primary Level (.04%), CPE (1.1%), Incomplete Secondary Level (9.7%), SC/Basic Secondary Level (45.6%) HSC/Advanced Secondary Level (38.3%), Tertiary Level (3.3%) and no answer was given for 1.5%. Participant’s marital status 95.8% were Single, 1.8% Married, 1.5% Cohabiting and .9% Missing data. The respondent came from different ethnicity, .09% Sino-Mauritian, 8.1% Creole, 1.5% Franco-Mauritian, 61.0% Hindu, Muslim 17.4, Mixed 5.1%, other 3.1% and 2.0% admitted they don’t know. Of them who reported that used drug were .00% chino-Mauritian, 2.4% Creole, 9.8% Franco-Mauritian, 48.8% Hindu, Muslim 17.1, Mixed 17.1%, other .00 and 4.9% who consider that they don’t know their ethnicity.

Respondents’ drugs usage

Direct logistic regression was performed to assess the impact of a number of factors on the likelihood that respondents would report that they used drugs. The model contained six independent variables (age, gender, ethnicity total sum of sport activity, total sum of attitudes towards drug and perceived health). The full model containing all predictors was statistically significant (χ^2 (6, $N = 429$) = 41, 9, $p < .0001$), indicating that the model was able to distinguish between respondents who reported and did not report using drugs for non-medical reasons. The model as a whole explained between 9.3% (Cox and Snell R^2) and 21% (Nagelkerke R^2) of the variance in drug usage, and correctly classified 92.3%

Table 1. Logistic regression analysis predicting respondents' drugs usage.

Variable	B	S.E.	Wald	df	Sig.	Exp(B)	95% C.I. for Exp(B)	
							Lower	Upper
PH	-.75	.38	3.95	1	.047	.47	.22	.99
SA	-.59	.24	6.39	1	.011	.55	.35	.88
ATD	-.98	.34	8.49	1	.004	.38	.20	.73
Gender	-.28	.37	.56	1	.456	.76	.36	1.57
Age	.92	.39	5.04	1	.025	2.50	1.12	5.58
Ethnicity	.22	.14	2.39	1	.12	1.24	.94	1.65
Constant	2.47	1.49	2.75	1	.09	11.79		

Note: PH (Perceived Health), SA (Sport activity), ATD (Attitude towards drugs).

Table 2. Linear regression analysis predicting respondents' Sport activity by five interpreters.

Model enter	R	R ²	Unstand Coeff		Stand Coeff	t	Sig.	Corr. Part	Collinearity Statistics	
			B	S.E.					Tolerance	VIF
(Constant)	.468	.219	2.78	.36	.02	7.71	.000			
PH			.02	.07	.02	.34	.734	.02	.96	1.04
Drug usage			-.51	.12	-.19	-4.32	.000	-.18	.89	1.11
ATD			.22	.07	.15	3.32	.001	.14	.92	1.09
Gender			.51	.07	.33	7.63	.000	.33	.95	1.05
Age			-.17	.08	-.09	-2.12	.034	-.09	.96	1.04
Ethnicity			.01	.03	.02	.49	.491	.02	.97	1.03

Note: PH (Perceived Health) and ATD (Attitude towards drugs).

of cases. As shown in Table 1, four of the independent variables made a unique statistically significant contribution to the model (age, total sum of sport activity, total sum of attitudes towards drug, and perceived health). The strongest predictor of reporting a using drug was age, recording an odds ratio of 2.50 and shows a positive effect. This indicated that older respondents have 2.50 higher risk to use drug than other respondent.

Respondents' sport activity

By linear regression analysis predicting respondents' sport activity six interpreters; use of drugs, gender, age, ethnicity, perceived health and total sum of attitude towards drugs, were used. Preliminary analyses were conducted to ensure no violation of the assumptions of normality, linearity, multi-collinearity and homoscedasticity. It was indicated that 21.9% of the variance was predicted by the significant model ($F [6,427] = 19.97, p = .000$) and four out of six predictors made a unique significant contribution: Gender, age, drug usage and attitude towards drugs predicted the respondents' sport activity. Drug usage was a negative predictor, in other words, the more use of drug, the less sport activity (Table 2).

