Youth Drug Use in Barbados and England: Correlates with Online Peer Influences

Abstract

This study examined the relationship between susceptibility to drug-related online peer influence on Facebook and offline alcohol, tobacco and marijuana use among emerging adults (18 and 24 years) enrolled at the university level in Barbados and England. A cross-national comparative, explanatory sequential mixed-methods design was employed with samples of students of African-Caribbean descent, and European descent, in Barbados and England respectively. Quantitative data was collected using surveys from 241 students in Barbados and 186 in England. Qualitative focus groups were conducted with 23 Barbadian students and 16 English students. Spearman rank order correlations were conducted to analyse quantitative data and a three-tiered categorization system was used to analyze the qualitative data. Significant positive relationships between students' SOPI and alcohol, tobacco and marijuana use were found. Six qualitative themes emerged representing cross-national similarities, while three themes emerged highlighting some differences between the two contexts. We propose that the relationship between SOPI and offline drug use may be mediated by the interrelated factors of emerging-adult developmental characteristics and the online and offline social environments. We represent these findings diagrammatically to convey that developmental and environmental factors together can provide a holistic understanding of the interplay between online interactions and offline risk behaviours.

Keywords: Facebook, Drug-use Media, Online, Peers, Influence, Emerging Adulthood

Peer influences are a strong predictor of drug use among youth (Bahr, Hoffmann, & Yang, 2005; Morera et al., 2015; Van Ryzin, Fosco, & Dishion, 2012). Hence, we argue that peer influence susceptibility plays a major role in the cause and maintenance of youth drug use. Findings from The World Health Organization (WHO) World Mental Health Surveys suggest that alcohol, tobacco and marijuana are frequently used drugs by youth across the Americas, Europe, Middle East, Africa and Asia (Degenhardt, et al., 2008). This is also the case in Barbados and England.

The major legal substance of choice among youth in Barbados is alcohol, while marijuana remains the most popular illegal drug (Yearwood, 2007). In an effort to curtail the trends in drug use and the subsequent effects, the Government of Barbados' expenditure for substance abuse services grew from $26,000 in 2002-2003 to $1.1 million in 2009-2010 (Bailey, 2010). By comparison in England, after alcohol and cigarettes, cannabis is the most commonly used substance by young people (Jones et al., 2011). In 2016, cannabis and alcohol were most cited as being the reason for which youth sought drug rehabilitation treatment and research has consistently shown that drug use is higher among British young people (16 – 24 years) than for the adult population as a whole (Broadfield, 2017; Mann, 2014; National Statistics, 2012).

Online Peer Influences and Youth Drug Use

Social networking sites (SNS) are an integral part of today's society and with the proliferation of social media, many health damaging behaviors can be demonstrated and encouraged by online peers. This is likely due to the fact that the peer group is a major agent of socialization that can encourage youth to engage in risky behavior such as drug use. Therefore, to understand the implications that interacting with others online can have on the offline behaviors of youth, researchers have investigated drug-related online social behaviours across a variety of SNS platforms.

Research internationally has found that SNS have been used by youth to promote drug use; more specifically, alcohol use on sites such as MySpace in the USA (Morgan, Snelson, & Ellison-Bowers, 2010) and Facebook (Egan & Moreno, 2011), in addition to other drugs such as tobacco on YouTube in New Zealand (Elkin, Thomson & Wilson, 2010) and marijuana on Twitter in the USA (Cavazos-Rehg, et al., 2015). However, much of the literature in this area has focused primarily on the frequency of messages conveying alcohol use on SNS (Lyons et al., 2014; Moreno, Christakis, Egan, Brockman & Becker, 2012; Niland, Lyons, Goodwin & Hutton, 2014; Ridout, Campbell & Ellis, 2012; Westgate, Neighbors, Heppner, Jahn & Lindgren, 2014). Fewer studies (conducted in the USA) have been geared towards investigating: (a) other types of drugs in addition to alcohol (Cook, Bauermeister, Gordon-Messer & Zimmerman, 2013; Stoddard, Bauermeister, Gordon-Messer, Johns & Zimmerman, 2012), and (b) the relationship between exposure to drug-related media from peers and offline drug use among youth (Huang et al., 2014).

Past studies have focused on one type of drug; were restricted to one jurisdiction; and were conducted in industrialized countries. In comparison to the aforementioned contexts, there is a paucity of research on the relationship between online peer influence and drug use among youth in Barbados and England. Such an investigation would yield comparative findings, and is important given the shared concerns that these two countries have about the effects of online technologies on the health-risk behaviors of youth.

Youth Drug Use and Online Influences in Barbados and England

There is concern about the effects of SNS on the development and behaviors of youth in Barbados (Farley, 2011) and England (Zonfrillo & Osterhoudt, 2014). Both countries have a similar framework which governs the legal classification of drugs based on the Westminster system of England, and both have signed onto international multilateral agreements governing the policing of drugs in their respective jurisdictions (e.g. UN, 1988).

In addition, given comparable societal values and norms, shared by both Barbados and England, the social and moral lens through which youth drug use is ultimately viewed is highly influenced by the Anglican Faith – the predominant religion of both countries. We therefore argue that the aforementioned similarities may contribute to a mutual concern about the impact of peers across SNS on youth drug use in these two contexts.

Peer group interactions are no longer restricted to offline environments thus making it possible to promote drug use content that can be created and shared online among youth (Moreno, Briner, Williams, Walker & Christakis, 2009). For example, both the Caribbean Community organization (CARICOM; of which Barbados is a member state) and The Pan American Health Organization (PAHO) have been charged with the responsibility of establishing greater social media presence to disseminate pro-wellness messages. These messages are geared towards the reduction of non-communicable diseases associated with the use of substances such as alcohol and tobacco (Samuels & Unwin, 2016). This is because youth in the Pan-American region are heavily exposed to pro-substance use marketing via social media. SNS are accessible from almost any smart device with Internet access (Dir, Cyders, & Coskunpinar, 2013). Hence, newer online social interactive media advertising campaigns have far outpaced both statutory regulation and self-regulation within the Caribbean region (PAHO, 2016).

Public health experts in the UK are calling for greater regulation of alcohol advertising in light of new research that claims the industry's marketing practices on social media can encourage young people to consume alcohol (Gayle, 2017). Moreover, dangerous drinking games on SNS have become commonplace among youth in this context. In 2014, there was an upsurge in the popularity of an online social media binge-drinking game – "neknomination" (Moss et al., 2015) that originated in Australia and became common among youth in the UK, US and Canada (Webb, 2015). This game was trending

on the SNS Facebook and involved young people recording, "videos of themselves while rapidly drinking excessive quantities of alcoholic drinks (necking) and then nominate friends to outdo them within 24 hours; the videos are then posted on social media…" (Barbieri, 2018, para.1). There were numerous media reports of youth in the UK succumbing to peer pressure to participate in the drinking game which, for some, resulted in death (Zonfrillo & Osterhoudt, 2014).

