

A Study of the Quantitative Assessment of the Perception of Youth HIV Youth Services

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Abstract

This study identified the prevention and care service needs for Human Immunodeficiency Virus (HIV) infected youth living in the northern and southern regions of the state of Georgia. It examined care service utilization by mode of exposure of HIV positive youth ages 13 to 24, as well as the perception that of their parents/guardians. The study examined the statistically significant relationship between youth's mode of exposure relative to perceived utilization of social support services and medical services. It employed a mixed method exploratory research design inclusive of qualitative and quantitative data collection; however, this article will discuss only the quantitative results of the social support and medical services. Quantitative data were collected by participants at the conclusion of twelve focus groups and in-depth individual interviews with a sample size of 29. Interviews were conducted from November 2006 to January 2007 in five cities located in the state of Georgia. Findings suggest the need for more HIV peer counselors and peer groups for HIV positive youth ages 13 to 24.

Keywords: HIV/AIDS, service utilization, African American, youth

1. Introduction

Despite major advances in the treatment of Human Immunodeficiency Virus (HIV) and Acquired Immunodeficiency Syndrome (AIDS) continued transmission of HIV remains a major public health problem (Bogart & Thorburn, 2005). Declines in AIDS incidence during the 1990s were not accompanied by comparable declines in the number of newly diagnosed cases of HIV (CDC, 2004). Moreover, the Centers for Disease Control and Prevention (CDC) reported that at least half of all new HIV infections in the United States were among individuals younger than 25 and that the proportion of young people with a diagnosis of AIDS increased (CDC, 2010). As of 2010, more than 1.1 million people in the United States were living with the HIV infection, and almost one in six or 15.8% were unaware of their infection (CDC, 2012).

While the estimated incidences of HIV have remained stable overall in recent years, at approximately 50,000 new HIV infections per year, some groups were affected more than others in the United States. During the time frame of this study in 2010, an estimated 10,456 youth were diagnosed with HIV in the United States and six dependent areas in 2011, representing 21% of an estimated 50,199 people diagnosed during that year. In 2010, youth made up 17% of the U.S. population, and accounted for an estimated 26% of all HIV infections in the United States. Accordingly, African American youth accounted for an estimated 57% of all new HIV infections among youth in the United States, followed by Hispanic/Latino and whites at 20%, respectively (CDC, 2010).

The HIV/AIDS epidemic continues to grow in the state of Georgia with a total number of 50,436 cumulative AIDS cases reported by the end of this study in 2012, which represented an increase of HIV prevalence of 53% from 2005. Georgia was ranked fifth highest in the nation for the total number of new diagnoses of HIV infection in 2011 and sixth highest in the nation for total number of adults and youth living with the HIV infection in 2010. However, the number of new diagnoses of the HIV infection per year varied from 2005 to 2012 with the total new HIV diagnoses in Georgia for 2012 being 2,911, which was a decrease of 4% from 2001 (CDC, 2012).

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Testing, diagnosis, and medical care soon after HIV infection and before developing AIDS are key to the prevention of unnecessary morbidity and mortality as well as reducing further HIV transmissions. According to reports by CDC, in 2012, persons testing late for HIV infection accounted for 57% of new AIDS diagnoses in Georgia. Within that same year, 78% of those diagnosed with HIV were men, 22% were women and there were 47% of the youth ages 13 to 24 with AIDS living outside the 20-county metropolitan Atlanta area (CDC, 2012; Georgia Department of Community Health, n.d.). In rural areas, resources are scarce, and people are more dispersed; therefore, these individuals are harder to reach with treatment and prevention efforts (Akers et al., 2005).

Young people in the United States are at persistent risk for HIV infection (Brown, Beausoleil & DiClemente, 1992; Leigh, Morrison, Trocki & Temple, 1994). This risk is especially notable for youth of minority races and ethnicities (Jemmott, Jemmott & Fong, 1992). Brown, Beausoleil & DiClemente (1992) purports that many young people begin having sexual intercourse at early ages; that 47% of high school students have had sexual intercourse, and 7.4% of them reported first sexual intercourse before age 13. According to research (Crepaz & Marks, 2002; Hader, Smith, Moore & Holmberg, 2001; Lynch, 1999) teens are not likely to perceive themselves at risk and may be willing to take chances with unprotected sex. Many of the 19% of Georgians with AIDS who were diagnosed in their 20s were likely infected as a teen (Georgia Department of Public Health [GDPH], 2012). There is, therefore, an increasing need to gain a better understanding of the prevention and care services needs from that of the consumer, the HIV positive youth as well from the perspective of the health provider.

2. HIV Positive Youth and Healthcare Utilization

HIV/AIDS is hitting the world's young people hardest (Brown, Beausoleil & DiClemente, 1992). More than half of the 14,000 people newly infected each year are under 25 years of age; most of which are female. However, despite the disproportionate burden youth carry, studies show (Huba et al., 2000) that youth are more likely than adults to adopt and maintain safe behaviors; however, young people are routinely disregarded when strategies on HIV/AIDS are drafted, policies made and budgets allocated (Office of National AIDS Policy [ONAP], 2003). Youth between the ages of 13 and 24 in the United States are at unrelenting risks for HIV infection, particularly youth of minority races and ethnicities (Coyle et al., 2004; CDC, 2010).

