

Published in final edited form as:

Am J Mens Health. 2016 September; 10(5): 359-376. doi:10.1177/1557988314566227.

The Internet's Multiple Roles in Facilitating the Sexual Orientation Identity Development of Gay and Bisexual Male Adolescents

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Abstract

One emerging avenue for the exploration of adolescents' sexual orientation identity development is the Internet since it allows for varying degrees of anonymity and exploration. The purpose of this phenomenological study was to examine the role of the Internet in facilitating the sexual orientation identity development process of gay and bisexual male adolescents. Qualitative interviews were conducted with an ethnically diverse sample of 63 gay/bisexual male adolescents (ages 15–23). Participants reported using a range of Internet applications as they explored and came to accept their sexual orientation identity, with the intended purpose and degree of anonymity desired determining which applications were used. Youth reported that the Internet provided a range of functions with regard to the exploration and acceptance of their sexual orientation identity, including: 1) increasing self awareness of sexual orientation identity; 2) learning about gay/bisexual community life; 3) communicating with other gay/bisexual people; 4) meeting other gay/bisexual people; 5) finding comfort and acceptance with sexual orientation; and 6) facilitating the coming out process. Future research and practice may explore the Internet as a platform for promoting the healthy development of gay and bisexual male adolescents by

providing a developmentally and culturally appropriate venue for the exploration and subsequent commitment to an integrated sexual orientation identity.

Keywords

qualitative research; adolescent men; sexual orientation identity; gay; Internet

Introduction

During adolescence individuals explore various sexual, occupational, ideological, and cultural roles as they attempt to integrate their life experiences and solidify their unique and mature personal adult identity (Erikson, 1980). In order to develop a mature overall adult identity an adolescent needs to engage in both *identity exploration* where s/he tries out various roles/life plans and continually re-examines their degree of personal fit, and *identity commitment* where s/he invests in a particular course of action or belief (Erikson, 1980; Marcia, 1980, 2007). The formation of a solidified identity has been considered by many theorists to be the primary developmental goal of adolescence (Adams, Gullotta, & Montemayor, 1992; Erikson, 1968; 1980). More recent theorists contend that there has been an expansion of the period between childhood and adulthood for young people in industrialized societies, and consider the time between late teens and the mid-twenties to be a distinct developmental period called emerging adulthood (Arnett, 1997, 2000). Identity development is viewed by these theorists as a critical developmental milestone addressed during emerging adulthood (Arnett, 2000).

Adult identity is not a uni-dimensional construct, but instead is composed of an array of identities that intersect with each other in various realms of a person's life (e.g., political, sexual, cultural, religious); and each of these identities may form at varying rates and be influenced by both similar and unique factors. In order to develop a cohesive and integrated sense of identity in these different realms, adolescents and emerging adults typically explore various roles and behaviors as they commit to their own unique identities. Exploration and subsequent commitment to unified adult identities has been associated with higher levels of psychological health and lower rates of health-related risk behaviors for various populations of adolescents and emerging adults (Duman, Ellis, & Wolfe, 2012; Ritchie, Meca, Medrazo, Schwartz, Hardy, Zamboanga et al., 2013; Rogers-Sirin & Gupta, 2013; Rotheram-Borus, 1989; Wiley & Berman, 2013).

Sexual Orientation Identity Development among Adolescents

One critical aspect of identity formation for adolescents is an exploration of one's sexual orientation identity. Sexual orientation is a complex and multi-dimensional construct that is differentially defined by researchers and practitioners based on both theoretical and practical considerations (Rosario & Schrimshaw, 2014). Many contemporary perspectives on sexual orientation suggest that the broader construct of sexual orientation includes elements of sexual attraction, sexual behavior, sexual identity/identification, and romantic orientation/relationships (Institute of Medicine, 2011; Mustanski, Kuper, & Greene, 2014; Rosario & Schrimshaw, 2014). Although variability exists with regard to how researchers define the

sexual orientation exploration process and outcomes for adolescents, *sexual orientation identity development* is "generally conceptualized as a process of becoming aware of one's same sex attractions, incorporating such experiences into one's overall sense of self, and 'coming out' to others' (Mustanski, Kuper, & Greene, 2014, p. 610). The use of the term *sexual orientation identity* to describe an adolescent's current understanding and labeling of her/his sexual orientation has been used in several comtemporary health-related investigations utilizing large-scale national school-based samples and longitudinal cohorts of lesbian, gay, and bisexual (LGB) youth in the United States and England (Hagger-Johnson, Taibjee, Semlyen et al., 2014; Newcomb, Birkett, Corliss, & MUstanski, 2014; Ott, Wypij, Corliss et al., 2013; Reisner, Van Wagenen, Gordon, & Calzo, 2014).

Initial theories of sexual orientation identity development for gay men and lesbian women proposed a stage-based linear developmental process characterized by initial same-sex attraction and subsequent discomfort; withdrawal from the heterosexual community; exploration of the gay/lesbian community; and acceptance and integration of a gay/lesbian identity with one's larger personal adult identity (Cass, 1979; Coleman, 1982; Troiden, 1989). In addition to the lack of attention to culturally-specific differences that may impact the sexual orientation identity development process for people of color (Wilson & Harper, 2013), a major challenge of these traditional sexual orientation identity development models is the assertion by researchers and theorists that LGB sexual orientation identity development for adolescents and emerging adults does not necessarily progress in a singularly pre-determined linear fashion, and instead likely involves a more fluid and dynamic process marked by exploration and episodes of uncertainty (D'Augelli, 1994; Diamond, 2000, 2008; Dickson, Paul, & Herbison, 2003; Halpern & Kaestle, 2014). Research and theory further support the notion that this sexual orientation identity development process differs based on gender (Diamond, 2000; 2008; Katz-Wise & Hyde, 2014; Halpern & Kaestle, 2014; Schneider, 2001)

Adolescents and emerging adults explore their sexual orientation identity within multiple ecological social systems, especially the family, school, and peer networks (Bronfenbrenner, 2005; D'Augelli, 2005). Although these social institutions often provide support and guidance for heterosexually-identified youth, gay and bisexual adolescents may find that their family, peers, and teachers do not accept, support, and/or nurture them as they develop their gay/bisexual identity and may actually perpetrate harmful verbal and physical acts of violence against them (D'Augelli & Hershberger, 1993; Pilkington & D'Augelli, 1995; Savin-Williams, 1995). Societal stigma related to being gay/bisexual and the concomitant isolation, rejection, and discrimination that many gay/bisexual youth face has been reported to be related to a range of negative social and behavioral health outcomes (Blake, Ledsky, Lehman, Goodenow, Sawyer, & Hack, 2001; Martin-Storey & Crosnoe, 2012; Rosario, Hunter, Maguen, Gwadz, & Smith, 2001; Waldo, Hesson-McInnis, & D'Augelli, 1998). Thus, the decision to disclose their sexual orientation identity to others can be complicated for gay and bisexual male adolescents who may fear expulsion from their home if parents become aware of their sexual orientation, and who may lack a supportive network of peers and/or mentors to buffer the difficulties of juggling adolescent development and gay victimization (D'Augelli, 2005).