Comparing Youth Drug Use in Barbados and England: Some Cultural Considerations

Having established that there are a number of similarities between Barbados and England, we now turn to some inherent cultural differences as they pertain to drug use among youth in these two jurisdictions. Inevitably, offline contexts can influence what, how and why youth create and generate drug-related media content on SNS. Therefore, it is in this way that offline youth sub-culture plays an integral role in the use of SNS to promote drug use. It should be noted that there is a relative paucity of research about the culture of youth drug use in Barbados in comparison to England, as the focus of Caribbean drug research is on the prevalence of drug use and is often amalgamated with findings from Latin America. Despite the dearth of Barbados-based data, the sections to follow provide an overview of some of the cultural differences in the practices which may influence drug use among emerging adults in Barbados and England.

Alcohol Use among Youth in Barbados and England

It can be argued that in Barbados, alcohol use amongst youth tends to center around national holidays and festivals, as is the case for other English-speaking Caribbean nations (e.g., Reid, Malow & Rosenberg, 2012) rather than the alcohol itself, as is often the case in England. In Barbados, "Grand Kadooment" is the culminating day of the annual national festival known as "Crop Over;" a "celebration with drunken merry-making," and much reveling (Evans, 2016, p. 177) and is a time when social norms are relaxed. Barbados has a

very deep and close association with alcohol given its colonial history as a major producer of sugar and rum. The Crop Over Festival was born out of a bygone era when slaves celebrated the end of the sugar cane crop.

Though the historical meaning behind national celebrations is qualitatively different in England, the consumption of alcohol also serves a very important social function and is deeply rooted in British culture (Holmes et al., 2016). For example, some national festivals are centered on the alcohol itself (e.g., the Great British Beer Festival). Additionally, research has found that it is customary for English people to frequent public houses (aka. pubs; Egginton, Williams & Parker, 2002), have a "night out," (de Visser et al., 2013), and participate in "pub crawls" (Measham & Brain, 2005). Among British youth, according to Measham and Brain (2005), there is also "a 'new culture of intoxication', which is partly characterized by 'determined drunkenness' and the desire for 'controlled loss of control'..." (as cited in Holmes, Ally, Brennan, & Meier, 2016; p. 11).

Within the British context, it is important to highlight the role that the university environment plays in youth drinking culture. For students in England, excessive consumption of alcohol and binge drinking is commonplace (Davoren, Demant, Shiely & Perry, 2016). The role of alcohol in the development of social relationships with peers is evident across the many alcohol-related activities which form part of "Fresher's Week" (Coleman, 2012). Indeed, Davoren et al., (2016) have shown that drinking alcohol has become an important strategy through which university students in England make friends and gain peer acceptance.

In the Barbadian context however, the university with the largest undergraduate student enrolment has a campus-wide alcohol policy that prohibits the promotion of alcoholic beverages and restricts drinking by students under 21 years of age (UWI, Cave Hill Campus, 2018). Therefore, in Barbados, it can be inferred that activities involving

alcohol use are more likely to be discouraged at student-based social events and are not a common feature of socializing among students on campus in comparison to their English counterparts.

Tobacco Use among Youth in Barbados and England

Lwegaba, (2004) notes that there is a relatively low prevalence of tobacco use among the adult population of Barbados. This is to be expected, given that Barbados is protected by law from exposure to secondhand smoke in all indoor work environments and public places (PAHO, 2011). These policies are geared towards the reduction of tobacco among the population. In comparison to a younger demographic (13 - 15 years), findings of the WHO report on the global tobacco epidemic (2011) suggest that emerging adults in Barbados use tobacco to a much lesser extent. It has also been argued that attending university may act as a protective factor for Barbadian emerging adults to mitigate against the likelihood of tobacco use (Howitt, Hambleton, Rose, et. al., 2015).

However, in England, smoking tobacco is the single greatest cause of preventable illness and premature death (Cancer Research UK, 2014). It should also be noted that even though the smoking prevalence in England has fallen over the past five years (from 19.3% to 14.9%) smoking rates remain stubbornly high among some groups (Public Health England, 2017) such as the emerging adult demographic (18 - 24 years), which boasts one of the highest prevalence rates (Jarvis, 2003). This is understandable given that smoking is, "...acceptable, attractive and, above all, [a] normal part of English youth culture…" (Amos, et al., 2009, p. 8). Although, in more recent times, emerging adult rates have declined, tobacco use among young adults continues to be a concern as around 18% of young adults (18-24 year olds) in England smoke (Statistics on Smoking - England, 2018). Research suggests that there is a culture of tobacco use in England (Amos, et al., 2009; Brown et al,

2014; Goddard, 2008) which arguably continues "to reinforce the normalcy of the behavior to young people." (Hastings & Angus, 2008; p. 10).

Marijuana Use among Youth in Barbados and England

The use of marijuana (an illicit drug), is embedded in aspects of Caribbean culture (Jules & Maynard, 2016). For example, within the Caribbean Rastafarian community cannabis use for therapeutic and religious purposes is relatively common (Benard, 2007; Dreher, 2002). Furthermore, regardless of its legal status, research has found that Barbadian youth (12 - 25 years) perceived alcohol as being a bigger health problem in the community in comparison to marijuana (UNDCP, 2002). This suggests that some Caribbean youth hold relatively favorable attitudes towards the use of marijuana. Reports from the National Council on Substance Abuse (NCSA) in Barbados has indicated that, "... many people do not regard occasional or experimental marijuana use as being risky and there is a general perception that access to marijuana is relatively easy" (NCSA, 2006 as cited in Lashley & Yearwood, 2011; p. 66).

In England, marijuana use is much more common among young people aged 16-24, than in any other age group (Roe & Man, 2006). It has also been found to be the most frequently used illicit drug among college and university students (Bennett & Holloway, 2014; Larimer, Kilmer & Lee, 2005; Newbury-Birch, Lowry, & Kamali, 2002). Factors associated with the use of cannabis by this demographic included regular attendance at pubs and nightclubs (Bennett & Holloway, 2014); thereby highlighting the recreational use of cannabis when socializing with others.

Comparing Online Social Contexts

Social contagion (Galster, 2012) and peer socialization effects (Prinstein, Brechwald & Cohen, 2011) are likely to be the reason why conforming to peers' online actions would be related to offline behavior, regardless of the national context. This is because emerging

adults in Barbados and England would have access to the same features of an internationally established SNS platform, irrespective of geographic location. However, it should be noted that differences would be evident with regards to the media content that is posted, as such content would likely reflect country-specific youth drug use cultures. For example, the binge-drinking "neknomination" game became a fixture of youth drug culture in England. This is in contrast to the Barbadian context where such drinking games are not prevalent; but rather, the posting of videos and photographs on Facebook often coincide with Carnival or "Grand Kadooment" when drinking alcohol excessively is glamorized among youth.

It is therefore due to the aforementioned cultural realities that young people can be considered a high priority group for drug education and intervention. Given the potential negative effects that alcohol and other drugs can have on this demographic, governments in Barbados and England have a vested interest in reducing the prevalence and onset of drug use among youth (NCSA, 2015; Her Majesty's Government, 2017).