Healthcare services utilization is of utmost importance in minimizing social support and medical care needs for youth infected with the virus that causes HIV. Research has confirmed the benefits of early diagnosis of HIV/AIDS and the literature regarding health care utilization speaks to a number of studies related to HIV care services utilization for adults (Kellerman et al., 2006; Huba et al., 2000). Conversely, there was a dearth of articles that addressed the HIV health care services utilization for HIV positive youth 13 to 24 years of age. Research has also shown that early detection of HIV in youth and utilization of care services improves the youths' health by modifying conditions that influence their care and management (Kellerman et al., 2006; Lynch, 1999).

2.1 HIV/AIDS Service Delivery in Georgia

The system of care service delivery in Georgia is largely dependent upon the existing public health structure with community health centers, universities, hospitals and community organizations playing a variety of roles in different parts of the state. All levels of the Ryan White funding are distributed throughout the state of Georgia. These funding streams have enabled Georgia to expand the resources to people living with HIV/AIDS (Akers, 2005; Blake, Taylor, Nichols, & Akers, 2008; Carey & Schroder, 2002).

The Ryan White Comprehensive AIDS Resources Emergency (CARE) Act is a federal legislation that addresses unmet needs of persons living with HIV by funding primary health care and support services. The CARE Act was named after Ryan White, an Indiana teenager, whose courageous struggle with HIV/AIDS and against AIDS related discrimination helped educate the nation. Youth ages 13 to 24 constituted approximately 4.1% of all Ryan White Comprehensive AIDS Resources Emergency (CARE) Act clients in 2002 (Health Resources & Services Administration [HRSA], 2008; CDC, 2006).

The CARE Act reaches more than 533,000 people each year (CDC, 2006). The Eligible Metropolitan Area (EMA) is the geographic area eligible to receive Title I CARE Act funds. Title I provides grants to 51 EMA's disproportionately affected by HIV/AIDS. The United States Bureau of Census defines the boundaries of the metropolitan area; eligibility is determined by AIDS cases reported to the Centers for Disease Control and Prevention. The Atlanta EMA includes the following counties: Bartow, Paulding, Carroll, Coweta, Fayette, Spalding, Henry, Newton, Rockdale, Gwinnett, Walton, Barrow, Forsyth, Cherokee, Pickens, DeKalb, Fulton, Clayton, Cobb and Douglas (Akers et al., 2005).

3. Purpose of the Study

This pilot study focused on HIV positive youth, ages 13 to 24 and their parents and/or guardians regarding HIV service utilization. It was conducted as a smaller component of a larger ongoing project that focused on HIV/AIDS education, prevention and intervention services in the state of Georgia. The data collected for the study with the youth and their parents/guardians were utilized exclusively for the pilot study that focused on HIV youth services utilization.

While the pilot study and the larger ongoing project were through collaborations with Kennesaw State University's Kennesaw AIDS Research and Evaluation Network (KSU/ KAREnet) in Kennesaw, Georgia from 2006 to 2010, both projects were conducted through collaborative efforts with Georgia's HIV/AIDS Community Planning Group (GCPG); Department of Human Resources (DHR), Division of Public Health; and with participating AIDS Service Organizations (ASO).

The overarching purpose of the pilot study was to identify the HIV prevention and care service needs for behaviorally infected and perinatally acquired HIV youth living in Georgia. The projects' targeted population were HIV positive youth 13 to 24, their parents/guardians and the AIDS Service Organization as providers. While the study also assessed the knowledge, attitude, and behavior of both the HIV positive youth and their parent/guardian perceptions toward HIV/AIDS prevention and care service utilization in Georgia; this article will present a small segment of the findings by focusing on the service utilization by HIV infected African-American youth based on mode of exposure.

In both projects prevention and care services range from services such as clinical research trials, rapid HIV testing, syringe and needle distributions and approximately 31 other services identified throughout the study. However, special emphasis was focused on the HIV positive youth perception toward prevention and care service utilization, as well as those of their parents/guardians (Cunningham et al., 2006; Gambrill, 1997). Some of those services for the youth and their parents/guardians included social support care utilization and medical services utilization needs, condom distribution, counseling, mental health services and peer counseling services.

The theoretical construct utilized in this study was based in part on the Health Belief Model. The Health Belief Model evaluated prevention modalities and the service utilization delivery component relegated to HIV positive youth living in the state of Georgia (Glanz, Rimer, & Lewis, 2002). The study results and findings further addressed the need for more evidenced based educational information for Georgia's HIV/AIDS Community Planning Group (GCPG) by providing an annual update to the 2013 State of Georgia HIV/AIDS Comprehensive Plan.