Discussion

The strongest predictor of reporting drug use was age. Age was also an important factor in respondents' sports participation. Evidence from a systematic review shows that participation in sport peaks during early adolescence, around 11–13 years old, before declining through adolescence (Eime, Young, Harvey, Charity, & Payne, 2013). In addition, studies from Canada have shown that drug users are at their peak during this developmental period (Young et al., 2011; Clark et al., 2015). In the case of Mauritius, the Ministry of Youth and Sports (2014) reports that not only sports participation, but also drug usage, peaks among young people of age group between 16 and 17.

In particular, Arnett (1999) argues about three domains of conflicts related to the transitional period from childhood to adulthood among young people; conflict with parents, mood disruptions, and risk behaviour. In this sense, youth is viewed as a period during which young people struggle to establish

themselves as autonomous independent individuals. In addition, during the phase of adolescence, some young people challenge parental and societal values through more influential peer pressure and values. During their developmental period, some youth even try to break several societal boundaries, and sometimes act rebelliously against the societal and parents' norm and values.

Furthermore, adolescence is known as a crucial developmental period, with the confluence of biological, psychological and social changes that can predispose to the occurrence of mood disruptions among young people (Quello, Brady, & Sonne, 2005; Rocha, Zeni, Caetano, & Kieling, 2013). In this sense, young people are therefore often characterized as a period of both intra (bodily) and inter (societal) conflict. During the past decade, research results and clinical experience have converged in the recognition that unstable psychological conditions among young people commonly co-occur with substance use disorders (National Institute on Drug Abuse, 2003; Mohamad, Mohammad, Ali, & Awang, 2016).

The focus on young people as critical and vital periods emerged from a belief that young people require control from risk taking and cultivation through healthy behaviours and practices to grow safely into adulthood (Troen, 1985). Although the majority of young people can make informed decisions about themselves and their future, the critical age ranges defined as adolescence and youth have also been characterized as periods prone to influences in health risks from peers, media, cultural environment and so on (Rambaree, 2011). In a similar manner, Steinberg (2007) argues that thrill seeking, and the slow maturation of the cognitive-control system, which regulates these impulses, makes adolescence a time of heightened vulnerability for risky behaviours, such as substance abuse (cigarette, alcohol and drugs). The potential impact of specific risk and protective factors among young people changes with age in such a way that association with drug-abusing peers may be a more significant risk factor for an adolescent (Quello et al., 2005).

In this study, drug usage was a negative predictor, in other words, the more use of drug the less sport activity. This particular finding therefore corroborate with other studies where it has been found that young people who engage in the consumption of drugs, tend to participate less in organized sports at school or in their communities (Pate et al., 2000; Harcourt, Unglik, & Cook, 2012; Lisha et al., 2014). In particular, Pastor, Balaguer, Pons, and Garcia-Merita (2003) report that young people who participate more in sports have a positive effect on their mental wellbeing and therefore have better conditions to avoid getting into drug usage.

The government of Mauritius, through the Ministry of Youth and Sports, as well as the sports federations and various youth organisations put effort towards encouraging young people to practice sports as a means to adopt a drug-free lifestyle. Despite all the efforts, a study reports that, 59.4% of young people in Mauritius lacks exercise because of non-participation in sports and recreational activities (Ministry of Youth & Sports-Mauritius, 2014). Mauritius has a highly competitive education system, coexisting with relatively long after-school hours private tuitions (Ah-Teck & Starr, 2012). During their final years of secondary and tertiary levels examination years, many young people cannot afford to participate in sports activities mainly because of lack of time (Ministry of Youth & Sports-Mauritius, 2014). Perhaps, educational stress and lack of sports/recreational activities make young people in Mauritius more vulnerable to drug use.