Ethnic minority gay/bisexual youth, in particular, may face unique challenges to identity formation due to experiences of both individual-level and institutionalized racism (Harper, Jernewall, & Zea, 2004; Jamil, Harper, Fernandez, 2009; Wilson & Harper, 2013). Experiencing such racism has been associated with both increased likelihood of participating in health risk behaviors and experiencing negative mental health outcomes among gay/ bisexual young men of color (Hightow-Weidman, Phillips, Jones, et al., 2011; Wong, Weiss, Ayala, & Kipke, 2010). Members of various ethnic/racial communities also may not view being gay or bisexual as acceptable within their community and/or culture and thus may shun a gay/bisexual young man of color (Wilson & Harper, 2013). This may be partially based on the belief that participation in same-gender romantic relationships and sexual activities are violations of traditional ethnic-specific cultural values or rules (Chan, 1995; Harper et al., 2004; Jamil et al., 2009). Ethnic minority gay/bisexual male adolescents also have reported experiences of segmenting their identity development into both private (e.g., sexual orientation identity) and public processes (e.g., ethnic identity) given the variability in acceptance for these different identities by family, close friends, peers, and community members (Jamil et al., 2009).

Both the development of a positive individual gay/bisexual identity and the development of supportive connections within the larger gay community have been associated with health protective benefits for gay/bisexual youth, particularly in terms of sexual health (Harper, Fernandez, Bruce, Hosek, Jacobs, & ATN, 2013; Rosario et al., 2001; Waldo, McFarland, Katz, MacDellar, & Valleroy, 2000). Rosario et al. (2001) demonstrated that more positive personal attitudes toward "homosexuality" among their sample of gay/bisexual male adolescents (ages 14–21) was associated with lower rates of unprotected anal sex through lower rates of anxiety and higher levels of self-esteem; and that those gay/bisexual male youth who were more involved in gay/lesbian community activities reported lower rates of both unprotected oral and anal sex. Harper et al. (2013) demonstrated that comfort and connection with the larger gay community was associated with greater engagement in medical care for gay/bisexual male adolescents living with HIV.

Since gay/bisexual adolescents and emerging adults often develop their sense of sexuality and sexual orientation within the context of many societal systems that do not support samegender sexual attraction and activity, they may need to find creative ways to explore and understand their sexuality. One avenue for this sexual exploration is the Internet, as it offers young people the ability to investigate their sexuality in a manner that allows for varying degrees of anonymity (Pingel, Bauermeister, Johns, Eisenberg & Leslie-Santana, 2013).

Gay/Bisexual Male Adolescents Use of the Internet

The Internet and its various applications are pervasive in youth culture and communication practices, with teens (ages 12–17) and emerging adults (ages 18–29) recognized as the two age groups most likely to be online (Lenhart, Purcell, Smith, & Zickuhr, 2010). Based on data from a nationally representative phone survey of youth ages 12–17 in the United States, 95% of youth reported Internet use—a percentage that has been consistent since 2006 (Madden, Lenhart, Duggan, Cortesi & Gasser, 2013). Lesbian, gay, and bisexual (LGB) adolescents are among the youth who use the Internet on a regular basis, highlighting

opportunities to both reach and understand this population (Allison, Bauermeister, Bull, Lightfoot, Mustanski, Shegog & Levine, 2012). Mobile access to the Internet has increased substantially over the years, with 74% of youth in 2012 reporting access to the internet through cell phones, tablets or other mobile devices (Madden et al., 2013). These mobile devices give youth access to various types of smartphone web applications commonly known as apps. Qualitative data from Black young gay/bisexual men has demonstrated that youth view mobile phones and the various applications that exist on them (e.g., gaming apps, navigational apps, music apps) as integral to their daily lives, and these mobile devices serve as their primary means of socializing, finding information, and completing activities of daily life (Muessig, Pike, Fowler et al., 2013). Given the pervasive nature of Internet use and access among gay and bisexual young men, interventionists have been increasingly focusing on using mobile devices and other Internet platforms to deliver health promotion interventions, including those focused on decreasing anxiety and depression, reducing sexual shame, and reducing HIV risk behaviors (e.g., Christensen, Miller, Appleby et al., 2013; Holloway, Rice, Gibbs, Winetrobe, Dunlap, & Rhoades, 2014; Muessig et al., 2013; Pachankis, Lelutiu-Weinberger, Golub, & Parsons, 2013).

Most of the research conducted specifically on Internet usage by gay and bisexual youth has focused on the degree to which young men seek out sexual partners online, whether casual and/or romantic, and its association with sexual risk behavior (Bauermeister, Leslie-Santana, Johns, Pingel, & Eisenberg, 2011; Grov, Brewlow, Newcomb, Rosenberger, & Bauermeister, 2014). An increasing number of geo-social networking apps are also available which allow men the opportunity to connect with other men who are spatially nearby, and these apps are being used by young gay and bisexual men to find sexual partners (Holloway, Rice, Gibbs, Winetrobe, Dunlap, & Rhoades, 2014; Winetrobe, Rice, Bauermeister, Petering, & Holloway, 2014). Garofalo, Herrick, Mustanski, & Donenberg (2007) conducted a quantitative study of gay/bisexual youth in Chicago where they found that 68% of the youth surveyed reported using the Internet to find a romantic or sexual partner, 48% reported having had sex with a partner found on the Internet, and 23% reported inconsistent condom use with Internet partners. Further findings from Garofalo et al's (2007) study revealed that White young men were more likely (65%) to have met sexual partners through the Internet compared to African American (20%) or Latino (51%) young men.

There is a burgeoning literature focused on how gay/bisexual young men in the United States are using the Internet not only to find dating and sex partners, but also to learn about same-sex sexual behavior, sexual health promotion, and sexual orientation identity development (e.g., Kubicek, Beyer, Weiss, Iverson, & Kipke, 2010; Kubicek, Carpineto, McDavitt, Weiss, & Kipke, 2011; Mitchell, Ybarra, Korchmaros, & Kosciw, 2014; Mustanski, Lyons, & Garcia, 2011; Pingel, Bauermeister, Johns, Eisenberg, & Leslie-Santana, 2013; Pingel, Thomas, Harmell & Bauermeister, 2013). Given the lack of offline same-sex sexual health information provided to gay/bisexual adolescents by parents or school-based sex education programs, the Internet has become a primary source for many gay/bisexual young men to learn about the mechanics of same-sex sexual behavior and the enactment of sexual health promotion strategies such as same-sex partner negotiation and condom use (Kubicek et al., 2010; Kubicek et al., 2011; Mitchell et al., 2014; Mustanski, Lyons, & Garcia, 2011; Pingel, Bauermeiser, Johns et al., 2013; Pingel, Thomas, Harmell, &

Bauermeister, 2013). Gay/bisexual youth also have reported that the Internet provides them with a safe and confidential place to connect with other gay/bisexual young men as they develop their sexual orientation identity, and can serve as a form of connection to the larger gay community during a time when they desire connection and social support (Kubicek et al, 2011; Mustanski et al., 2011; Pingel, Bauermeiser, Johns et al., 2013). Pingel and colleagues' (2013) recent qualitative study of single gay and bisexual young men illustrates this supportive function, as their youth reported that online interactions provide them with opportunities to explore their sexuality and pose questions to others regarding their same-sex desires and attractions, with reduced concern of being stigmatized through self-identification.

The purpose of this study was to contribute to the growing literature on the positive sexual health and development benefits of the Internet for gay and bisexual adolescents by examining the role of the Internet in facilitating the sexual orientation identity development process of gay and bisexual male adolescents. Since the sexual orientation identity development processes of lesbians and bisexual young women have been proposed to differ from that of gay and bisexual young men (Diamond, 2003; Schneider, 2001), the current study only examined gay and bisexual male youth. Given the lack of prior nuanced data on the various specific functions of the Internet in sexual orientation identity development for gay/bisexual male youth, this study utilized a qualitative phenomenological approach to explore a range of ways in which the Internet could facilitate sexual orientation identity development.