4. Methodology

This study employed a mixed method exploratory research design where both qualitative research, in the form of focus groups and key informant interviews, and quantitative research utilizing survey research were conducted. A combination of twelve focus groups and key informant/in-depth individual interviews were conducted with HIV positive youth from the ages of 13 to 24 and their parents or guardians in five cities in the state of Georgia; Atlanta, Savannah, Albany, Stone Mountain and Augusta. Prior to conducting the first interview with youth and their parents/guardian, key informant interviews were scheduled with key contacts from the selected Aids Serving Organizations (ASO), clinics and hospitals. All the interviews for the study were conducted between November 13, 2006 and January 26, 2007 with youth 13 to 24 years of age who received services from the participating agencies and institutions. Qualitative data were collected from the twelve focus groups and in-depth individual interviews with the youth through the Youth Needs Assessment Survey and the Youth Demographic Data Form.

4.1 Sample and Population

A convenience sample was recruited through the participant's providers. Both qualitative and quantitative data were collected through focus groups and/or in-depth individual interviews with HIV positive youth, ages 13-24 who received HIV related health services in Georgia. The sample size for the pilot study (youth and parent/guardian) was N = 29. This included a total of twelve-focus groups/in-depth interviews in which the number of subjects assigned to each focus group was dependent on the number of participants volunteering. As a result of feedback from the ASO regarding the observation of the differences in maturity levels and supporting research regarding adolescent stages of development (Schriver, 2011; Hutchison, 2008; Zastrow & Kirst-Ashman, 2009) the youth were stratified based on age, 13 – 17 and 18 – 24.

Table 1 Socio-demographic Profile of Study Participants

Variable	Frequency	Percent
Race		
African American/Black	28	96.6
Multi-Racial	1	3.4
Gender		
Male	20	69.0
Female	9	31.0
Age Category		
13 – 17	12	42.9
18 – 24	4	14.2
25 – 44	4	14.3
45 – 54	4	14.2
55 – 64	2	7.2
65 +	2	7.2
Marital Status of Parent/Guardian		
Single	5	38.5
Married	3	23.1
Widowed	3	23.1
Separated	1	7.7
Committed Relationship	1	7.7
Reported Family Annual Income		
0 – \$10,000	4	15.4
\$10,001 – \$20,000	9	34.6
\$20,001 – \$30,000	2	7.7
\$30,001 – \$40,000	2	7.7
Don't Know	9	34.6
Educational Level		
Six Years	2	7.4
Seven Years	1	3.7
Eight Years	2	7.4
Nine Years	2	7.4
Ten Years	3	11.1
Eleven Years	4	14.8
Twelve Years	10	37.0
Thirteen Years	1	3.7
Fourteen Years	2	7.4
Positive HIV Status	21	72.4
Negative HIV Status	8	27.6

5. Instrumentation and Treatment of Data

While the research study employed a total of seven instruments, five designed for qualitative data gathering and two for quantitative data gathering; for the purpose of this article, only the two quantitative instruments relevant to the youth are discussed. These instruments exemplified several different models for developing or adapting measures described in the literature and were developed by the KAREnet team. The two instruments were the Youth Needs Assessment Survey and the Youth Demographic Data Form. The Youth Demographic Focus Group Forms consisted of fifteen questions and the Youth Service Needs Assessment Survey asked about 29 services utilized and were both self-administered. They were entered into SPSS (Statistical Product and Service Solutions, formerly Statistical Package for the Social Sciences), for analysis. All data were confidential and only aggregated findings were reported.

6. Results

Quantitative Analysis

While the study utilized a mixed method analysis of both qualitative and quantitative; this section of the article provides research findings resulting from analysis regarding the mode of exposure and other demographic characteristics; perceived knowledge, attitude and behavior regarding prevention; and perceived utilization of care services. The presentation of study findings is organized into four sections: 1) demographic data for the focus group/in-depth interviews, 2) quantitative analysis from youth and parent/guardian needs assessment surveys, 3) quantitative analysis from the provider surveys and 4) research questions and hypotheses.

6.1 Demographic Data

Descriptive statistics were used to analyze the following: race, gender, age category, marital status of parents/guardians, annual income, education level and parents HIV status. The target population for this study was composed of perinatally acquired HIV youth and/or behaviorally infected youth between the ages of 13 to 24, sees Table 1.

The age category for the youth was dichotomized into two separate groups; ages 13 to 17, which was 42.9% of the study population, and ages 18 to 24, which was 14.2%. This was done to provide an age appropriate environment for the focus group discussions.

As Table 1 indicates, 38.5% of the parents/guardians were single; 23.1% were married; 23.1% widowed and 7.7% were separated or in committed relationships. Regarding the family income of the study, 15.4% of the family's annual income was \$10,000 or less; 7.7% between \$20,000 and \$ 40,000; 34.6% between \$10,000 and \$20,000 and 34.6% of the participating families reported having no knowledge of their family's income. As it relates to educational levels, 7.4% of the youth participants were in the 6th grade; 3.7% in the 7th grade; 7.4% in the 8th grade and the largest number of participants were 37% and self-identified has having completed the 12th grade. The overall HIV status composition of the focus groups and in-depth interviews was 72.4 % participants HIV positive and 27.6% not infected with the HIV virus.