Another main finding of this study is that, gender predicted the respondents' sport activity. Broadly, gender describes the socially constructed characteristics of women and men, in contrast to those that are biologically determined. Several studies from Mauritius have confirmed that females are still minority participants in sports, because of prevailing societal norms (Rambaree & Knez, 2016; Rambaree, Knez, & Auchoybur, 2012; Ramtohul, 2010; Rambaree & Auchoybur, 2009). In fact, the Mauritian National Action Plan on Physical Activity 2011–2014, reports that in 2009 the percentage of men and women practising sufficient leisure physical activity in Mauritius was 23.2% and 10.9%, respectively (Ministry of Health and Quality of Life – Mauritius, 2011). Rambaree and Auchoybur (2009) found that male students from University of Mauritius were four times more likely to participate in sport activities when compared to their female counterparts. Mauritius is a highly patriarchal society, where gender has significant effects on various aspects of young people's life, including sports participation.

In this study on Mauritian young people, sports participation predicted less drug usage and negative attitude towards drugs usage. Previous studies have reported that the development of positive attitudes towards drugs appears to be a combination of risk factors related to young people's social environment (Mousavi, Garcia, Jimmefors, Archer, & Ewalds-Kvist, 2014; Mohamad et al., 2016). Changes in young people's attitude towards drugs are therefore a vital attempt to balance their social environment (Helkama, Myllyniemi, & Liebkind, 2004). It is commonly known that every individual young person wants to conform to the group in order to avoid exclusion, express feelings and facilitate interactions in social situations (Aronson, Wilson, & Akert, 2005; Mohamad et al., 2016; Mousavi et al., 2014; Stattin & Kerr, 2000).

In this sense, sports clubs and associations for young people need to be a vital target in sensitisation campaigns against drug. However, further study needs to investigate similarities and differences in the associations between risk factors and positive attitudes towards drugs and drug use, and recognize any potential new group to prevent or alleviate the problem. Such studies may be of importance when it comes to assessing which individuals are at increased risk for developing drug abuse and which specific risk factors are related to these behaviours at different ages.

Limitations and strengths

Findings from the current study were based on cross-sectional data; and therefore no causal direction can be specified for questions such as whether lack of sport activity is the cause of drug use among the studied sample. Furthermore, self-assessments are subjective measures and can be affected by both personality traits and inability to respond honestly (Watson, Clark, & Tellegen, 1988). Although 39 questions were used in this study, the gathered data still cannot provide all needed information about substance use and associated problems experienced by young people in Mauritius. Nevertheless, well-validated and reliable instruments formed the basis of the results, which must have a positive effect on the reliability of the findings.

In addition, the questionnaires were in English, which means that all the allegations retained their original meaning. By choosing statistic method like multiple regression and logistic regression, which were ideal for the investigation of more complex real life, rather than laboratory-based, research questions, the methods allowed the study to have a control over multi-collinearity, singularity, outliers, normality, linearity, homoscedasticity and independence of residuals. Even internal consistency of all the items was measured by means of Cronbach's alpha in order to enhance the rigour in the analysis process.

For such a study area, it is important to have a broader and deeper understanding of young peoples' experiences of pro-drugs and their attitudes towards drug use, sport activity and their relation with drug use. Future research should therefore include the impact of a cross-cultural comparison of young people's drug use to reveal what comes by nature and what is cultural. Continued research in this area can provide societal actors with more accurate guidance on which aspects are most important, when it comes to preventing drug usage among young people.

Conclusion

This study concludes with three main findings that have major implications for the wellbeing of young people in Mauritius. Firstly, it shows that age is an important factor in drug usage among young people. Secondly, it finds that sports can help to prevent young people in getting into drug use. Finally, it reports that young females are less likely to participate in sports as compared to young males. Understanding the connections between sport participation and drug usage, using a sociocultural lens, could advance efforts towards the promotion of a healthy lifestyle among young people (Clark et al., 2015). Policy-makers, in Mauritius, therefore need to continue with their efforts towards widening the participation of young people in sport activities and campaigning against drug usage through youth associations and clubs. In addition, Mauritian policy makers need to have not only policy guidelines, but also clear and concrete actions for breaking the glass ceiling regarding women's participation, particularly in sports.

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Disclosure statement

No potential conflict of interest was reported by the authors.

Notes on contributors

Komalsingh Rambaree (PhD) is currently an associate professor of social work at the University of Gävle, Sweden. He has a PhD in social work and social policy from University of Manchester, UK. He is originally from Mauritius and he has worked there as youth officer in the Ministry of Youth and Sports and lecturer at the University of Mauritius. His research areas include eco-social work, youth, health, gender, ethnicity, internet, sexuality and qualitative data analysis.