Methods

Phenomenological Inquiry

Since the focus of this study is on the lived experiences of gay/bisexual male adolescents with regard to their sexual orientation identity and the role that the Internet played in this process, the data collection and analyses were conducted using a phenomenological inquiry framework (Creswell, 2013; Patton, 2002). Phenomenology is specifically focused on describing what a given group of people have in common as they experience a particular phenomenon, and it is an inductive analytic approach that allows the patterns, themes, and categories of analysis to emerge from the data (Creswell, 2013; Patton, 2002). It differs from other approaches to qualitative inquiry in that the primary focus is on identifying elements of a particular phenomenon by describing both what the phenomenon is and how it is experienced by a particular group of people (Creswell, 2013). The data that are collected are then presented through textual descriptions of the phenomena based on summaries of the experiences described by respondents. The composite descriptions offer an explanation of the underlying structure which exists across the respondents' experiences (Creswell, 2013; Moustakas, 1994). Phenomenological methods have been noted to be especially beneficial in psychological research on sexuality since they help researchers better understand the phenomenon of human sexuality as it is experienced in everyday life (Frost, McClelland, Clark, & Boylan, 2014). The phenomenological inquiry in the current study allows for an understanding of the variety of ways in which the Internet facilitated aspects of sexual

orientation identity development among gay/bisexual male adolescents, and an appreciation of both individual and shared experiences and meanings given to those experiences.

Participants

Participants in this study included 63 male adolescents and emerging adults between the ages of 15 and 23 years (mean and median age = 19) who identified as gay, bisexual, or questioning, and lived in either the Miami/Dade County or Chicago metropolitan areas. These youth were selected from a larger pool of 200 (Chicago N=97; Miami N=103) gay/bisexual/questioning male youth who were recruited from a diverse array of Lesbian/Gay/Bisexual/Transgender-focused community agencies and social venues where gay/bisexual young men congregate. The 63 youth who participated were selected based on their responses to an initial quantitative survey in order to create a stratified purposive sample that represented youth from varying age groups, ethnicities, and levels of identification with the gay community. The final sample of 63 youth identified their ethnicity as African American (N=19), Latino/Hispanic (n=22), or White (N=22); and their sexual orientation as gay (N=46), bisexual (N=15), or questioning (N=2).

Interview Guide

Data for this paper were taken from a parent project which was a multiphase mixed-methods study designed to explore the relationship between HIV sexual risk behaviors and ethnic, sexual orientation, and masculine gender identity development. Thus this study was not explicitly designed as an exploration of the role of the Internet in the sexual orientation identity development of gay and bisexual adolescents, but due to the frequency with which the Internet's role in identity development appeared in the data the current in-depth analysis was conducted.

A semi-structured qualitative interview guide was created specifically for the parent study during a three month development process by a team of researchers who had extensive experience working with gay/bisexual youth. The interview guide was grounded in phenomenological and constructivist frameworks, which provided a general structure for discussion but required participants to provide their own conceptualizations of terms and phrases based on their life experiences and perceptions. Thus for each identity, participants were first asked to define their identity using their own words and conceptualizations, and then were guided through an in-depth exploration of factors that have influenced each specific identity development. Several areas within the interview protocol covered important areas of identity development which were established in previous literature, including personal meaning, awareness of identity, connection to community, and presence of facilitators/supports. Within these areas youth provided accounts of their own experiences, but were also encouraged to discuss additional information that was not covered in the interview guide but that seemed personally relevant in their identity development. By using their own lived experiences and definitions rather than imposing definitions upon participants based on prior research, the interview guide was grounded in the inductive nature of phenomenological inquiry.

The Internet was only specifically asked about in one section of the interview guide related to the presence or absence of a community which is focused on their previously defined sexual orientation identity. Although interviewers used the sexual orientation identity term defined by each participant during the interview, most described this as a "gay community." If participants stated that they felt there was such a community, after they described it they were asked "Are there any other [participant's self-defined sexual orientation identity] communities, such as an Internet [participant's self-defined sexual orientation identity] community?" If the participant stated that he felt there was no sexual orientation identity community, he was asked the following "A community can be any group that shares some things in common, even if they do not live close to each other, such as an Internet community. Do you think there are some of these other kinds of [participant's self-defined sexual orientation identity] communities?"

Procedure

The data collection for this study had two primary phases. First, participants were recruited through community agencies and socializing venues to complete a self-administered quantitative questionnaire. To be eligible for the questionnaire, participants needed to: (1) report that they were a biological male and currently identify as male; (2) be at least 14 and no more than 22 years of age at the time of study enrollment, (3) identify as gay, bisexual or questioning, (4) identify as African American, Latino or European American, (5) live in the Chicago metropolitan area or Miami/Dade County metropolitan area, and (6) have not tested positive for HIV (this was due to the larger study's focus on primary prevention).

The information obtained from this brief questionnaire was then used to create the sampling frame for the next phase of the study, in-depth qualitative interviews. The sampling frame was stratified by 3 age groups to account for developmental and sociocultural stages related to entry into middle/late adolescence and legal entry into bar culture (15–17, 18–20, 21–22), ethnicity (African American, Latino, and European American) and level of gay identification (higher and lower). Two valid and reliable measures included in the questionnaire, the *Gay Identity Questionnaire* (Brady & Busse, 1994) and the *Identification and Involvement with the Gay Community Scale* (Vanable, McKirnan, & Stokes, 1998), were used to stratify youth by level of gay identification. Both measures were used since youth who are developing their sexual orientation identity may reveal exploration and acceptance of their gay identity through both cognitive processes (traditional measures of gay identity) and social/experiential activities (participation in and connection to the gay community).

The in-depth qualitative interview took approximately two hours, and respondents were compensated for their participation. Interviews took place between June 2004 and January 2006. All interviewers identified as gay or lesbian, and consisted of four men and one woman from diverse ethnic backgrounds. The interviewers received extensive training in qualitative interviewing and techniques prior to conducting any interviews. All interviews were audio-taped and transcribed verbatim by an independent professional transcriptionist. Transcripts were checked for accuracy by a research team member who listened to each tape while reading the transcription text and making edits where appropriate. The study was approved by the Institutional Review Boards of all participating universities.

Data Analyses

The data analyses were conducted using a phenomenological inquiry framework, as described earlier (Creswell, 2013; Patton, 2002). The composite descriptions of the phenomena presented in this article offer an explanation of the underlying structure which exists across the respondents' experiences (Creswell, 2013; Moustakas, 1994). In line with the phenomenological orientation for this inquiry, the analyses were conducted to assure that different voices were represented in the findings and that conceptual "outliers" were not silenced by the average or dominant perspective by presenting all voiced themes instead of only those that were endorsed by a majority of participants (Creswell, 2013; Moustakas, 1994). Specific counts of the number of times each theme or sub-theme was endorsed are not presented as to not privilege any particular experience or perspective. Offering such counts also may create inaccurate accounts of the prevalence of each theme since the semi-structured qualitative interview guide that was used did not query all participants about the multiple roles that the Internet may have played in their development given that the primary focus of this study was not on the role of the Internet in sexual orientation identity development.

In order to assist with classifying, sorting, and retrieving coded text during the analysis, all transcribed interviews were entered into NVivo software (Qualitative Solutions & Research International) prior to analysis. For the purposes of this inquiry, the "Internet" was defined as any one of the multiple computer-based applications included in the worldwide network of electronic communication modalities that carry information from one computer to another. This included applications such as websites (including social networking websites), instant messenger (IM), electronic mail (email), chat rooms, listservs, discussion forums, and blogs.