The study examined the relationship of how HIV positive youth's mode of exposure affected their perceived utilization of social support and medical services. The social support services were operationalized by utilization of peer counseling and counseling for HIV services. Medical services were defined by the utilization of primary HIV care services, mental health services and dental services.

There were two research questions and three null hypotheses of the study. The research questions (RQ) for this study were as follows:

RQ1: Is there a statistically significant relationship between youth's mode of exposure and perceived utilization of social support services?

Is there a statistically significant relationship between youth's mode of exposure and perceived utilization of medical services?

The hypotheses for this study were as follows:

H01: There is no statistically significant relationship between youth's mode of exposure and perceived utilization of social support services.

H02: There is no statistically significant relationship between youth's mode of exposure and perceived utilization of medical services.

H03: There is no statistically significant relationship between HIV status and perceived utilization of social support service by peer counseling services.

Table 2 Socio-demographic Variable Table

Variables	Scale of Measurement	Data Entry Code	Source of Data
<i>Sociodemographic / Youth Information</i>			
Age Category	Ordinal	1=13 -17 years 2=18 -24 years	Youth Demographic Form
Ethnicity/Race	Nominal	1= African American 5= Multi-racial	Youth Demographic Form
Gender	Nominal	1= Female 2= Male 3= Transgender (Female) 4= Transgender (Male)	Youth Demographic Form
Mode of Exposure	Nominal	1= Sharing needles 2= Unprotected Vaginal 3= Unprotected Anal Sex 4=Born with HIV 5=Don't know	Youth Demographic Form
Months Known of Diagnosis	Nominal	1= Less than 12 months 2= 13 to 60 months 3= 61 to 120 months 4= 121 to 180 months 5= 181 to 240 months	Youth Demographic Form
Months in Treatment	Nominal	1= Less than 12 months 2= 13 to 60 months 3= 61 to 120 months 4= 121 to 180 months 5= 181 to 240 months 6= over 241 months	Youth Demographic Form
Perception of Greatest Risk Behavior	Nominal	1= Drug Use 2= Needle Sharing 3= Unprotected Sex 4= Other	Youth Demographic Form
How often provider talks about prevention	Ordinal	1=Never 2=Some Visits 3=Most Visits 4=Every Visit	Youth Demographic Form
Perception of lack of prevention utilization	Nominal	1=Don't care 2=Lack of knowledge 3=Other	Youth Demographic Form

Socio-demographic factors had a significant impact on utilization of care involving individuals, groups or communities. In the study, socio-demographic variables were defined as (1) age, (2) ethnicity/race, (3) gender, (4) mode of exposure, (5) months known of diagnosis and (6) household income. The perceived utilization of care services was measured by (1) condom distribution; (2) counseling for HIV, (3) dental services, (4) HIV education and training, (5) mental health services, (6) primary HIV care doctor and (7) peer counseling services. Table 2 provides a dependent variable description of socio-demographic facts include in the study.

Table 3 Cross tabulation of Counseling for HIV Service Utilization by Mode of Exposure

	Mode of Exposure									
	Unprotected		Anal Sex		Born with HIV		Don't Know		Total	
	#	%	#	%	#	%	#	%		
Counseling for HIV										
Used most often	2	13.3	4	26.7	0	0.0	6	40.0		
Greatest need	1	6.7	4	26.7	2	13.3	7	46.7		
Not available	1	6.7	1	6.7	0	0.0	2	13.3		
Total	4	26.7	9	60.0	2	13.3	15	100.0		
$\phi = .468$		df = 4		$p = .512$						

7. Summary of Results and Quantitative Analysis of Focus Group Forms

Counseling Services for HIV Service Utilization by Mode of Exposure

With regards to research question one (RQ1); there was no statistically significant relationship between youth’s mode of exposure and perceived utilization of social support services by counseling for HIV services. To arrive at this conclusion, cross tabulations were utilized to demonstrate the statistical relationship between independent variables and the dependent variables. As indicated in table 3, 40% of the youth (used most often) indicated that they utilized counseling services that provided HIV education and of that 40%, 13.3% were behaviorally infected and 26.7% perinatally acquired the virus. Table 3 further points out that 46.7% of the same sample population identified counseling services for HIV as a (greatest need) in their community and a total of 13.3 % of the youth identified the services as not being available within their community.

As shown in table 3, statistical measurement phi (ϕ) was employed to test for the strength between mode of exposure (MOE) and counseling for HIV. As indicated, there was a weak relationship ($\phi = .468$) between the two variables. When the chi-square statistical test for significance was applied (.512), the null hypothesis was accepted indicating no statistically significant relationship between the HIV positive youth’s mode of exposure and counseling for HIV service utilization.