Fariba Mousavi has a master degree in Psychology (Stockholm University), bachelor in biochemical science (Karolinska Institute), deputy operations manager at Individual and Family Attendo AB and researcher in psychology. Her main interests are health, coping, high school pupils' attitudes towards drugs, character in relation to IQ, academic achievement and well-being. She is currently conducting an international cross-cultural project in these fields in Sweden, Iran, Pakistan, and Mauritius. Moreover, she is part of an international project on the meaning coping strategies among people who have been affected by cancer in Iran.

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References

- Abdu-Raheem, B. O. (2013). Sociological factors to drug abuse and the effects on secondary school students' academic performance in Ekiti and Ondo States, Nigeria. *Contemporary Issues in Education Research*, 6, 233–240.
- Ah-Teck, J. C., & Starr, K. (2012). Striving for educational equity and 'world class quality' schools in Mauritius in global times. *The Global Studies Journal*, 5(1), 1–15.
- Arnett, J. J. (1999). Adolescent storm and stress reconsidered. *American Psychologist*, 54, 317–326. doi:10.1037/0003-066X.54.5.317
- Aronson, E., Wilson, T. D., & Akert, R. M. (2005). *Social psychology. Attitudes and attitude change: Influencing thoughts and feelings*. Upper Saddle River, NJ: Pearson Prentice Hall.
- Bryan, A., Moran, R., Farrell, E., & O'Brien, M. (2000). *Drug-related knowledge, attitudes and beliefs in Ireland. Report of a nation-wide survey*. Dublin: The Health Research Board.
- Canadian Centre on Substance Abuse. (2014). Substance use, sport and youth: Canadian surveys. Retrieved January 22, from <http://www.ccsa.ca/Resource%20Library/CCSA-Substance-Use-Sport-Youth-Surveys-Summary-2016-en.pdf>
- Clark, H., Camire, M., Wade, T. J., & Cairney, J. (2015). Sport participation and its association with social and psychological factors known to predict substance use and abuse among youth: A scoping review of the literature. *International Review of Sport and Exercise Psychology*, 8, 224–250. doi:10.1080/1750984X.2015.1068829
- Creado, S., & Reardon, C. (2016). The sports psychiatrist and performance-enhancing drugs. *International Review of Psychiatry*, 28, 564–571. doi:10.1080/09540261.2016.1190690
- Currie, C. (Ed.). (1998). *Health behaviour in school-aged children: A World Health Organization cross-national study, research protocol for the 1997–98 survey*. Edinburgh: Research Unit in Health and Behavioural Change, University of Edinburgh.
- Eime, R. M., Young, J. A., Harvey, J. T., Charity, M. J., & Payne, W. R. (2013). A systematic review of the psychological and social benefits of participation in sport for children and adolescents: Informing development of a conceptual model of health through sport. *International Journal of Behavioral Nutrition and Physical Activity*, 10, 2–14. doi:10.1186/1479-5868-10-135