Initial *a priori* codes were created prior to analysis in order to capture the primary concepts being explored regarding the Internet's potential role in the sexual orientation identity development process, and further codes were added during the iterative analysis process. These *a priori* codes were grounded in core aspects of sexual orientation identity development from prior theoretical/empirical literature focused on this developmental process as well as our prior empirical work in this area (e.g., Cass, 1979; Coleman, 1982; Jamil et al., 2009; Troiden, 1989) and included codes such as the Internet's role in the following: "identity awareness," "identity connection," and "identity comfort."

After all of the transcripts were read and reviewed, additional content codes were added to the initial *a priori* code list to capture the experiences described by participants, and a codebook was created which included operational definitions of all codes. Transcripts were then re-read and pattern codes were created to connect subsequent concepts under larger headings within each transcript. After pattern codes were assigned to appropriate segments of the transcripts, consistent patterns in meaning, concepts, and themes across all interviews were identified (Creswell, 2013; Miles & Huberman, 1994). Two sets of comparative analyses were then conducted to explore potential differences in the responses of participants based on ethnic group membership (i.e., African American vs. Latino vs. European American) and sexual orientation (i.e., gay vs. bisexual vs. questioning). The

creation and assignment of all codes was conducted by the first two authors, and any inconsistencies in coding and analysis were resolved through discussion and consensus.

In order to assure the quality and credibility of the overall emergent themes from the qualitative interviews, several credibility checks were enacted. The first involved "member-checking" interviews (Guba & Lincoln, 1981) with three gay/bisexual male youth that occurred after approximately half the qualitative interviews had been conducted, and involved youth responding to initial interview themes and identifying additional areas for inquiry. The second check was "peer debriefing" interviews (Lincoln & Guba, 1985) with three adult "experts" that occurred at the same time as the initial "member checking" youth interviews. These "experts" had extensive experience working with gay/bisexual youth, and were asked to independently verify the initial emergent themes from the qualitative analyses. The third validation check consisted of two focus groups, where interview participants returned after all interviews were completed to verify general patterns and themes identified in the initial analyses.

Results

In exploring the narratives of gay/bisexual male youth's sexual orientation identity development processes, it was clear that the Internet played a variety of different roles in helping to facilitate aspects of sexual orientation identity development. The young men reported using a range of Internet applications (e.g., websites, discussion boards, IM, email, etc.) when engaged in the various components of exploration and acceptance of sexual identity, depending on the specific function and the relative need for anonymity. The specific functions that the Internet played in the sexual orientation identity development of participants clustered in three broad areas: 1) learning about and exploring sexual orientation and the gay community; 2) connecting and socializing with other gay and bisexual peers; and 3) gaining self acceptance and sharing sexual orientation identity with others. Within each of these three primary areas there were two major themes that were identified, with additional sub-themes within some of the themes. The following six thematic functions of the Internet in facilitating the sexual orientation identity development of gay/bisexual male youth will be discussed: a) increasing self awareness of sexual orientation identity; b) learning about gay/bisexual community life; c) communicating with other gay/bisexual people; d) meeting other gay/bisexual people; e) finding comfort and acceptance with sexual orientation; and f) facilitating the coming out process.

The two comparative analyses that were conducted did not produce any major thematic differences based on race/ethnicity or sexual orientation, so the themes and sub-themes presented represent the phenomena of youth in the study across these various membership categories. One exception is that African American and Latino youth (but not European American youth) discussed the phenomenon of connecting with gay/bisexual affirming spaces within their own ethnic communities through ethnic-specific gay/bisexual social networking sites; and this will be discussed within the theme of "Communicating with Other Gay/Bisexual People."

Representative quotes which were extracted from the transcripts are offered throughout the following sections in order to further illustrate the various themes and sub-themes that were identified. Given space limitations, longer narrative quotes could not be reproduced for all themes/sub-themes, thus background and contextual information is offered in the text in order to facilitate a better understanding of how the quote illustrates the given theme/sub-theme. Pseudonyms were created, and information regarding age, race/ethnicity, and sexual orientation identity are also listed (*R*= *respondent*; *I*=*interviewer*).

Learning About and Exploring Sexual Orientation and the Gay Community

Increasing Self Awareness of Sexual Orientation Identity—Some youth found the Internet useful in helping them to realize their sexual attraction to other males. Two subthemes emerged in this area, with the Internet either a) providing sexually explicit images of men that prompted arousal and subsequent exploration of same-gender attraction, or b) providing images of gay and bisexual men that affirmed that gay/bisexual men "do exist." The former typically involved Internet-based pornographic or erotica websites. In the following quote Marco discusses how straight pornography initially stimulated his sexual interest in other males, which then led him to explore connections with other gay/bisexual males through further Internet-based connections:

During eighth grade I got Internet. And I started talking on-line and I started making friends. At first, at first what I would do is I would go on-line and start meeting girls. But then I'm like, hey, I saw these pictures that I kind of like when I would watch straight porn, then be like, oh, that guy's hot. Then I'd be like, hey, wait. Maybe I could find some other things I like. So I start getting curious and I started searching. That's how I discovered there's some like areas for gay people. And like you're chatting there. And all that stuff...that's kind of when I started to be more into the community. (Marco, 16, Latino Bisexual Male)

The latter sub-theme describes situations where participants viewed a range of websites that showed images of gay/bisexual men displaying various forms of attraction to other men. For participants who had experienced sexual attraction to other men but had never seen two men showing any displays of affection or sexuality toward each other, viewing these images was very validating. In several of these instances, viewing these images set the stage for further exploration of their sexual orientation. The following quote describes one participant's experience of initially discounting any thoughts that he and the other males in his high school could be gay until he started viewing images of other young men like himself and his schoolmates on websites who were actually gay and who were engaging in same-gender sexual behavior. Such experiences affirmed that he, and perhaps other young men in his school, could also be gay.

R: In high school, like I'd see other boys, and I'd think about it but then I'd be like, whatever. Like of course they were straight, and then like on the websites, it was like, it was, they were really gay and doing gay things.

I: So was it seeing another man with another man that helped you kind of put those pieces together [i.e. realize you were gay]?

R: Yeah. (Octavio, 19, Latino Gay Male)

Learning about Gay/Bisexual Community Life—The Internet served as a great resource for youth to learn more about the gay/bisexual community and what it meant to identity as gay or bisexual. Participants reported using a variety of resources that included varying levels of anonymity, representing a range of levels of connection through the Internet. At the most anonymous level, some of the youth would search for gay-related websites that included articles on a range of gay/bisexual issues in order to help inform them of the concerns that gay/bisexual men face. Sean recounts educating himself about "homosexuality" and the gay/bisexual community by reading online encyclopedia entries and articles early in his sexual orientation identity process.

Um, well, when I first identified, when I first realized, again I was in fifth grade, that's what, 10 or 11 years old, that's young. So um, I had all these messages already, like these preconceived notions of what a gay guy was, what a gay person was. And most of them were negative because that's just how like at school, for example, that's how they're portrayed, and the Church doesn't necessarily have the nicest stances. But um, so I did, for instance, like I kind of researched on my own. I did some research on the Internet, but again I didn't go into chat rooms. I mean, I looked up homosexuality in the [online] encyclopedia just to see what they said. I read articles [online] about it when I could find them. Um, and so like I kind of educated myself and I kind of came to terms with myself. By the time that I came out, I was already like very proud of the fact that I was gay, and wouldn't have changed it had I been given the opportunity (Sean, 18, White Gay Male).