Table 4 Cross tabulation of Peer Counseling Service Utilization by Mode of Exposure

	Mode of Exposure									
	Unprotected		Anal Sex		Born with HIV		Don't Know		Total	
	#	%	#	%	#	%	#	%		
Peer Counseling Services										
Used most often	2	13.3	1	6.7	0	0.0	3	20.0		
Greatest need	2	13.3	3	20.0	2	13.3	7	46.7		
Not available	0	0.0	5	33.3	0	0.0	5	33.3		
Total	4	26.7	9	60.0	2	13.3	15	100.0		
$\phi = .705$		df = 4		$p = .113$						

8. Peer Counseling Care Services Utilization by Mode of Exposure

Regarding hypothesis one (H01), there was no statistically significant relationship between youth’s mode of exposure and perceived utilization of social support services by peer counseling services. As indicated in Table 4, 20.0% of the youth indicated that they utilized peer counseling care services and of that 20%, 13.3% were behaviorally infected and 6.7% youth who perinatally acquired the virus. Table 4 further points out that 46.7% youth identified peer-counseling services as the greatest need in their community; while 33.3 % identified the services as not being available within their community. As shown in table 4, statistical measurement phi (Φ) was employed to test for the strength between mode of exposure and peer counseling services and as indicated, there was a weak relationship ($\Phi = .705$) between the two variables. When the chi-square statistical test for significance was applied (.113), the null hypothesis was accepted, indicating no statistically significant relationship between mode of exposure and peer counseling care service utilization.

Table 5 Cross tabulation of Primary HIV Care Service Utilization by Mode of Exposure

	Unprotected		Mode of Exposure				Total	
	Anal Sex #	%	Born with HIV #	%	Don't Know #	%	#	%
Primary HIV Care								
Used most often	2	12.5	5	31.3	1	6.3	8	50.0
Greatest need	2	12.5	2	12.5	1	6.3	5	31.3
Not available	0	0.0	2	12.5	0	0.0	3	18.8
Total	4	25.0	9	56.3	2	12.6	16	100.0

$\Phi = .636$ $df = 6$ $p = .371$

9. Primary HIV Care Services Utilization by Mode of Exposure

Research question two (RQ2) measured the statistically significant relationship between youth’s mode of exposure and perceived utilization of medical services by the primary HIV care doctor. As indicated in table 5, of the HIV positive youth that responded, 50% indicated that they utilized primary HIV care services and of that 50%, 12.5% were behaviorally infected and 31.3% of the youth perinatally acquired the virus. Table 5 further points out that 31.3% of the same sample population identified primary HIV care services as the greatest need in their community. Table 5 also reports that 12.5 % of the youth identified that the services were not being utilized because they were not available within their community. Lastly, as shown in table 5, statistical measurement phi (Φ) was employed to test for the strength between mode of exposure and primary HIV care services. As indicated, there was a moderate relationship ($\Phi = .636$) between the two variables. When the chi-square statistical test for significance was applied (.371), the null hypothesis was accepted, indicating no statistically significant relationship between mode of exposure and primary HIV care service utilization.

Table 6 Cross tabulation of Mental Health Service Utilization by Mode of Exposure

	Unprotected		Mode of Exposure				Total	
	Anal Sex #	%	Born with HIV #	%	Don't Know #	%	#	%
Mental Health Service								
Used most often	2	13.3	3	20.0	0	0.0	5	33.3
Greatest need	2	13.3	4	26.7	2	13.3	8	53.3
Not available	0	0.0	2	13.3	0	0.0	2	13.3
Total	4	26.7	9	60.0	2	13.3	15	100.0

$\Phi = .468$ $df = 4$ $p = .468$

10. Mental Health Service Utilization by Mode of Exposure

Regarding hypothesis two (H02), there was no statistically significant relationship between youth’s mode of exposure and perceived utilization of medical services by mental health providers. As indicated in table 6, 33.3% indicated that they utilized mental health services and of that 33.3%, 13.3% of the youth were behaviorally infected and 20.03% of the youth were perinatally infected. Table 6 further points out that 53.3% of the same sample population identified mental health services as a greatest need in their community. Table 6 further reports that 13.3 % of the youth identified the services as not being available within their community. As shown in table 6, statistical measurement phi (Φ) was employed to test for the strength between mode of exposure and mental health services. As noted, there was a weak relationship ($\Phi = .468$) between the two variables. When the chi-square statistical test for significance was applied (.468), the null hypothesis was accepted, indicating no statistically significant relationship between mode of exposure and mental health service utilization.