Defining Characteristics of Youth and Susceptibility to Peer Influence

Youth can be described as the stage during which an individual is transitioning from dependence (childhood) to independence (adulthood) (Cunningham & McGinnis, 2008) and it is accepted internationally that the age of 24 denotes the end of youth (Commission for Social Development Resolutions, 2007; Secretary-General's Report to the General Assembly, 1981, 1985; Ross, Dick & Ferguson, 2006; UN General Assembly Resolution, 1995, 2002, 2007). In the current research, respondents within the upper range of youth (18 – 24 years), a period known as emerging adulthood (Arnett, 2000), participated in the study. One of the factors that contributed to the development of emerging adulthood as a distinct developmental category was the gradual importance of attaining a post-secondary level education to service post-industrialized countries with information-based economies (Tanner & Arnett, 2009); an education which is often obtained within the university context.

Young people have been found to be particularly susceptible to the influence of their peers (Romer & Moreno, 2017) and, the presence of peers increases risk-taking among this demographic, in comparison to adults (Chein, Albert, O'Brien, Uckert & Steinberg, 2008; Gardner & Steinberg, 2005; Wood, Read, Palfai & Stevenson, 2001). This is especially true during the transition to university as drug use tends to escalate among youth; a phenomenon known as the "college effect" (Bachman et al., 1997). Furthermore, those students who used drugs at secondary school may demonstrate an increase in drug use upon reaching university (Jules, et al., 2015).

Students attend secondary school and matriculate to tertiary-level education around the age of 18 in Barbados and England. During this time, students often have reduced contact with parents and siblings, and as a result, peers become critical attachment figures (Doumen, et al., 2012). With the transition to university, distance is created between the parent and the emerging adult, hence there is greater freedom from parental control (Cohen, Kasen, Chen, Hartmark, & Gordon, 2003); a known protective factor for reducing drug use. As a result of peers being key agents of socialization at this time (Borsari & Carey, 2001) they have the potential to influence the attitudes and behaviors of university students as it relates to alcohol, tobacco and cannabis in both offline and online contexts.

Peers can act as role models and create the perception that certain behaviors increase social acceptance and status (Simons-Morton et al., 2001). Moreover, emerging adults lack a cohesive identity (Arnett, 2000) due to their need to explore many selves within their peer groups (Jules, Maynard & Coulson, 2017; Newman & Newman, 2017). Students within this demographic also have a need for intimacy and interconnectedness (Subrahmanyam & Smahel, 2010).

In addition to offline peer groups, the ubiquitous access of SNS provides yet another opportunity for emerging adults to interact with peers and potentially use alcohol and other

drugs socially. SNS are being comprehensively embraced and integrated into the daily lives

of youth (Tsitsika et al., 2014). SNS allow for the creation of virtual profiles and online

media content by users which can then be viewed and traversed based on the social

connections users make within the website environment (Ellison & boyd, 2013). It is in this

way that SNS have the capacity to function as an online "super-peer" (Strasburger &

Wilson, 2002), establish behavioral norms among users and increase youths' susceptibility

to peer influence. Therefore, we argue that the susceptibility of emerging adults to peers in

both offline and online environments is likely to increase given the developmental

characteristics of this group together with the online features of SNS platforms.

A Theoretical Framework on Youth Peer Influence and Deviant Behavior

For the purpose of this research, key principles of the social cognitive theory

(Bandura, 1986) and the social impact theory (Latané, 1996) will be used to explain how

peer socialization can take place on Facebook; thereby making an individual more

susceptible to their peers. For Bandura (1986), individuals learn by attending to models in

their social environment, known as observational learning. Models will be attended to if the

model is similar to the observer (i.e., same sex and age, [Eyal & Rubin, 2003]) and are seen

as having high status, power, and are thought of as attractive (Olson & Hergenhahn, 2009).

According to Bandura (1986), reinforcement provides observers with information that may

allow them to anticipate certain outcomes based on behaviors that are demonstrated by

others. Reinforcement increases the probability that behavior will reoccur and it should be

noted that a person can be reinforced directly or vicariously. For example, Facebook has a

"Like" function which can be used to directly show support for what is uploaded and

displayed online. There is also a section for writing comments which can be used to show

encouragement for displayed online behavior. It is in this way that peers can reinforce each

other by encouraging emerging adults to engage in behaviors in keeping with peer-sanctioned norms.

The key to understanding why emerging adults work on trying to be perceived as popular, may be due to the perceived advantages which are afforded those who have attained popularity status in their peer group on SNS. In 1980, Cialdini and Richardson coined the term "basking in reflected glory" to refer to the act of affiliating with high status popular peers and the potential rewards which may follow as a result of such associations. Hence, if individuals do not conform to the behaviors of the peer group, they could be ostracized. The threat of losing one's status and sense of belonging within an online social group can act as a catalyst to continue engaging in behaviors in keeping with the expectations of peers.

Potential sources of influence are more powerful when they are proximal rather than distal (Miller, 2013). This is supported by the social impact theory (Latané, 1996), more specifically, the principle of immediacy, which refers to the degree of closeness to the source(s) of influence (Latané, 1996). Facebook, by facilitating real time communication, increases the "proximity" between users. Hence, the use of Facebook may also increase the potential for individuals to be influenced by their peers. This is because peer interactions are no longer defined by physical or geographic location on this SNS, but rather by access to an Internet connection.

In addition, peer interactions can take place publicly on Facebook. That is, information shared on an individual's online profile can be viewed by many individuals who have been given access to do so. The greater the number of people on Facebook with which one affiliates, increases the potential for comments and other forms of feedback to be given about the information one uploads onto the site. According to the social impact theory the number of people increases the impact on the target individual's attitude and behavior (Latané, 1996), and research has found that an individual's adoption of a particular behavior

is much more likely when participants received social reinforcement from multiple

neighbors in a social network (Centola, 2010).

Therefore, susceptibility to peer influence can be, "conceived as the differential

tendency of individuals to be influenced by the attitudes, beliefs, and behaviors of their

peers" (Meldrum, Miller & Flexon, 2013; p.106) and can encompass, "the tendency to look

to standards from peers in developing their own motivations, attitudes, and behaviour"

(Laroche & Yang, 2011; p. 3). These definitions are in keeping with the socialization model

of peer influence whereby through social contagion the behaviors of one individual are

associated with the behaviors demonstrated by another (Heilbron & Prinstein, 2008). Hence,

susceptibility to drug-related online peer influence, in the current study was conceptualized

as the likelihood that an individual will yield to or acquire online behaviors and attitudes

which support the use of drugs due to the implied or direct encouragement received from

their peers across SNS (Jules, 2014). Using this lens, it can be argued that youth who are

susceptible to online peers are likely to share, endorse or create drug related media content

on SNS due to behaviours of their online social contacts.

This is in keeping with past research on peer group susceptibility in offline networks.

For example, young adults associating with peers who engaged in higher concentrations of

drug use offline were more likely to use drugs than those who interacted with peer group

networks that used drugs to a lesser extent (Harakeh & Vollebergh, 2012; Miller, Prinstein,

& Esposito-Smythers, 2014; Reifman & Watson, 2003; Valente, Gallaher & Mouttapa,

2004). More recently, with the advent of SNS, Huang et al., (2014) found that mere

exposure to friends' risky displays online was significantly associated with adolescent

smoking and drinking offline.