Other participants reported learning about the realities of living as a gay/bisexual man through reading the life narratives and stories of other gay/bisexual individuals posted on websites, blogs, chatrooms, and message boards. Those youth who felt comfortable seeking greater levels of connection would engage in discussions with more experienced gay/bisexual men and youth in order to seek advice on a range of topics related to dating, sexuality, sexual health, and safety. In the following quote Derek discusses how he learned a great deal about what it means to be a gay/bisexual young man from reading a range of stories posted by gay and bisexual men on a gay/bisexual message board. In addition, he also received general advice from other men about how to navigate the gay/bisexual community, including how to protect himself from potential harm when physically connecting with other young men he met online, by posting messages and questions on the message board.

I: How did they [postings on message boards] help you?

R: Just like seeing their stories and like giving me advice and stuff. What to do and safety tips and stuff like that. (Derek, 18, African American Bisexual Male)

Connecting and Socializing with other Gay and Bisexual Peers

Communicating with other Gay/Bisexual People—For the vast majority of the youth interviewed, the Internet served as a way to communicate with other gay and bisexual people, especially other youth. These connections were first established through a variety of Internet-related venues, and continued communication occurred through email, IM, and chat rooms. The Internet enabled youth to access general sexuality specific websites, as well as

youth specific gay/bisexual websites. For some, these connections with other gay/bisexual people represented the first time they realized that there were other gay people in the world. One young man remarked that the day he first found a gay chat room was "... when I first started discovering there were people like me." Due to the relative anonymity of the Internet, those young men who were not ready to meet others in person were still able to converse with other gay/bisexual individuals in a setting that provided them with the comfort of communicating freely without the fear of revealing their identity. Octavio first communicated with other gay/bisexual young men only over the Internet until he felt comfortable enough with his sexuality to meet and talk with other gay/bisexual people in person.

I'd say the Internet was just a way of getting close without really meeting anyone. It was like I was scared, but not scared enough, and then now it's like I'm not, I'm not afraid to actually like talk to someone. (Octavio, 19, Latino Gay Male)

For others who did not live in communities where they could easily access a physical gay/bisexual community, these Internet connections also served a positive connective role. This is detailed by Ryan who talks about how the Internet provides a way for gay/bisexual men to find a virtual community with others like them when they do not have that physical connection in their own geographic environment.

Yeah, there's gay communities I feel on the Internet. It's, it's a way for people who don't have that um, who don't have that external connection in their town, in their, wherever they live that being on the Internet it's easy to find people that are similar to yourself and, and bond through, through similarities. (Ryan, 19, White Gay Male)

Many of the youth reported that being able to communicate with other individuals who were experiencing similar same-gender attraction, desires, and sexual behaviors was very beneficial to their sexual orientation identity development and to their overall well being. Some reported decreased feelings of loneliness since they found out that they were "not alone" with regard to their sexual orientation. This was clearly expressed by Marco who reported that he did not feel alone since he was able to connect and share experiences with other young gay/bisexual men on the Internet:

Well, it's one of the main social lines, because you talk to people there, you share your thoughts, it's like oh, this happened to me or people share information with you and you just know what's going on. And you don't feel alone. Because that's what's nice. (Marco, 16, Latino Bisexual Male)

Others discussed enjoying the ability to bond and find connections with other young men who shared their life experiences and feelings. They felt that these young men were able to understand them in a way that nobody else could. This is illustrated in Fabian's quote where he describes how he feels more comfortable chatting online with bisexual young men since he feels that they share more in common with him.

Yeah, I actually go on gay chat lines, but I'm more in the bisexual community because everyone there, I think I get along with more of them, because like they're

in my place. They feel what I'm feeling. They're going through what I'm going, and I can, we can share the same connections. (Fabian, 16, Latino Gay Male)

For African American and Latino gay/bisexual young men, the Internet also enabled them to connect to gay/bisexual affirming spaces within their own ethnic communities, by utilizing ethnic-specific social networking sites that have gay/bisexual specific chat groups or pages. In the following excerpt, Derek explains that there are several general ethnic/racial-specific websites that contain gay chat rooms.

- R Yeah. They have [names of three racial/ethnic-specific websites].
- I Okay. Okay. And they're all for like GLBT?
- R Oh, no, no. There, they have like a, um, a gay like chat room section in there for the people in there. (Derek, 18, African American Bisexual Male)

Youth described learning and exploring their ethnic communities, similarly to how they learned about and explored their sexual communities. By using simple search terms such as African American/Black or Latin American/Latino, youth were able to read, view or listen to media accessible through the Internet. These web sites represent gay friendly and culturally affirming spaces for gay/bisexual youth of color, who may otherwise experience discrimination or stigmatization in the wider gay/bisexual community. These websites may also be avenues for researchers attempting to access hard to reach populations like gay/bisexual youth of color.

Meeting other Gay/Bisexual People—Those young men who wanted to go beyond online communications with other gay/bisexual people reported that the Internet was a reliable source for meeting other gay and bisexual people offline. There were three primary types of meetings that occurred: a) meeting friends, b) meeting boyfriends/romantic partners, and c) meeting sexual partners. Although previous literature on gay/bisexual youth's use of the Internet has focused on the latter of these three, this type of meeting was not the most predominant type of meeting reported by the youth. While some youth did report using the Internet for all three purposes, there were several youth who stated that they never use the Internet for finding sexual partners. These youth typically discussed how the Internet provided them with a safe venue for identifying other gay/bisexual young men through chat rooms and websites for potential friendships, and thus they did not have to guess who in their social environment may or may not be a potential gay/bisexual friend.

For many of the youth who developed offline friendships, these began as online communications such as were described in the previous section. Some of these friendships were with individuals in their immediate geographic environment and the youth were able to interact on a regular basis, whereas others represented friends who lived in other locations and the two young men were able to visit each other from time to time. Yet other youth discussed how the Internet helped to facilitate friendships with other gay/bisexual youth in their school. Paul describes how the Internet provided a safe forum for first assessing whether or not a person in his school was gay/bisexual before actually approaching him in the physical school environment.

I: What made it easy for someone to approach you in high school to ask if you were gay?

R: He approached me on the Instant Messenger first though. I think it's a lot easier to do something, again which is why I think chat rooms are so popular, to do something on-line rather than in person where no one can see your face. (Paul, 17, White Gay Male)

Finding boyfriends and romantic partners was discussed by several of the participants, and this occurred through various modalities including website chat rooms, weblogs, and social networking websites. While some of the youth were actively pursuing a romantic relationship through the Internet, others reported that young men who began as online friends later become offline boyfriends. Alex offers an accounting of the various Internet-based modalities and sites through which he has met other gay/bisexual young men who have become his boyfriend.

I've met a lot of people off the Internet, too, like my first boyfriend I met through just a friend, but then I met um, another one off of [young gay men's magazine website] and we had just talked for a long time, and then he ended up doing a play with one of my friends and I went to see it and that's how we first met in person. And then there's um, this thing called [general weblog site] which is like um, online journal kind of thing. And my next boyfriend found me off of [gay website] and then I found my next boyfriend off of that, and then my current boyfriend I found off [general social networking website] which kind of sounds bad, but it wasn't, it was more like, I don't think that, T's really the only, the only one that I found specifically off of that, but I think it's easier to talk to gay guys when like you know them through other people. Like the first way to like start talking to them is like to like IM them or talk to them or whatnot. (Alex, 17, White Gay Male)

Other participants did discuss using the Internet as a way to meet other men for sexual encounters. They typically reported that they entered chat rooms or posted messages on forums/message boards specifically with the purpose of obtaining a sexual partner. The majority of these events involved one-time sexual encounters, but some youth did report having multiple contacts over time with a sexual partner they met through the Internet. Andrew talked about how he uses the Internet for different purposes, one of which is to occasionally connect with other gay/bisexual young men in chat rooms in order to have sexual encounters.