Table 7 Cross tabulation of Dental Service Utilization by Mode of Exposure

Unprotected Mode of Exposure	Mode of Exposure		Anal Sex		Born with HIV		Don't Know		Total
	#	%	#	%	#	%	#	%	
Dental Service									
Used most often	1	6.3	4	25.0	1	6.3	7	43.8	
Greatest need	2	12.5	4	25.0	1	6.3	7	43.8	
Not available	1	6.3	1	6.3	0	0.0	2	12.5	
Total	4	25.0	9	56.3	2	12.5	16	100.0	

$\Phi = .391$ $df = 6$ $p = .875$

11. Dental Service Utilization by Mode of Exposure

Regarding hypothesis two (H02) dental service utilization; there was no statistically significant relationship between youth’s mode of exposure and perceived utilization of medical services in the form of dental services. As indicated in table 7, 43.8% of the youth indicated that they utilized dental services. Of that 43.8%, 6.3% youth were behaviorally infected and 25.0% of the youth perinatally acquired the HIV virus and 6.3% of the youth did not indicate any type of mode of exposure by selecting the “don’t know” category. Table 7 further points out that 43.8% of the same sample population identified dental services as a (greatest need) in their community and 12.5 % of the youth identified the services as not being available. As shown in table 7, statistical measurement phi (Φ) was employed to test for the strength between mode of exposure and mental health services. As indicated, there was a weak relationship ($\Phi = .391$) between the two variables. When the chi-square statistical test for significance was applied (.875), the null hypothesis was accepted, indicating no statistically significant relationship between mode of exposure and dental care service utilization.

Table 8 Cross tabulation of Peer Counseling Service Utilization by HIV Status

HIV Status	No		Yes		Total	
	#	%	#	%	#	%
Peer Counseling Services						
Used most often	0	0.0	4	14.8	4	14.8
Greatest need	7	25.9	11	40.7	18	66.7
Not available	0	0.0	5	18.5	5	18.5
Total	7	25.9	20	74.1	27	100.0

$\Phi = .418$ $df = 2$ $p = .094$

12. Peer Counseling Service Utilization by HIV Status

Regarding hypothesis two (H02), there was a statistically significant relationship between HIV status and perceived utilization of social support services by peer counseling services. Cross tabulations were performed to determine the nature of statistical relationships between peer counseling service utilization and the reported HIV status of the focus group/in-depth interview participants. As Table 8 indicates, 27 of the 29 participants reported their HIV status and of that 27, 74.1% participants reported being HIV positive. Of the 74.1%, 14.8% indicated that they utilized peer counseling services; eleven or 40.7% reported peer counseling as the (greatest needed) service and five or 18.5% reported peer-counseling services as not being available within their community. Seven or 25.9% of the 27 participants reported not being HIV positive and reported peer counseling services as a greatest need. As shown in table 8, statistical measurement phi (Φ) was employed to test for the strength of the service utilization between peer counseling service and HIV status. As indicated, there was a weak relationship ($\Phi = .418$) between the two variables. When the chi-square statistical test for significance was applied (.094), the null hypothesis was rejected, indicating a statistically significant relationship between peer counseling utilization services and HIV status.

Table 9 Cross tabulation of Counseling for HIV Service Utilization by HIV Status

Counseling for HIV Services	HIV Status			Total		
	No	Yes	Total			
Used most often	1	3.6%	7	25.0%	8	28.6%
Greatest need	6	21.4%	11	39.3%	17	60.7%
Not available	1	3.6%	2	7.1%	3	10.7%
Total	8	28.6%	20	71.4%	28	100.0%

$\Phi = .418$ $df = 2$ $p = .491$

13. Counseling for HIV Service Utilization by HIV Status

There was no statistically significant relationship between HIV status and perceived utilization of social support service by counseling for HIV services. Cross tabulations were also performed to determine the nature of statistical relationships between counseling for HIV service utilization and the reported HIV status of the focus group or in-depth interview participants. As table 9, 28 of the 29 participated who answered this question reported their HIV status and of the 28, 71.4% or twenty participants reported being HIV infected. Of the 71.4%, 25 % indicated that they utilized peer-counseling services; 39.3% reported peer counseling as the greatest needed services and 3.6% reported HIV counseling services not available within their communities, while 21.4% identifying peer-counseling services as a greatest need.

As shown in Table 9, statistical measurement phi (Φ) was employed to test for the strength between counseling for HIV service utilization and HIV status. As indicated, there was a weak relationship ($\Phi = .418$) between the two variables. When the chi-square statistical test for significance was applied (.491), the null hypothesis was accepted, indicating no statistically significant relationship counseling for HIV service utilization and HIV status.

Table 10 Pearson Correlation Coefficients of Provider Characteristics

	Variable 1	Variable 2	Variable 3	Variable 4
Variable 1	1	.306*	.083	-.054
Sig. 2-tailed		.032	.693	.786
(N)	62	49	25	28
Variable 2	.306*	1	.831**	.250

Note: N indicates sample size for each correlation analysis

Variable 1: Social Worker (LSW)

Variable 2: Peer Counselor

Variable 3: Youth 13 to 17 years of age

Variable 4: Youth 18 to 24 years of age

* Correlation was significant at the 0.01 level (2-tailed)

** Correlation was significant at the 0.05 level (2-tailed)

Table 10 shows the relationship between the dependent variables regarding service request utilization using the one-way analysis of variance (ANOVA). ANOVA is a statistical program to calculate predictive modeling with regard to certain level of statistical certainties given what the data shows. The interval dependent variables from the provider survey and the categorical independent variables were individually analyzed as a unit of analysis for significance. When the relationship between peer counselors and the number of youths 13 to 17 years of age and youth 18 to 24 years of age were examined by ANOVA the frequency of use and youth services were predictable dependent on the age of the cohort. Youth who were 18 to 24 years of age typically used youth services. A strong correlations predictor relationship between Peer Counselor services and youth services generally existed. Therefore, the correlation between the two variables was analyzed and there was a relationship to how frequently youth were apt to request these services.