There is concern about the effects of online peer interactions on youth drug use, and

a paucity of cross-national comparative research on this topic. This research is part of a

larger study to investigate the susceptibility to online peer influence and offline health

behavior (Jules, 2014). The purpose of this cross-national comparative study was to:

statistically investigate and understand the relationship between susceptibility to drug-

related online peer influence on Facebook and offline alcohol, tobacco and marijuana use

among emerging adults enrolled at university in Barbados and in England. Furthermore, the

qualitative narratives of emerging adult samples from both cultural contexts were compared

to highlight similarities and differences in the factors associated with emerging adults'

susceptibility to online peer influence and drug use.

Method

Facebook (the world's most popular SNS; The Statistical Portal, 2017a) was the

context within which the online drug-related behaviors of the emerging adults and their

peers were investigated. At the time of data collection, this SNS was popular among those in

the 18 to 24 age group in both countries (Socialbakers, 2014a; 2014b); a trend in user

demographics which presently continues on a global scale (The Statistical Portal, 2017b).

Research Design

Research about alcohol, tobacco and marijuana use among youth in Barbados and

England has been disproportionately focused on prevalence studies and with little to no

research conducted about the impact of online peers on emerging adult drug use. This gap

in the literature underscores the importance of employing mixed methodology to

quantitatively explore and qualitatively explain the statistical findings. Hence, a cross-

national comparative, explanatory sequential mixed methods research design was employed.

This design allowed the researchers to first determine *what* is happening and then explain

how and *why* it is happening from the perspective of the youth themselves in both

jurisdictions. Study approval was obtained from the research ethics committees of the

participating universities. Public university students between the ages of 18 and 24 in

Barbados and England were then surveyed using a questionnaire to collect quantitative data. Subsequently, qualitative data were collected (via focus groups) and used to explain the quantitative findings.

Participants

Quantitative data were collected from 241 university students in Barbados and 186 in the UK who were conveniently sampled. As a result of the sampling procedure employed, the sample did not reflect equal ratio of male to female students. The Barbadian and English students were of African-Caribbean descent and European descent, respectively. The Barbadian sample, consisted of 179 females (74%) and 62 males (26%; $M = 21$ years), while the British sample comprised of 122 (66%) females and 64 (34%) males ($M = 20$ years). Eight focus groups were conducted during the qualitative research phase. The focus group participants were conveniently selected and each group contained a minimum of 4 and a maximum of 8 participants who would not have been part of the sample during quantitative data collection. With respect to the focus group participants, we were unaware of any prior relationships among them. To participate in the focus groups, students had to have a SNS account (i.e., Facebook) and be between the ages of 18 and 24. The sessions were approximately an hour in duration and were digitally recorded. A total of 39 students participated; that is, 23 students from Barbados (10 females, 13 males) and 16 students from England (14 females, 2 males).

Instruments

The susceptibility to online peer influence – drug-risk scale (SOPI-DRS; Jules, 2014) was used to measure the degree to which emerging adults were influenced by their Facebook peers to endorse and share drug related media online. The scale consisted of 11 items with internal reliabilities of 0.85 (Barbados) and 0.89 (England). Each scale item was scored along a 5-point Likert type scale where responses ranged from 1 (never) to 5 (always).

Higher scores indicated greater susceptibility to online peer influence. There were three direct questions inquiring about alcohol, tobacco and marijuana use over the past 12 months. Ranked data were collected as participants responded to the questions along the following Likert scale (0 - Never, 1 - Once or twice, 2 - Monthly, 3 - Weekly, 4 - Daily or Almost Daily). After analysis of the quantitative data, the qualitative phase occurred. Focus group respondents were asked a single question: "What could account for the relationship between students' susceptibility to online peers and drug use offline?"

Procedures

During both data-collection phases, demographic data were obtained from all respondents. In this explanatory mixed methods study, the results from the quantitative research strand led to the formulation of the qualitative interview schedule. Participants were solicited through the internal university student electronic mail systems of the two universities. For the quantitative phase, every undergraduate student was sent an email about potentially participating in the study using the university student portal in Barbados. However, in England only those university departments that were willing to contact students via their electronic mailing lists assisted with the student recruitment process. For the qualitative phase, a recruitment flier was circulated electronically to students' electronic mail inboxes via a university departmental mailing list in England. In Barbados the recruitment flier was printed and posted on campus notice boards. Hence, a convenience sampling technique was used to select participants for both phases of the study.

Students were required to give consent and complete the self-report questionnaire electronically by following a web link embedded in the emails circulated. Focus groups were used for the qualitative phase of the study and were led by one facilitator at a private location at each of the universities. Prior to participating, all students were required to provide written consent. Following the completion of the focus groups there was a seven-

day grace period during which participants were free to withdraw their responses.

Afterwards, the recordings were transcribed for later analysis.

Data Analysis

A series of spearman's rank order correlation coefficient analyses were conducted to analyse the quantitative data. Qualitative data analysis commenced during the review and transcription of the first focus group. Data analysis continued with each focus group until data saturation occurred (i.e., when there was repetition in emergent themes). A three-level categorization system was used for text analysis (Jules, Maynard & Coulson, 2017). Data analysis was informed by the work of Auerbach and Silverstein (2003) such that, low level text based categories were first identified, then middle level themes and finally theoretical constructs were derived. An example of this three-tiered organizational framework is depicted in Table 1 which provides examples of text used at the different stages of the qualitative data analysis. It was in this way that the researchers reduced the transcriptions to excerpts of relevant text (Auerbach & Silverstein, 2003).

At the first stage of analysis transcripts were read line by line in order to derive the underlying meaning or concepts behind the statements made (Strauss & Corbin, 1990). Similar words or phrases that depicted text expressing the same idea were extracted and labelled as repeating ideas. It was through this process that a consensus was reached among the researchers regarding what information should be used for further analysis. The next step involved organizing the repeating ideas into larger groups that expressed a common implicit topic (i.e. theme). When all of the repeating ideas were represented by themes, overarching theoretical constructs were determined under which the various themes could be subsumed. Theoretical constructs are more abstract ideas that arise from groups of themes and were selected based on the literature reviewed on the research topic. This process allowed the researchers to progress from a lower to a higher, more abstract level of understanding,

thereby providing an abstract bridge between concerns of the participants and the research objectives.

Results

Non-zero correlations (in the same direction) were found in the sample data for both Barbados and England. In accordance with the guidelines of Pallant, (2011), significant weak to strong positive correlations were found between SOPI-DRS and drug use in the emerging adult samples from Barbados and England (see Table 2). The level of significance, strength and the direction of the relationships found in the sample data were relatively similar in both contexts. Such that, higher levels of online peer susceptibility were associated with greater alcohol, tobacco and marijuana use over a 12-month period and the probability of observing such a value by chance was less than 0.01.

In an effort to understand why the aforementioned relationships occurred, a number of themes emanated from the narratives of the emerging adults who participated in the focus groups. Six qualitative themes found to be similar across both contexts, were: the need for popularity, the need to belong, online peer approval, multiple source feedback, socializing at parties where drugs are available and the university environment. However, three themes emerged which highlighted cross-national differences; they included: varied access to alcohol on university campuses, variations in the social context of drug use and differences in smoking preferences. Given the cross-cultural nature of the study, the participants' quotes were presented verbatim, which in some cases, depict the local dialect and cultural variations in the use of words.