It's, I mean, I feel that um, like even in chat rooms, like I go into chat rooms and chat with people and it's like oh, you want to meet up and mess around, or like, I just want to have fun. Enjoy myself. (Andrew, 18, White Gay Male)

Gaining Self Acceptance and Sharing Sexual Orientation Identity with Others

Finding Comfort and Acceptance with Sexual Orientation—Having both online and offline connections with other gay and bisexual people helped some youth feel more emotionally connected to other gay/bisexual individuals, while others felt more connected to a larger gay/bisexual community. This sense of connection and community assisted many of the youth with accepting their sexual identity, and feeling a sense of comfort with their

sexuality. For some, this comfort and acceptance came about after connecting with others online, and for others it was solidified after actually meeting someone else in person who was gay/bisexual. In the following excerpt Derek discusses the role that connecting with various other gay/bisexual individuals through Internet forums and chat rooms played in helping him to accept his sexual orientation, as such connections provided him with guidance and support.

Um, well, at 14, when I came out, um, I would say Internet discussion boards, like forums and chat rooms, just hearing other people's experiences and stuff like that. And reading what they had to say um, really helped me. Um, to I don't know, come into acceptance. (Derek, 18, African American Bisexual Male)

Alex, on the other hand, describes how an Internet connection with one specific young gay man which eventually turned into a face-to-face meeting helped him to feel more comfortable with his sexual orientation.

R: Even um, there's this kid Q [who he met online], who's my age and he lives in Utah... so like I ended up meeting him and he was the first person that I really talked to like in person, like that knew I was gay. And like I thought that was kind of an important point.

I: Why?

R: Just because it was the first time like being comfortable like in person with someone who like knew I was gay. (Alex, 17, White Gay Male)

Regardless of the level of connection with others that was established through the Internet, these affirmations served a positive role in helping youth to come to terms with their sexual orientation identity.

Facilitating the Coming Out Process—The Internet was the medium used by many of the participants to reveal their sexual orientation to others or to "come out." Young men in the study reporting using a variety of Internet-based applications, and also revealed their sexual orientation identity to a range of different people on the Internet including strangers, friends, and family members. The methods used and the people to whom they revealed their sexual orientation represented varying levels of intimacy and connection. At the least intimate level, some youth reported coming out to strangers on discussion forums or chat rooms, usually as a way to gauge the reaction of others when such information was revealed. This information was then used by some to make decisions about coming out to others with whom they had personal relationships. Alex describes how he gained the confidence he needed to "come out" to his first friend after first chatting with other gay men on one Internet message board and then receiving a positive response from people he did not know when he "came out" on another Internet message board.

...my generation is so like computer savvy and whatever, like I think I had come out um, no, I'd gone on this one message board that was, it, it's actually a [female pop star] like fan message board and there was like a gay section on it, because that's like some of her friends are gay and whatnot. And like I just started talking to people there, but that was like, it wasn't really a coming out, because it's just kind

of like, and they're gay. But then there's actually this other message board that was just a general talk line and I remember I came out on that. And then like I got like a good response from that just from like, but from people I don't really know. But after that, like I became like confident enough that I was planning on telling my first friend. (Alex, 17, White Gay Male)

Several participants discussed how they came out to their friends over the Internet. This was sometimes seen as an easier way to tell those friends with whom they had been connected for a longer period of time or who they considered to be their best friend, since they felt those individuals would require more explanation and the Internet allowed them to take time to carefully craft and articulate their message. Chris describes how he felt that the Internet gave him the ability to better explain his sexual orientation to those friends that he had known for a prolonged period of time, even though he chose to tell his best friend in person.

I knew it [coming out] wouldn't be an issue. I mean, my friends are all liberal, so it was, it was kind of, it was very difficult for me actually like verbalize and it just took me a while to, I think, I told him [best friend] in person, but other people I told like over the Internet and stuff like that. Because it was a really difficult thing for me to kind of verbalize to them because how long I've known them. (Chris, 19, African American Gay Male)

Gilbert, on the other hand, chose to disclose his sexual orientation to his best friend through the Internet, which then lead to an open and honest discussion that strengthened their friendship.

Like for example, my best friend, he's straight. He's straight, plus when we were like young, when we were like 12, 13, he was mean to me. He was, and now we were talking on the Internet, I told him I'm gay. And he's like, wow, I didn't know. I'm sorry for everything that I made you go through when we were young, make you feel like shit or gay or now, now I see you as a guy, as a person. Because you're gay doesn't mean that I have to treat you like an asshole. We have more, we have very connection right now, like we used to have. So it's good. (Gilbert, 22, Latino Bisexual Male)

Still other participants reported using Internet-based communication applications to come out to family members. These were typically used when family members were not living in the same geographic region as the participant. Roger describes how he and his sister both "came out" to each other at the same time over Instant Messenger while she was away at college.

I think, during my junior, senior year, like my sister and I both came out to each other at the exact same time. So that was helpful. To see it. Yeah. Because we were always like really close, like best friends, so that just like brought us closer together...Um, she came out to me first like initially she's like, R, I have to tell you something. She's being like really dramatic. And um, she's like, I'm gay. And then, I'm like, I just like said LOL, and then um, it was over instant messenger, because she was at college already. So then I'm just like, I am, too. And she's like, oh, okay. (Roger, 19, Latino Gay Male)

Discussion

Sexual orientation identity development is a critical aspect of the overall identity formation process of gay and bisexual adolescents. These youth must develop their sexual identity amidst a backdrop of heterosexism and homophobia, and explore their sexuality within multiple social-ecological systems that often do not support and encourage same-gender sexual desires (Bronfenbrenner, 2005; D'Augelli, 2005). Given the increased access and relative anonymity of the Internet, gay and bisexual male adolescents are using various Internet-based resources and platforms to facilitate their sexual orientation identity development. These venues offer gay and bisexual adolescents the ability to explore their sexuality in virtual environments where they can control when, how, and how much disclosure about their personal identity and emerging sexuality they want to provide to others (Pingel et al., 2013). Internet modalities also give gay and bisexual youth the option to go beyond virtual connections, by facilitating face-to-face connections with other gay and bisexual people.

Data from the current study identified a great deal about the functions the Internet plays in the sexual orientation identity development process of gay and bisexual male adolescents. The young people in this sample reported using a range of Internet applications that provided them with varying degrees of anonymity and connection to others. Participants also chose to use different applications depending on what they hoped to accomplish during a particular Internet interaction. These findings are in alignment with the growing body of literature focused on exploring the various ways in which gay/bisexual young men in the United States are using the Internet to learn about same-sex sexual behavior, sexual health promotion, and sexual orientation identity development (e.g., Kubicek et al., 2011; Mitchell et al., 2014; Mustanski et al., 2011; Pingel, Bauermeister, Johns et al., 2013; Pingel, Thomas, Harmell & Bauermeister, 2013). Given the lack of same-sex sexual health information provided to gay/bisexual adolescents through school-based sex education programs, the Internet has become a primary source for many gay/bisexual young men to learn about their sexuality.