Table 11 One Way ANOVA of Service Request Utilization Between Groups

Service Requested	Characteristic	F-Value	Significance
Youth Services	Peer Counselor	4.70	.003
Youth Services	Females ages 18 to 24	2.36	.069
Peer Counseling	Peer Counselors	2.51	.057
HIV Education & Training	Youth ages 13 to 17	2.50	.061
HIV Education & Training	Youth ages 18 to 24	4.25	.006

As indicated in table 11, a strong predictor model or predictor outcome that provided statistical evidence that youth services are more apt to be requested more with respect to peer counseling at a significance of .003 and a F-Value of 4.70. Table 11 also indicated that there was a weak relationship predictably between youth services and those that make the frequent request for services utilization between female youth ages 18 to 24 at the significance level of .069 and a F-Value of 2.36. The relationship was weak, but it did exist. From this data, it can be suggested that by a certain level of prediction that female youth will typically pursue or seek out these types of care services. Even though the significance was less than .10, it is important to report the findings for two distinct reasons. The findings indicated the need to develop models or services for HIV positive women or high-risk negatives 18 to 24 years of age because from the providers' perception, they were more apt to seek and utilize youth services. Secondly, from a researcher's perspective, reporting it avoided committing a Type II error (β).

As indicated in table 11, the significance regarding Peer Counselor was within the range of .10 and .05. of .057 and the F- Value is 2.51. The significance is barely .10 but needed to be reported in order to avoid committing a Type II Error (β). The Peer Counseling reported by the providers were general Peer Counseling that was not only specific to youth ages 13 to 24. When examining the dependent variable of HIV Education and Training, the number of youths ages 13 to 17 and the number of youths ages 18 to 24 depended on how frequently HIV Education and Training services were most often requested. HIV Education and Training services showed a strong significant relationship between ages of 13 to 17 (.061) with F-Value (2.5) and ages 18 to 24 years at the significance level (.006) with the F-Value (4.2). This was also reported to avoid a Type II Error (β). It is therefore speculated that HIV Education and Training was most often requested by an adult and of the age of majority. It is further theorized that youth 13 to 17 years of age who were perinatally infected have a higher working knowledge of HIV education due to their involvement regarding the history of the virus via their parents/guardians and their parents'/guardians' request for service utilization.

Table 11 also indicated the perception of the effectiveness of the HIV prevention programs reported by the Service Providers. The effectiveness in relations to the interval level variables against the categorical level variables is measured. Individual Level Intervention Peer

Counseling was measured against Peer Counselors with an F-Value of 2.9 and a significance of .04. Females ages 13 to 17 had an F-Value 2.4 with a significance level .09; males ages 13 to 17 had an F-Value of 2.4 with a significance level of .09 and females ages 18 to 24 had an F-Value of 2.3 with a significance level of .09.

Table 12 One Way ANOVA of Service Request Effectiveness Between Groups

Service Requested	Characteristic	F-Value	Significance
Peer Counseling ILI	Peer Counselor	2.95	.045
Peer Counseling ILI	Females ages 13 to 17	2.35	.097
Peer Counseling ILI	Males ages 13 to 17	2.39	.093
Peer Counseling ILI	Females ages 18 to 24	2.26	.102
Peer Counseling GLI	Peer Counselor	5.40	.004

Note: ILI means Individual Level Intervention and GLI means Group Level Intervention

Table 12 shows the relationship between the dependent variables regarding service request effectiveness using the one-way analysis of variance (ANOVA). There is a strong predictor relationship between perceived effectiveness of prevention and intervention services for Group Level Intervention Peer Counseling and Peer Counselor, F-Value (5.40) at a significance level of .004.

Logically the author was referring generally to the services, however, when mined down, perceptions of effectiveness still hold true in the context of Peer Counseling but the limitation of that might have been due to the fact of how the variables were measured. Nonetheless, it only had one index to measure Peer Counseling effectiveness for individuals.

Theoretically, the study utilized more indexes were both reliable and valid in order to determine the effectiveness of Peer Counseling. It is therefore, conceivable to have a higher level of significance.