Results of Thematic Analysis

The need for popularity. In an effort to attain popularity and increase their status within the peer group, students affiliated with peers who use drugs and post their

behavioural practices online. For example, one student said, "Young people want to be

popular…" (Female Student, Barbados, Mixed FGD1, May 30, 2014). Another student said

> To be popular you have to put up a post that will generate interest that a lot of people
> are going to like it or share it or what not. So, for you to put up a status about
> drinking you'll have to want to start drinking too… And sometimes… you haven't
> even taken a sip. Then you put it [the photo] up and then you get the interest [from
> the Facebook community] and then eventually overtime you can start drinking too
> (Male Student, England, Mixed FGD1, March 30, 2014).

The use of Facebook "Likes" indicates one's enjoyment, appreciation or fondness of

what has been shared, a high number of "Likes" are associated with the degree to which one

is viewed as popular online. As a result of this, some students post media content with the

sole purpose of obtaining Facebook "Likes" so as to increase their social status online. One

student said, "people put up things so that they can just get a reaction... so that you know

they get all these Likes and all these different comments and you say wow" (Male Student,

Barbados, Mixed FGD3, May 30, 2014).

The point was also made that Facebook is used to compete among users in order to attain the

highest level of popularity within a social group. One student said,

> I think it is a popularity contest…Because you would be thinking about what I can
> do next to make people Like all of my photos…So the idea that by putting it online
> you get more views than what you would see in your normal little group (Female
> Student, Barbados, Mixed FGD3, May 30, 2014).

> By observing the posts that generate the most Facebook "Likes" other Facebook

users become motivated to engage in similar behaviours. This is done in order to obtain

online feedback from more popular peers. Another student said,

> ...like if I go on Facebook … I laugh because they are funny and I see things I would
> do the same thing because I want to make other people laugh because I want more
> Likes or more comments so I would go and do the same thing (Male Student,
> Barbados, Mixed FGD1, May 30, 2014).

> *The need to belong.* Students have a need to be involved with and accepted by their

peers. The idea of not belonging to a group can be anxiety provoking as described by two

students: "before I came to university I was seeing all these things on Facebook and I was so

nervous because I thought oh I'm gonna be left out because I was never wild like that" (Female Student, England, Female-only FGD2, March 30, 2014). "No one likes to feel left out" (Male Student, Barbados, Mixed FGD1, May 30, 2014). To be part of a group students are willing to adopt the health damaging behaviours that they are exposed to on Facebook. As stated by one student, "well the main thing is that people like to be in the do (Female Student, Barbados, Mixed FGD2, May 30, 2014).

Online peer approval. Feedback, when given in the form of Facebook comments, can convey approval for certain behaviours and images posted online. This feedback may encourage risky behaviours online. As one student expressed, "if your friends say Yow! Dat one dere cool or whatever then you would be more inclined to actually do it." (Male Student, Barbados, Mixed FGD2, May 30, 2014). For example, a student was of the view that, "if you get approval from someone else then you feel less conscious that it is morally wrong…" (Female Student, Barbados, Mixed FGD3, May 30, 2014). Whereas another student said, "Yeah, I guess it is because you feel more comfortable knowing that someone else is doing it" (Female Student, England, Female-only FGD2, March 30, 2014).

Multiple source feedback. Students explained that many different people on Facebook can write on the same profile of an individual. Multiple messages from many sources can increase the degree to which someone is influenced online. One student said, "it [Facebook] is quite public … but you can post something and someone else can chip in there and post their comments. So, you can have like a group commenting on one post though" (Male Student, Barbados, Mixed FGD2, May 30, 2014). Another student said, "I think it depends on what topic it is…people write comments on a person's profile who is [nek]nominated to try to convince them to do it" (Female Student, England, Female-only FGD3, March 30, 2014).

Socializing at parties where drugs are available. Closely associated with an emerging adult's need to be popular is the act of attending parties where alcohol and other drugs may be present. Being a part of these social environments can then contribute to personal drug use. One student said,

> … by being with people who stay out late, party, drink, smoke and they get more recognition socially so people will strive to be in those kinds of situations and I guess get into using drugs too (Female Student, Barbados, Mixed FGD1, May 30, 2014).

> Attendance at offline parties is likely to intersect with the online environment. For

example, students reported that creating photos and videos of personal drug use, requires an individual to engage in these behaviors offline. Once recorded these activities are then uploaded onto Facebook. One student said, "I look at my Facebook and all well all of my pictures drinking were at clubs" (Female Student, England, Female-only FGD2, March 30, 2014). Another stated that,

> … and these things are posted on Facebook… when you go to a party you want people to know that you went to the party, you want people to know who you went out with and what you did, so you put it on Facebook (Female Student, Barbados, Mixed FGD2, May 30, 2014).

The virtual uploading and offline actions demonstrate the interrelationship between the online and offline world. In addition, attending to the risky behaviour of peers (via Facebook) can normalize this behavior. For example, a student said,

> Yeah well when I go on Facebook I see so many pictures of people hanging out and stuff … I don't feel as bad because other people do it as well. So, then you think that it is not such a big deal (Female Student, England, Female-only FGD1, March 30, 2014).

> Whereas, another said,

> One of my friends, they were under a car … they took pictures and when he eventually got up to go partying again… he threw up and they took pictures again … they take pictures to have as a memory to show oh... you did that… (Female Student, Barbados, Mixed FGD4, May 30, 2014).

Drug use was generally viewed as a group activity so that students can socialize with each other. One student said,

> Like socially [drug use] is a group thing, you don't smoke by yourself … People don't usually smoke by themselves … only people who are really desperate and they have no one to talk to (laughter from all) but when people see you smoking they want to link up … like I don't know they might hot box …smoke up in the car, they might go to somebody's house … and all smoke up and have a good time… (Male Student, Barbados, Mixed FGD3, May 30, 2014).

Another student said,

> It's for chilling with your friends and smoking [marijuana] is adding to the enjoyment (Male Student, Barbados, Mixed FGD4, May 30, 2014).

The university environment. Campus life, for students, can contribute to risk-taking behaviors. For example, one student said, "Yeah … Like with this neknomination… I mean people on campus are doing it and like people have died… I mean it is just crazy...people mix all sorts of stuff with alcohol and put it on Facebook…" (Female Student, England, Mixed FGD1, March 30, 2014).

It was also found that many of the perceptions held about campus life are a misrepresentation of what happens in reality on a day to day basis. According to students, the photos uploaded onto Facebook are used to highlight or glorify risky behavior and contribute to the perception that irresponsible behavior on campus is quite common. One student said,

> The photos [posted on Facebook] influence people's thinking that that's their life, that's how they live...so I wanna live like that… that's why I'll kind of replicate that and do what they are doing and hopefully I can live like that (Female Student, Barbados, Mixed FGD4, May 30, 2014).