Multiple Sexual Orientation Identity Development Functions

The Internet provided gay and bisexual male youth with a forum where they could: 1) learn about and explore their sexual orientation and the gay community; 2) connect and socialize with other gay and bisexual peers; and 3) gain self acceptance and share their sexual orientation identity with others. These three primary categories of functions represent core aspects of sexual orientation identity development from prior theoretical/empirical literature including identity awareness, identity connection, and identity comfort (e.g., Cass, 1979; Coleman, 1982; Troiden, 1989), although they did not appear to occur in a successive temporal order as has been hypothesized in these theories. Although these three general areas were used in the development of our initial a priori codes, it is noteworthy that no additional major content areas were identified beyond these, even though we allowed for additional thematic categories to emerge in an inductive manner from the data.

Some youth found the Internet useful in helping them to realize their sexual attraction to other males by providing sexually explicit images of men that prompted arousal and by

providing images of other gay/bisexual young men and adults that gave visibility to the existence of other gay/bisexual people. Participants also learned about gay/bisexual community life and about what it means to be a gay man in society through the written content found in narratives of other gay/bisexual young men and adults that were accessed via a variety of Internet-related sources with varying degrees of anonymity. This combination of both visual and narrative stimuli helped these young men to realize their attraction to other men, and to learn about the existence and functions of the broader LGB community. Although prior studies have identified access to internet-based pornography as helpful in understanding the mechanics of same-sex sexuality among young men (Kubicek et al., 2010; Kubicek et al., 2011), these studies have not specifically discussed viewing explicit content in terms of its potential role in the sexual orientation identity development process. On other hand, the importance of having access to the online narratives of other gay/bisexual young men and adults, as well as the opportunity to pose questions to these individuals, has been identified by Pingel, Bauermeister, Johns et al. (2013) as an aspect of the Internet that facilitated sexual orientation identity development.

The Internet provided an array of ways in which youth could communicate with other gay/bisexual people that provided varying degrees of anonymity and commitment to the communication process. It gave some youth the opportunity to connect with other gay/bisexual people without ever having to reveal any personally identifying information, which gave them the ability to explore their sexual orientation identity with a sense of safety and comfort. For those youth who were isolated from other gay/bisexual people, either because of choice or because of geography, the Internet provided an avenue for connection and decreased loneliness. For African American and Latino youth, the Internet also helped them to communicate with other LGB people of color and to find affirming places and spaces for gay/bisexual youth of color to exchange thoughts and ideas.

With regard to meeting other gay/bisexual people, the Internet assisted participants with meeting friends, boyfriends/romantic partners, and also sexual partners. Interestingly, even though the extant literature on Internet use by gay/bisexual young men has focused primarily on using the Internet to find sexual partners (Bauermeister, Leslie-Santana, Johns, Pingel, & Eisenberg, 2011), this was not the primary type of physical connections reported by our participants. As with other areas, youth utilized a range of Internet-based methods to connect with other gay/bisexual people for friendship, including those who lived within their geographic area as well as those who lived far away. While some youth also directly sought out dating partners on the Internet, others reported that some friends they met online eventually became their boyfriend. Finding sexual partners was the last way in which youth connected with other gay/bisexual people, and this involved both one-time partners as well as regular sexual partners. The Internet allowed these young men to emotionally and physically connect with other gay/bisexual people both locally and globally and to engage in a range of relationships and social interactions that are critical to the sexual orientation identity process. By connecting with other men and young men on LGB-specific websites, participants had the safety and security of knowing that they were communicating with other young men who shared their attraction to males so they did not have to worry about making incorrect assumptions about sexual orientation during face-to-face interactions—a situation that may result in physical and emotional harm if the receptive individual harbors

homophobic or heterosexist views. These findings are in alignment with prior research which has identified the Internet as a safe and confidential place for gay/bisexual male adolescents to connect with other gay/bisexual young men as they explore their sexuality (Kubicek et al., 2011; Mustanski et al., 2011; Pingel, Bauermeiser, Johns et al., 2013).

For many youth the comfort and acceptance stemmed from varying combinations and degrees of gaining accurate information about gay/bisexual people on the Internet, and connecting either virtually or physically with other gay/bisexual people. These experiences helped to affirm participants' sexual orientation identity and to provide them with a sense of belonging and connection to a larger community—all resulting in a greater acceptance of their own sexual orientation. The Internet also provided participants with various modalities for revealing their sexual orientation to others. The different methods demonstrated varying degrees of intimacy and connection, from chat rooms and message board to email and instant messaging. As electronic forms of communication become the norm for young people, it is not surprising that adolescents prefer to communicate personal and intimate information through the Internet and other electronic forms of communication (Schouten, Valkenburg, & Peter, 2007). Valkenburg & Peter (2011) suggest that adolescents prefer Internet-based communication for sensitive information because it provides them with enhanced controllability over their self-presentation and self-disclosure because it provides anonymity, asynchronicity (ability to edit), and accessibility. Therefore, the Internet is providing gay/bisexual adolescents with a developmentally appropriate form of communication to assist with their coming out process.

Developmentally and Culturally Appropriate Forum for Identity Exploration

The sense of control and independence offered by the Internet is developmentally important for all adolescents, as gaining autonomy from parents and other adult caretakers is an important milestone of adolescent development (Havighurst, 1972; Noom, Dekovic, & Meeus, 2001). The varying levels of anonymity offered by the Internet may be especially beneficial for gay and bisexual adolescents who may experience multiple levels of violence and victimization from adults and peers who are not accepting of their same-gender sexual attractions and behaviors (Pilkington & D'Augelli, 1995; Rivers & D'Augelli, 2001). Thus the Internet often provides these youth with a relatively safe and supportive environment where they can develop their sexual orientation identity at their own pace with varying levels of both virtual and actual connection with other gay/bisexual people.

Part of developing a gay/bisexual sexual orientation identity is also learning about the larger gay culture and its accompanying traditions, rituals, symbols, norms, and ways of being, acting and knowing (Gee, 1990; Herdt, 1992, 1997; Pope, 1995). This can be a complex task since there is not one monolithic gay culture. Hertdt (1997) stresses the importance of understanding varying sexual cultures that exist in societies, which he views as generally accepted models of cultural ideals regarding sexual behavior within a specific group. Sexual cultures include sexual and gender norms, emotions, beliefs, rules, and symbolic meanings attached to the nature and meaning of sexual encounters and other sexualized social interactions. Thus a sexual culture creates a system for categorizing certain sexual acts and behaviors as desirable and appropriate, whereas others may be viewed as inappropriate and

forbidden (Herdt, 1997). Thus, as young people explore their sexuality and learn about sexual cultures, they develop an individualized sense of sexuality within the context of a larger cultural social system.

Therefore, gay/bisexual adolescents must not only learn about the larger gay culture, but also must determine what they personally view as appropriate and inappropriate sexual behaviors within their sexual culture. The Internet is a convenient way for gay and bisexual adolescents to do this since they can explore different aspects of the culture with varying degrees of anonymity. Youth also may chose to connect with others during this exploration, as the Internet has been recognized as an important socializing force for youth seeking to learn about gay culture (Driver, 2006; Linne, 2003). As suggested by Russell (2002) and supported by the data presented in this study, the Internet also serves as a way for gay and bisexual youth to create their own communities and connect with one another.