- Government of Mauritius. (2016) Youth forum – Drug scourge is a national issue, says President Gurib-Fakim. Retrieved from <http://www.govmu.org/English/News/Pages/Youth-Forum-Drug-scourge-is-a-national-issue,-says-President-Gurib-Fakim.aspx>
- Harcourt, P. R., Unglik, H., & Cook, J. L. (2012). Strategy to reduce illicit drug use is effective in elite Australian football. *British Journal of Sports Medicine*, *46*, 943–945. doi:10.1136/bjsports-2012-091329
- Helkama, K., Myllyniemi, R., & Liebkind, K. (2004). *Social psychology: Introduction*. Malmö: Liber.
- Jiloha, R. C. (2009). Social and cultural aspects of drug abuse in adolescents. *Delhi Psychiatry Journal*, *12*, 167–175.
- Johnston, L., Saumtally, A., Corceal, S., Mahadoo, I., & Oodally, F. (2011). High HIV and hepatitis C prevalence amongst injecting drug users in Mauritius: Findings from a population size estimation and respondent driven sampling survey. *International Journal of Drug Policy*, *22*, 252–258. doi:10.1016/j.drugpo.2011.05.007
- Kloos, A., Weller, R., Chan, R., & Weller, E. (2009). Gender differences in adolescent substance abuse. *Current Psychiatry Reports*, *11*, 120–126. doi:10.1007/s11920-009-0019-8
- Krug, A., & Pollard, R. (2014). The impacts of drug policy on young people Mauritius. Retrieved on January 30, 2017, from http://youthrise.org/sites/default/files/resources/IDPC-Youth-RISE-drug-policy-case-study_Mauritius.pdf
- Kwan, M., Bobko, S., Faulkner, G., Donnelly, P., & Cairney, J. (2014). Sport participation and alcohol and illicit drug use in adolescents and young adults: A systematic review of longitudinal studies. *Addictive Behaviors*, *39*, 497–506. doi:10.1016/j.addbeh.2013.11.006
- L'Express. (2017). Enquête: Le trafic de drogues dures et ses ravages. Retrieved March 3, 2017, from <https://www.lexpress.mu/node/297716/enquete-traffic-drogues-dures-et-ravages>
- Lisha, N. E., Crano, W. D., & Delucchi, K. L. (2014). Participation in team sports and alcohol and marijuana use initiation trajectories. *Journal of Drug Issues*, *44*, 83–93. doi:10.1177/0022042613491107
- McCrystal, P., Higgins, K., & Percy, A. (2007). Exclusion and marginalization in adolescence: The experience of school exclusion on drug use and antisocial behavior. *Journal of Youth Studies*, *10*, 35–54. doi:10.1080/13676260701196103
- Mellanby, A., Rees, J., & Tripp, J. (2000). Peer-led and adult-led school health education: a critical review of available comparative research. *Health Education Research*, *15*, 533–545. doi:10.1093/her/15.5.533
- Ministry of Health, & Quality of Life – Mauritius. (2016). National drug observatory report 2016. Retrieved March 7, 2017, from <https://www.scribd.com/document/320650445/National-Drug-Observatory-Report#>
- Ministry of Health, & Quality of Life – Mauritius (2011). National action plan on physical activity 2011–2014. Retrieved December 18, 2016, from <http://health.govmu.org/English/Documents/actplan-pa.pdf>
- Ministry of Youth, & Sports-Mauritius. (2014). Determinants of youth behaviour in Mauritius. Retrieved June 10, 2016, from <http://mys.govmu.org/English/Pages/default.aspx>
- Mohamad, M., Mohammad, M., Ali, N. A. M., & Awang, Z. (2016). The impact of life satisfaction on substance abuse: Delinquency as a mediator. *International Journal of Adolescence and Youth*, 1–11. doi:10.1080/02673843.2016.1267021
- Moreira, A., Vóvio, C. L., & De Micheli, D. (2015). Drug abuse prevention in school: challenges and possibilities for the role of the educator. *Revista de Educação e Pesquisa*, *41*, 119–135. doi:10.1590/S1517-97022015011670
- Mossey, J. M., & Shapiro, E. (1982). Self-rated health: A predictor of mortality among the elderly. *American Journal of Public Health*, *72*, 800–808.
- Mousavi, F., Garcia, D., Jimmefors, A., Archer, T., & Ewalds-Kvist, B. (2014). Swedish high-school pupils' attitudes towards drugs in relation to drug usage, impulsiveness and other risk factors. *PeerJ*, *2*, e410. doi:10.7717/peerj.410
- National Institute on Drug Abuse. (2003). *Preventing drug use among children and adolescents: A research-based guide for parents, educators and community leaders* (2nd ed.). Washington, DC: National Institute on Drug Abuse, National Institutes of Health.
- Osborne, J. W. (2017). *Regression and linear modeling: Best practices and modern methods*. Thousand Oaks, CA: SAGE Publishing.
- Pastor, Y., Balaguer, I., Pons, D., & Garcia-Merita, M. (2003). Testing direct and indirect effects of sports participation on perceived health in Spanish adolescents between 15 and 18 years of age. *Journal of Adolescence*, *26*, 717–730. doi:10.1016/j.adolescence.2003.07.001
- Pate, R. R., Trost, S. G., Levin, S., & Dowda, M. (2000). Sports participation and health-related behaviors among US youth. *Archives of Pediatrics and Adolescent Medicine*, *154*, 904–911. doi:10.1001/archpedi.154.9.904
- Qello, S. B., Brady, K. T., & Sonne, S. C. (2005). Mood disorders and substance use disorder: A complex comorbidity. *Science & Practice Perspectives*, *3*, 13–21.
- Rambaree, K. (2011). Young people and cybersex in a sexually conservative society: A case study from Mauritius. In E. Dunkels, G.-M. Franberg, & C. Hallgren (Eds.), *Youth culture and net culture: Online social practices* (pp. 171–189). Hershey, PA: IGI Global Publishing.
- Rambaree, K., & Auchoybur, N. (2009). Sports participation and use of alcohol and cigarettes among the undergraduates from the University of Mauritius. *University of Mauritius Research Journal*, *15*(1), 1–16.
- Rambaree, K., & Knez, I. (2016). Effects of ethnicity and gender on youth health. *Cogent Social Sciences*, *2*(1), 1–15. doi:10.1080/23311886.2016.1186136
- Rambaree, K., Knez, I., & Auchoybur, N. (2012). Gender and health in higher education: A study of undergraduates from University of Mauritius. *Jenda: A Journal of Culture and African Women Studies*, *20*, 25–40.