Moreover, university is considered a place where the responsibilities of adulthood are suspended. Three students said, "I mean you are in the university environment and you don't change until you leave …until you finish your first degree... hopefully you would change afterwards" (Female Student, England, Female-only FGD4, March 30, 2014). "I think it is the lifestyle really, you don't grow up really, you stay the same until you leave university" (Male Student, England, Mixed FGD1, March 30, 2014). "Yeah cause you are just putting off the real world" (Female Student, England, Female-only FGD4, March 30,

2014). Another student said, "... people think that going off to university is the chance for you to do stupid stuff and it seems to work on most people" (Female Student, Barbados, Mixed FGD1, May 30, 2014).

Varied Access to Alcohol on University Campuses. At the participating university in Barbados use of alcohol was allowed on campus for a number of years. However, at the time of the study, the use of alcohol on campus had been restricted in keeping with new campus-wide policy. As one freshman queried, "what about these beer limes I was hearing about on campus?" (Male Barbadian Student, personal communication, May 30, 2014).

In England however, one student said, "I think drinking is so common at university, that it is even more common than online… you know it is just so easy to get a drink" (Male Student, England, Mixed FGD1, March 30, 2014). Furthermore, as a result of the prevalence of alcohol use at university within this context, on-campus drinking games are quite common. As one student noted, "there is this thing, neknominate that started …" (Female Student, England, Female-only FGD3, March 30, 2014). Neknomination at the time of the study was a popular online drinking game in England.

Variations in the Social Context of Drug Use

Qualitative differences were found with respect to the nature of the off-campus social environments within which alcohol and other drugs are used. Participants in England often spoke of the use of drugs at university, clubs, and parties. For example, one student noted,

> "I thought all [of] my flat mates were going to be completely party animals and all this stuff but then you got to think about the situation where people actually take pictures. People would take pictures at parties at clubs and so from what I know I thought they were completely wild" (Female Student, England, Female-only FGD2, March 30, 2014).

Another student stated that "when I drink at parties and I look not quite decent" (Female Student, England, Female-only FGD1, March 30, 2014). However, many of the Barbadian participants made reference to J'ouvert-like parties and indoor and outdoor fetes.

For example, one student said, "When it is J'ouvert time you would see the majority of young people drinking and from that they would drink excessively and be just pass out on the floor (Female Student, Barbados, Mixed FGD2, May 30, 2014).

Differences in Smoking Preferences. When students spoke of "smoking" Barbadian students made reference to marijuana. For example, one student said, "There are always going to be a group of people who smoke, a group of people who dance [at fetes], group of people who drink and depending on your group you do certain things … For example, smoking marijuana" (Male Student, Barbados, Mixed FGD3, May 30, 2014). Another stated, "… you take all these selfies and now on Facebook and Instagram you can do videos, so then there are people taking videos of themselves smoking weed" (Female Barbadian Student, personal communication, May 30, 2014). It was also mentioned that, "...when you see someone smoking [marijuana] online … you be like… oh ok I didn't know he was a cool person oh and I didn't know they smoke oh well I guess we can go hang out and smoke" (Male Student, Barbados, Mixed FGD1, May 30, 2014). As it pertained to British students they made reference to tobacco. For example, one student stated, "...if you want to be popular and we are talking about smoking well you'll have to start putting up photos of smoking [tobacco] too… (Male Student, England, Mixed FGD1, March 30, 2014). A "smoke" was also a term used to refer to a tobacco cigarette as articulated by one student, "… you could be posing up [online] with a smoke ... in your hand" (Male Student, England, Mixed FGD1, March 30, 2014). These differences in smoking references may suggest context-specific smoking preferences among emerging adults in Barbados and England.

Discussion

Higher levels of susceptibility to online peer influence (SOPI) were associated with greater alcohol, tobacco and marijuana use by emerging adult samples in both Barbados and England; a finding which is similar to past research in offline contexts (Miller, Prinstein, &

Esposito-Smythers, 2014; Reifman & Watson, 2003; Valente, Gallaher & Mouttapa, 2004).
The more students conformed with online peers to share, post and exchange information about drugs on Facebook, the greater their drug use. Although past research found that passive exposure to risk-taking peers (Harakeh & Vollebergh, 2012) and mere exposure to friends' risky displays on SNS was significantly associated with adolescent smoking and drinking offline (Huang et al., 2014), the current research demonstrates that active interactions by emerging adults with online peers about drug related media are also associated with drug use offline in both Barbados and England. Furthermore, the current study highlights cultural differences that exist in the way emerging adults interact between online and offline spaces as it pertains to drugs and drug related media.

Cross-national Similarities

Similar themes emerged from the narratives of students from both contexts that describe the social factors which contribute to emerging adults becoming susceptible to the drug related online behaviors of their peers — social behaviors which were related to offline illicit and licit drug use. As shown in figure 1, the themes which explain the relationship between SOPI and drug use (alcohol, marijuana and tobacco) were categorized as either developmental characteristics, online social-environmental factors or offline social-environmental factors.

Developmental Characteristics

Findings indicate that an emerging adult is likely to engage in behaviors in keeping with peer norms so as to reduce feelings of anxiety and to be accepted within the social group. The *need to belong* is essential for personal fulfilment (Baumeister & Leary, 1995) and acts as an internal drive to ensure that emerging adults remain interconnected with their peers. Emerging adults are motivated to be a part of a group, as peers provide support and guidance which can help them deal with challenges and uncertainties, as they try to establish

their identities. Therefore, the desire to be a member of a peer group, coupled with an internal disposition to conform with risky peers, is likely to result in the emerging adult also engaging in risky behavior.

Online group membership can foster competition between peers for popularity status, behaviors indicative of a *need for popularity* and admiration. Hence, some emerging adults are motivated to do whatever is required to maintain their online social standing. For example, emerging adults posted pictures of themselves hanging around others who drink and use marijuana so that they can be considered "cool." This finding is in keeping with past research (Moreno, Briner, Williams, Walker & Christakis, 2009; Morgan, Snelson, & Ellison-Bowers, 2010) where SNS are used by youth to demonstrate drug use behaviors. Furthermore, within the context of the current research, the desire that emerging adults have to affiliate with high status, popular online peers has also been documented in the literature as a process known as, "basking in reflected glory" (Cialdini & Richardson, 1980).

Online Social-Environmental Factors

Popular online peers model (or demonstrate) their online and offline behaviors on Facebook which emerging adults later imitate as a result of observational learning (Bandura, 1986). Furthermore, when students posted pictures of themselves using alcohol, tobacco or marijuana they were more likely to receive "Likes" on Facebook from others in the online social group. This is one way that *online peer approval* is communicated. Facebook "Likes" and encouraging online comments, were used as rewards to increase the likelihood of risk-taking behaviors by emerging adults. It was in this way that emerging adults received reinforcement for engaging in behaviors in keeping with peer group normative standards (e.g., sharing drug related media online and engaging in offline drug use).

It was also found that Facebook facilitates *multiple source feedback* in a many-to-one communication style; which collectively can increase an individual's susceptibility to peer

influence. Receiving feedback from multiple sources at any given time, is in keeping with the principle of "number" (of the social impact theory; Latané, 1996), which states that with greater sources of feedback one is more likely to be affected by the material being presented.