Table 13 Cross tabulation of Providers' Youth Services Perception of prevention by Peer Counseling Services Individual Level Intervention

	Perception of effectiveness of prevention interventions							
	Don't Know		Peer Counseling Somewhat Effective		Individual Intervention Effective		Level Very Effective	
	#	%	#	%	#	%	#	%
Youth Services								
Never Used	8	40.0	7	35.0	4	20.0	1	5.0
Rarely Used	2	12.5	4	25.0	1	6.3	7	43.8
Occasionally	11	52.4	5	23.8	3	14.3	3	14.3
Frequently	2	33.3	1	16.7	2	33.3	1	16.7
Always	2	18.2	2	18.2	2	18.2	5	45.5

df = 12 *p* = .072

Cross tabulations were utilized to demonstrate the statistical relationship between the interval variable of Youth Services and the categorical variables of provider's perceptions of prevention interventions. The Youth Services were measured by frequency of service utilization and request. The frequency categories were: 1) never used; 2) rarely used; 3) occasionally; 4) frequently; and 5) always. The categorical variables from the provider survey regarding their perception of effectiveness of prevention interventions service delivery provided a choice of one of four selections regarding service delivery: 1) Don't know, 2) Somewhat Effective; 3) Effective; 4) Very Effective. Cross tabulations were individual calculated between providers perception of Youth Services by Individual Level Peer Counseling Services Interventions; Youth Services by Group Level Peer Counseling Service Intervention; and by Youth Services and Condom Distribution and Training Community Level Intervention.

Cross tabulation between Youth Services and the providers' perception of Peer Counseling Services on the Individual Level revealed that 40% of the 20 that responded answered that youth services had never been used and that they did not know about it effectiveness during the reporting period. Eleven (11) or 52.4% of the twenty-two (22) that responded answered that the services were occasionally used, and they could not speak to its effectiveness regarding prevention intervention. With regards to services reported as "always" being utilized, 45.5% of the nine that responded identified them as being very effective.

As shown in Table 13, statistical measurement Chi Square (χ^2) was employed to test for the significance between youth services and Individual Level Peer Counseling Services. When the chi-square statistical test for significance was applied (.072), the null hypothesis was rejected, indicating a statistically significant relationship Peer Counseling utilization services and HIV status. As indicated, there was not a significant relationship between the two variables.

14. Limitations of the Study

When a study is conducted, there are often some aspects over which the researcher cannot exert absolute control. These aspects represent limitation to the interpretation, use and generalization of the findings. This study's participants were with HIV positive youth under the age of 18. This population was considered a vulnerable population because of their ages being 13 to 17 and their HIV status, which created a greater degree of difficulty in acquiring permission from the Institutional Review Boards (IRB) of the provider institutions. The race and ethnicity of its participants were also a limitation of the study. The organizations and agencies participating in the study reported providing services to different races and ethnicities and that in their recruitment solicited all race and ethnicities; yet the study only was able to secure HIV positive youth and parent/guardians who were African-American or multiracial.

Another limitation to the study was regarding the epidemiological focus of the data set because of its lack of a social work stance or focus. Lastly, since the needs assessments, demographic forms and the surveys were self-administered; it was assumed that the responses that were given represented accurate and honest responses.

15. Conclusion

As mentioned earlier, a large number of studies have been conducted that focused on healthcare service utilization for HIV positive adults but there exist a dearth of articles specific to the HIV positive youth 13 to 24 and even a less number of articles available for HIV positive youth living in the state of Georgia. Although the rationale behind focusing on the population group most affected by the HIV virus was clearly evident, this somewhat narrow focus neglects to account for a number of additional, substantive population groups such as youth 13 to 24 years of age and African American youth 13 to 24 years of age.

Future studies should examine the experiences received by HIV positive youth from their healthcare providers at different stages of their HIV status. They should also take into account the mode of transmission; particularly perinatally or behaviorally infected, when determining care utilization of services and effectiveness of service delivery. A common language with the youth should be developed, adopted and understood by healthcare providers, researchers and educators. In this study, a large number of youth (69%) reported not having a clear understanding of what their health care providers were trying to communicate to them regarding their diagnosis as well as more guidance regarding the need to adhere to medications or their treatment regimens.

More studies should examine the effectiveness of the HIV services delivery in the state of Georgia. According to this study, there is also a great need for more HIV services in the state of Georgia that provide social support and medical care services to youth 13 to 24 years of age. Challenges faced by this population are only augmented by the inability to locate services near their residence. A number of parents/guardians and youth reported that they had to travel over hundred miles one way for services. Health care professionals must work both with the HIV positive youth and within the system of HIV care to advocate for clear access to available treatment for every person with HIV who wants them.

Mental health professionals of all disciplines must merge their traditional roles with counseling and social case work in order to assist infected youth 13 to 24 years of age in maintaining social support as they adjust to new medications, treatment regimens. More training and more studies should be conducted to evaluate the level of sensitivity healthcare providers' show to youth who are infected with the virus, particularly in the state of Georgia.

More studies should also examine the association between the lack of medication adherence and the size and/or the taste of the medication among HIV positive youth. While it is impossible to foresee the future, some speculations about what might be in store for HIV infected youth may be useful and this can be accomplished to more research in these areas.

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