Study Limitations

There are aspects of the study methods and data that present limitations, and should be considered when interpreting the findings of this study. One major limitation is that the data for this paper were collected in 2004–2006, and the Internet and all of its applications have progressed significantly since that time. Although the percentage of youth who use the internet in the United States has not changed significantly since this time period, the accessibility of the internet has increased especially with regard to mobile access to the Internet (Madden et al., 2013). In addition, the development and use of a wide variety of apps has increased since these data were collected, especially the use of geo-social networking apps tailored to gay/bisexual men (Grov et al., 2014; Winerobe et al., 2014). In addition, the social climate regarding the acceptability of identifying as gay or bisexual may be different now than it was when the data were collected, especially as more states in the United States pass legislation to legalize same-sex marriage. Unfortunately, despite social advances gay and bisexual youth still experience marginalization and health disparities across a range of health-related behaviors and outcomes (Institute of Medicine, 2011; Newcomb et al., 2014; Rosario, Corliss, Everett et al., 2014).

Another limitation of this study is that the data were collected as part of a larger parent study that was not focused on Internet use, and thus detailed questions and probes regarding various Internet applications were not asked of all participants. Since the parent study was focused on exploring the relationship between HIV sexual risk behaviors and sexual orientation, ethnic, and masculine gender identity development, the Internet was only specifically queried in sections of the interview guide related to the presence or absence of a virtual community focused on participants' various identities (e.g., a virtual gay community). When participants were asked to describe their sexual orientation identity development experiences, the role of the Internet was often spontaneously discussed, which was the impetus for the current analysis and paper. Given the phenomenological and constructivist frameworks that guided data collection, when youth provided information about the Internet (regardless of the section of the interview) this was queried and probed, but there were not specific sections of the interview guide that systematically and longitudinally assessed the role of the internet in sexual orientation identity development.

Such a detailed set of questions that queried youth about the chronological influences of the Internet on sexual orientation identity development over time could have provided more detailed data on this process.

The sampling frame for this study also presents limitations to the applicability of these data to broader groups of gay and bisexual young men and other same-sex attracted male youth. Youth for this study were only sampled from the Chicago metropolitan area or the Miami/ Dade County metropolitan area. Thus these data may not apply to youth who live in either more suburban or rural areas within the United States—places where the lack of socializing venues for gay/bisexual youth may make the Internet more salient in the sexual orientation development process. Also, given the focus of the parent study, youth were only included if they identified as gay, bisexual, or questioning. Young men who were experiencing same-sex attraction and desires but did not identify as gay, bisexual, or questioning were not included in the sample and may represent a group of youth who access the Internet at higher rates in order to explore their same-sex desires. In addition, the sample was also limited to those who identified as African American, Latino or European American (also due to the nature of the parent study), thus the lived experiences of youth from other ethnic racial identities were not represented.

Future Directions

Although the Internet has many benefits with regard to facilitating the sexual orientation identity development of gay and bisexual adolescents, there are dangers to the Internet that should not be overlooked. Youth who are exploring their sexual orientation via the Internet may be vulnerable to adults who may prey on the naiveté of inexperienced adolescents. Thus, it is critical for parents/caretakers, teachers, community workers, and others who have contact with gay and bisexual adolescents to educate young people about the potential dangers of adults who use the Internet to exploit and victimize youth. They should also work with youth to bolster their existing Internet safety skills, as Hillier et al (2004) have identified that same-sex attracted youth possess a range of strategies they use to protect themselves from unsolicited information and people who approach them on the Internet.

In order to better understand the unique factors that impact the sexual orientation identity development processes of gay and bisexual male adolescents, it will be important for future researchers, theorists, and practitioners to explore the role of the Internet in this critical developmental process. Given the importance of developing a healthy and integrated sexual orientation identity for gay/bisexual adolescents, the Internet and other digital platforms should be explored as potential venues for delivering interventions that assist youth with this critical developmental process. Innovative interventions are currently being developed for gay/bisexual young men that utilize mobile devices and other Internet platforms to deliver physical and mental health promotion interventions (Christensen et al., 2013; Holloway et al., 2014; Muessig et al., 2013; Pachankis et al., 2013), but these generally do not address sexual orientation identity development. One exception is a recent article by Mustanski, Greene, Ryan & Whitton (2014) who have demonstrated the feasibility, acceptability, and initial efficacy of an online comprehensive sexual health promotion program for LGBT youth called Queer Sex Ed. Four of the 17 outcomes that were explored in this initial trial of

Queer Sex Ed were focused on varying aspects of sexual orientation identity and self-acceptance, and all four of these sexual orientation outcomes demonstrated significant positive intervention effects (Mustanski et al., 2014).

The rapidly expanding range of Internet-based platforms and technologies that are available to young people (e.g. YouTube, Foursquare, Instagram, Snapchat) provide increased opportunities for gay and bisexual adolescents and emerging adults to explore their sexual orientation identity development. These technologies provide adolescents with new virtual spaces where they can control and facilitate identity exploration and identity commitment (Erikson, 1980; Marcia, 1980, 2007). These developmental processes may be strengthened through the Internet and new social media technologies, as many of these applications require youth to create public profiles and encourage them to post new content regarding their lives. Thus, young people can explore different roles and personas, and gain immediate feedback from others regarding these new identities. In addition, internet-based interactions can foster social bonding and provide social support for gay and bisexual youth who, compared to prior generations, may have been isolated until they were old enough to frequent an LGB bar/club or community center.

The expanding range of the Internet and new social media technologies can enhance exploration in all of the sexual orientation identity development areas identified in the current data (i.e., sexual orientation awareness, LGB community education, communication, connection, self acceptance, coming out) in new and exciting ways that may provide more support and direction for future generations of gay and bisexual male adolescents and emerging adults. Youth should be cautioned regarding the potential dangers of engaging in identity exploration in public virtual spaces, as young people are often not focused on future consequences and may not think about the long-term effects of posting sensitive or confidential personal information. This is especially true for LGB adolescents, given the pervasiveness of heterosexism and LGB-restrictive policies in many communities. Also with new technologies developing at such a rapid pace, youth may not be fully aware of the breadth of exposure provided by new technologies that are still in a developmental or newly implemented stage.

The Internet, and its many applications, has become a mainstay of daily life for adolescents and emerging adults. The ever expanding array of Internet-based applications that are continually introduced into youth culture are creating new virtual spaces and communities, which provide gay and bisexual male adolescents with affirming environments where they can explore their sexual orientation and connect with other gay and bisexual youth.

Acknowledgments

The Adolescent Trials Network for HIV/AIDS Interventions (ATN) is funded by grant Nos. 5 U01 HD 40533 and 5 U01 HD 40474 from the National Institutes of Health through the National Institute of Child Health and Human Development (A. Rogers, PhD, MPH; K. Ryan, PhD; B. Kapogiannis, MD), with supplemental funding from the National Institutes on Drug Abuse (N. Borek, PhD), Mental Health (P. Brouwers, PhD), and Alcohol Abuse and Alcoholism (K. Bryant, PhD). The study was scientifically reviewed by the ATN's Behavioral Leadership Group. Network scientific and logistical support was provided by the ATN Coordinating Center (C. Wilson, C. Partlow), at the University of Alabama at Birmingham. Network operations were provided by the ATN Data and Operations Center at Westat, Inc. (G. Selkin-Gutman, J. Korelitz, and B. Driver). We would like to thank Larry Friedman, MD, PI of the Miami Adolescent Trials Unit and the participating faculty and staff of the Behavioral Health Promotion

Program at the University of Miami (M. Isabel Fernandez, Cesar deFuentes, Luis Alzamora, Cristobal Plaza, and Leah Varga), as well as the participating staff of the Adolescent Community Health Research Group at DePaul University (Bianca D.M. Wilson, Omar B. Jamil, Marco Hidalgo, R. Sebastian Torres). The investigators are grateful to the members of the Community Advisory Board for their insight and counsel and are particularly indebted to the youth who participated in this study.

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