Offline Social-environmental Factors

The perfect environment for the perpetuation of drug use can be created when emerging adults *socialize at parties where drugs are present*. Furthermore, social events bring students together so that they can interact with peers and these interactions can then be recorded, posted and shared on Facebook. When highly susceptible individuals attend these parties and social events, the atmosphere of drug use can increase the likelihood that they would use these substances. Hence, the intersection between the offline and online world can be established when emerging adults post information on Facebook that explicitly represents their offline experiences.

The final theme identified was *the university environment*. This theme took into account the real experiences encountered by students during university as well as their perceptions of campus life. In addition, students said that the freedom afforded them by the university environment allowed for the responsibilities of adulthood to be delayed. For example, it was said that university is a time to do, "stupid stuff" and that, "you are just putting off the real world." Delaying the responsibilities in this way is highly characteristic of the period of emerging adulthood (Arnett, 2000). Moreover, the university environment brings emerging adults in constant contact with their peers in offline contexts such as the Halls of Residence, classrooms and Students' Unions. As a result of being constantly surrounded by and having to interact with peers, students are likely to feel that they need to live up to the expectations of others in both online and offline environments. This is supported by the social impact theory (Latané, 1981), whereby peer influence is likely to increase when the source of feedback is proximal. Because the social linkages formed via

SNS are not bound by physical distance, information is more easily shared, thereby

increasing the likelihood that an individual will be influenced.

Cross-National Differences

After interrogating the qualitative transcripts of the participants in Barbados and

England, there were a number of contextual differences which could influence the type of

drug use media that is posted and shared on Facebook (see figure 1). These included: varied

access to alcohol on university campuses, variations in the social context of drug use and

differences in smoking preferences of emerging adults. It is important to highlight these

variations in offline drug use among this demographic as such differences are likely to

reflect unique culture-specific behaviors which can be posted online. Once such content is

posted, it becomes online drug-related media that can arguably influence online peer group

norms and offline drug use by future student cohorts who may become privy to, and

internalize this media.

Varied Access to Alcohol on University Campuses

All references made to alcohol use within the university setting were made by

emerging adults from England. This is indicative of the ease by which alcohol can be

obtained on campus within the British context; arguably, an impetus for the emergence of

binge-drinking games such as neknomination. However, there was a noted absence of such

references in the narratives from the Barbadian participants. This is not surprising given that

Barbadian students who participated in the study attend a university where there is a

campus-wide alcohol policy prohibiting all students under the age of 21 from purchasing,

possessing or consuming alcoholic beverages on campus (UWI, Student Handbook, 2018).

Variations in the Social Context of Drug Use

There were qualitative differences with respect to the nature of the off-campus social

environments within which alcohol and other drugs are used. It should be noted that the

participants in England spoke of the use of drugs in a wide variety of settings (university, clubs, and parties), while many of the Barbadian participants made reference to j'ouvert-like parties and indoor and outdoor fetes. Such fetes and parties within the Caribbean context are often associated with national festivals that take place at specific times of the year. It is also possible that many Barbadian university students (given on-campus alcohol prohibitive policies) are likely to use alcohol at these off-campus social events.

Differences in Smoking Preference

A difference was also evident in the use of the term "smoking". When used by British participants they were clearly referring to tobacco (a licit drug). Given that tobacco use is highly entrenched in British culture this is not surprising (Amos, et al., 2009; Brown et al, 2014; Goddard, 2008). However, Barbadian participants used the word smoking to indicate the use of marijuana (an illicit drug). It is possible that such reference to smoking for Barbadian emerging adults is indicative of relatively tolerant and in some cases favorable attitudes towards the use of marijuana; attitudes which are reflective of wider Caribbean culture (Benard, 2007; Dreher, 2002; Jules & Maynard, 2016).

On reflection of the emergent themes (see figure 1 for an example) the correlation between Susceptibility to Online Peer Influence (SOPI) and offline drug use could arguably be mediated by three types of factors: Emerging Adulthood Developmental, Online Social-Environmental, Offline Social-Environmental (as depicted in the diagram) - factors which are interrelated and supported by cross-national similarities. Although some cross-national differences were found, they highlight the importance of offline culturally-specific environmental factors to the understanding of the contextual nuances surrounding drug use in different populations of emerging adults. There is likely a bidirectional relationship between the online and offline world for emerging adults, and social media platforms serve as tools that bridge these social spaces. Not only are they influenced by their online peers to

share drug-related media content but they also post media based on their offline peer interactions. It is in this way that emerging adults may act as content consumers and content creators of drug-related media. The motivation that drives such behaviours are developmental in nature as emerging adults (based on the findings of the study) have a need to interact and be accepted by their peer group. Although the focus of the study was on one type of health risk behaviour (i.e., drug use), the contributing factors to peer influence susceptibility online (and related offline actions) may be applicable to many other behaviours (both negative and positive) among the emerging adult population.

Limitations

Although we believe that the findings of the current study contribute to extant literature about emerging adulthood, the research has a number of limitations. Facebook (one of many SNS) was the sole focus of the study in only two countries–which, although they share many similar societal characteristics, the universities from which the samples were drawn have distinctly different policies as it pertains to the use of alcohol and other drugs on campus. Hence, differences may be found with other SNS and in other cultural contexts. In each country data collection was based on convenient sampling which resulted in variations in the number of participants garnered. Furthermore, the statistical results support correlation between the variables, hence, causation should not be inferred from these findings given the non-experimental nature of the study.

The recruitment strategy was not consistent across the two institutions due to different administrative protocols. At the participating university in Barbados there was a central hub from which the survey online link was sent while at the university in England each department had to be approached independently. Hence, only those university departments that were willing to contact students via their electronic mailing lists assisted

with the student recruitment process in England, while in Barbados all university

undergraduate students were sent the survey link.

Furthermore, among those students who received the online survey link, some may

have completed the survey as a result of factors such as their availability or their past

positive experiences regarding online surveys. On the other hand, it is possible that some

students may have disregarded the correspondence, either having viewed it as spam email or

held negative feelings towards online research.

As a result of the differences in recruitment we cannot claim that our sample is

generalizable to all emerging adults at each university or in either country. For example, the

female to male student ratio was not in keeping with the wider undergraduate populations of

the participating institutions and it is possible that the opinions shared by participants may

reflect a gender bias (as more females participated in the study). Additionally, the majority

of the focus groups in England were female only while in Barbados they were mixed (i.e.,

male and female). These varied focus group characteristics may have had some impact on

the dynamics of the conversations. For example, same-sex groups may have demonstrated a

gender bias.

Study Implications

The findings from this study should be of particular interest to university student-

support administrators in relation to the development of promotional and preventative

policies and programs to reduce the incidence of health-risk behaviors such as the use of licit

and illicit drugs by students. Hence, universities can use their Facebook pages to share

positive messages and images of healthy student behaviors. In addition, they can utilize

university-affiliated student groups to convey such information on their Facebook sites,

thereby creating media that requires students to "Like" and/or post comments. It is in this

way that health-positive information can be widely circulated on students' Facebook newsfeeds.