- Ramtohol, R. (2010). The gendered dimension of competitive sports in a multicultural context: The Mauritian scenario. In J. Shehu (Ed.), *Gender, sport and development in Africa* (pp. 95–109). Senegal: Codesria.
- Rocha, T. B. M., Zeni, C. P., Caetano, S. C., & Kieling, C. (2013). Mood disorders in childhood and adolescence. *Revista Brasileira de Psiquiatria*, 35(suppl. 1), 92–100. doi:10.1590/1516-4446-2013-S106
- Stattin, H., & Kerr, M. (2000). Parental monitoring: A reinterpretation. *Child Development*, 71, 1072–1085. doi:10.1111/1467-8624.00210
- Steinberg, L. (2007). Risk-taking in adolescence: New perspectives from brain and behavioural science. *Current Directions in Psychological Science*, 16, 55–59.
- Troen, S. K. (1985). The technological development and adolescence: The early twentieth century'. *The Journal of Early Adolescence*, 5, 429–439. doi:10.1177/0272431685054003
- UNODC. (2010). World drug report 2010. Retrieved January 5, 2017, from http://www.unodc.org/documents/wdr/WDR_2010/World_Drug_Report_2010_
- USAID. (2014). *Mauritius*. Retrieved April 1, 2015, from https://eads.usaid.gov/esdb/analysis/fact_sheets/mauritius.pdf
- Ware, J. D., Davies-Avery, A., & Donald, C. A. (1978). *Conceptualization and measurement of health for adults in the health insurance study*. Santa Monica, CA: Rand.
- Watson, D., Clark, L. A., & Tellegen, A. (1988). Development and validation of brief of positive and negative affect: The PANAS scale. *Journal of Personality and Social Psychology*, 54, 1063–1070.
- WHO. (2013). Global school based student health survey 2011: Country report Republic of Mauritius. Retrieved February 23, 2017, from <http://www.who.int/chp/gshs/Mauritius-GSHS-Country-Report-2011.pdf>
- Wilson, T. (2002). The paradox of social class and sports involvement: The roles of cultural and economic capital. *International Review for the Sociology of Sport*, 37, 5–16. doi:10.1177/1012690202037001001
- Young, M. M., Saewyc, E., Boak, A., Jahrig, J., Anderson, B., Doiron-Brun, Y., Clark, H. (2011). *Cross Canada report on student alcohol and drug use: Report in short*. Ottawa: Canadian Centre on Substance Abuse.
- Zafar, A. (2011). Mauritius: An economic success story. In P. Chuhan-Pole, & M. Angwalo (Eds.), *Yes Africa can: Success stories from a dynamic continent* (pp. 91–105). Washington, DC: World Bank Group.