At the university level, policies that prohibit enrolled students from posting health-risk behaviors online can be developed. Although we recognize that risk-taking can be part of the developmental phase of emerging adulthood (i.e., experimentation with drugs), the university can create nonacademic online content that will provide a space for this demographic to fulfil their need for popularity, need to belong, and gain online peer approval from multiple sources. Based on the findings of the current study, such university created online social networking platforms would likely cater to the developmental issues of emerging adults as it would have similar features as SNS. Facilitating student interactions with peers on such a platform, would enable the emerging adult to attain popularity and status for socially acceptable and productive activities versus risky and potentially life threatening drug related behaviors.

Recommendations for Future Research

Future researchers can consider investigating the effects of different SNS such as Snapchat and Instagram on other health-risk behaviors among youth. Moreover, it should be ascertained to what extent similar online and offline behaviors and developmental needs are characteristic of a younger demographic, given their heightened use of SNS. To more comprehensively investigate the relationship between online peer influence susceptibility and offline drug use, it would be necessary to interrogate other variables such as peer and parental factors which may moderate the relationship. It is also possible that there are gender-based understandings of the uses of drugs and online interactions among emerging adults. Therefore, investigating the gendered dynamics of posting and exchanging risky drug-related media content could be an area of focus for future research.

Conclusion

Social networking sites are an integral part of modern day society. With the explosion of social media, many health damaging behaviors are modeled and reinforced by online peers. This research has made a contribution to extant literature by increasing knowledge about factors that explain the relationship between susceptibility to online peer influence (SOPI) and offline drug use in Barbados and England among emerging adults. This relationship was explained through the voices of emerging adults and a diagram was created to visually communicate the emergent themes and how they are interrelated. Offline contexts can influence what, how and why emerging adults create and generate drug-related media content on SNS. In addition, the developmental needs of emerging adults and offline youth sub-culture play a key role in the use of SNS to promote drug use. It is possible that the identified factors provide some context regarding the nature of the interactions between the offline and online worlds and how such interactions contribute to health risk behaviors among youth. Finally, this study demonstrates the need for researchers to recognize the importance of the role of online peer influence and culture in offline health-risk behaviors among emerging adult populations.

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Table 1

An example of the three-tiered categorization framework used when coding qualitative data

(I) DEVELOPMENTAL NEED OF EMERGING ADULTHOOD
**Need for popularity
"Young people want to be popular…" (Female Student, Barbados, Mixed FGD1, May 30, 2014)   "To be popular you have to put up a post that will generate interest that a lot of people are going to like it or share it or what not." (Male Student, England, Mixed FGD1, March 30, 2014).   - I think it is a popularity contest…Because you would be thinking about what I can do next to make people like all of my photos…" (Female Student, Barbados, Mixed FGD3, May 30, 2014)

Note: Key below indicates and explains the different stages of the qualitative analysis used in the study.

(I) THEORETICAL CONSTRUCT - abstract ideas that arise from groups of themes.

**Theme - an organizing concept that emerged from the repeating ideas.

- Repeating ideas - similar words or phrases used by respondents which express the same idea.

Table 2

Non-Parametric Correlations between Susceptibility to Online Peer Influence and Drug Use

Correlated Variables	r_s	
	Barbados	England
SOPI-DRS and alcohol use past 12 months	.615**	.464**
SOPI-DRS and tobacco use past 12 months	.238**	.263**
SOPI-DRS and marijuana use past 12 months	.342**	.376**

Note: ** $p < 0.01$
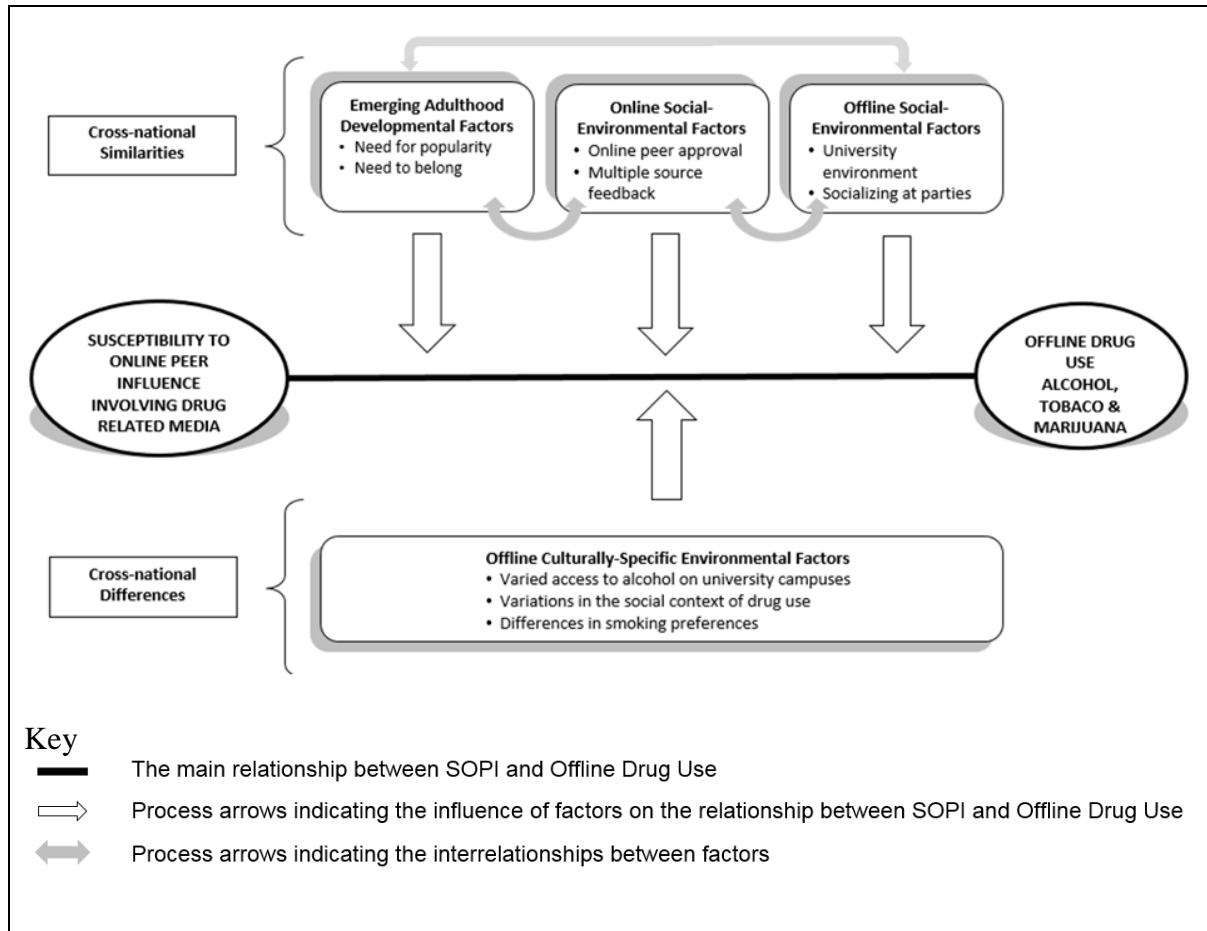
Figure 1. Diagram depicting factors which impact emerging adult susceptibility to online peer influence (SOPI) and subsequent offline drug use.