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Use of HIV Primary Care by HIV-positive Haitian Immigrants in Miami, Florida

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Abstract

Little is known about the use of HIV primary care among Haitian immigrants in the U.S. The present study utilizes data from a survey of HIV positive Haitians recruited from an HIV primary care clinic in Miami, Florida to examine barriers and facilitators of regular use of HIV care by this population. Selection of measures was guided by the Andersen Model of Health Services Utilization for Vulnerable Populations. The dependent variable, regular use of HIV primary care, was operationalized as completion of 4 or more HIV primary care visits during the previous 12 months. Of the 96 participants surveyed, approximately three-fourths did not graduate from high school and reported an annual income of up to $5,000. Seventy-nine percent of participants completed 4 or more visits in the past year. On univariate as well as multivariate analyses, participants without formal education or those with high psychological distress were significantly less likely to have used HIV primary care regularly than those who attended school or who were less distressed, respectively. The findings emphasize the need for health care practitioners to pay close attention to the education level and the mental health status of their Haitian HIV patients. The data also suggest that once these individuals are linked to care and offered assistance with their daily challenges they are very likely to stay connected to care and to take their antiretroviral medicines.

Keywords

Haitians; Access to care; HIV-positive immigrants

INTRODUCTION

Despite the treatment success of the antiretroviral medications (HAART), a sizeable proportion of the HIV-positive population is still not attending HIV care on a regular basis, and many persons living with HIV often receive their HIV care in hospital or emergency room settings (Fleishman & Hellinger, 2003; Metsch et al., 2009). HIV positive immigrants are particularly vulnerable to these disparities. These individuals face not only the traditional access barriers documented for other minority populations, and in most cases do so to a

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greater extent, but also in dealing with the health care system of this country, immigrants must overcome access impediments that are specific to their foreign origins (Guendelman, Scauffer, & Pearl, 2001), such as adaptation and acculturation challenges, communication barriers, and mistrust of the health care system (Braveman et al., 1989; Guendelman et al., 2001; Lillie-Blanton & Hudman, 2001; Schmidley, 2003; Saint-Jean & Crandall, 2005a; Saint-Jean & Crandall, 2005b).

Haitian immigrants reside in almost all areas of the country, especially in large cities; in Florida they represent one of the largest foreign-born groups. The 2006 American Community Survey estimated that there were 366,284 people of Haitian descent living in Florida (US Census Bureau, 2007). This community has been disproportionally impacted by the HIV epidemic. In Miami-Dade County, Florida, for instance, Haitians comprise 9% of HIV infection cases and 16% of AIDS cases, although they comprise only about 5% of the County population (Miami Dade County Health Department, 2009. Evidence also indicates that Haitians, in general, and HIV-positive Haitians in particular are among the groups with the least access to health care in the U.S. (Samet et al., 1994; Rodriguez, Metsch, Saint-Jean, Molina, & Kolber, 2007, Saint-Jean & Crandall, 2005a; Saint-Jean & Crandall, 2005b). A study conducted during the pre-HAART era found that Haitian ethnicity was associated with a lower CD4 cell count at presentation for initial primary care for HIV persons, indicating a delay in accessing available medical services (Samet et al., 1994). A more recent study found that, compared to African Americans, Haitians were more likely to be hospitalized for HIV-related complications and were more likely to delay seeking care (Rodriguez et al., 2007). The reasons for this delay have not been elucidated. However, emerging data indicate, that stigma, cultural issues, and limited knowledge about HIV transmission may constitute major health care barriers among HIV positive Haitians (Cayemittes, Placide, Barrere, Mariko & Severe, 2001); Gadon, Chierici, & Rios, 2001; Gilbert et al., 2007; Potocky, Dodge, & Greene, 2007; Darrow, Montanea, & Gladwin, 2009).

Health behavior science and theory have proven very valuable in providing insights into the study of health behaviors (Fishbein & Guinan, 1996). One such theory, the Andersen Behavioral Model of Health Services Utilization, has effectively guided studies of utilization of health services among disadvantaged populations (Andersen & Newman, 1973; Aday & Andersen, 1981; Andersen, McCutcheon, Aday, Chiu, & Bell, 1983; Goodwin & Andersen, 2002). The Andersen model categorizes health service use as either non-discretionary (e.g., emergency care, hospitalization) or discretionary (e.g., screening, out-patient visits, use of preventive services). It suggests that health services utilization is a function of the predisposition of people to use these services, their access to enabling resources, and their need for care. The model has helped to examine factors related to health service utilization among immigrants, including the interplay of race/ethnicity, psychosocial characteristics, and utilization of services (Bass & Noelker, 1987; Fleishman, Hsia, & Hellinger, 1994; Smith & Kirking, 1999; Snyder, Cunningham, & Nakazono, 2000). Recently, the original Andersen model has been revised to account for the distinct access challenges faced by groups such as immigrants and substance abusers which may influence these individuals' ability and opportunity to seek primary care (Gelberg, Andersen, & Leake, 2000; Katerndahl & Parchman, 2002; Lim, Andersen, Leake, Cunningham & Gelberg, 2002; Kushel, Gupta, Gee, & Haas, 2006). The new model, the Gelberg and Andersen Behavioral Model of Health Services Utilization for Vulnerable Populations, incorporates factors that are specific to vulnerable populations. We have applied this model as a heuristic framework to select variables for examination from a survey administered to a sample of HIV positive Haitian immigrants recruited from an HIV primary care clinic in a major urban medical center in Miami, Florida. The purpose of this study is to examine barriers and facilitators of the regular use of HIV primary care services by HIV positive Haitian immigrants.

METHODS

Participants

Study participants were recruited from the University of Miami/Jackson Memorial Medical Center, Miami-Dade County's largest health care facility for HIV/AIDS treatment, serving 2,000 patients annually. Inclusion criteria for this study were: having been born in Haiti, being 18 or over years of age, having been diagnosed with HIV, and being able to give informed consent. Between October 2007 and July 2008, all (n= 133) Haiti-born adults who presented at the clinic were referred by clinic staff to a study recruiter who invited them to participate in the study after briefly explaining to them the study objectives and procedures. Of the 133 individuals approached, 100 (75%) accepted to participate in the study and were administered a questionnaire during face to face interviews to assess socio-demographic characteristics, knowledge of HIV/AIDS, use of HIV primary care services, perceptions and attitudes toward health. The questionnaire was translated into Creole and back-translated into English by two individuals, in accordance with University of Miami IRB procedures. The questionnaire was administered in Creole to participants by a trained bilingual interviewer. Of the 100 study participants, 96 were aware of their HIV status for at least a year (mean: 8.5 years, SD: 6.16; range 0–28 years) at the time of their interview and were thus included in the analysis described below which examined whether these individuals have adhered to the quarterly follow-up visits recommended by Federal guidelines for HIV positive patients (Centers for Disease Control and Prevention [CDC], 2009).

Measures

Selection of measures was guided by the Behavioral Model of Health Services Utilization for Vulnerable Populations (Gelberg et al., 2000; Lim et al., 2002) which distinguishes between traditional and vulnerable variables and incorporates normative predisposing characteristics that existed prior to the perception of illness (e.g. race, education, age), the enabling resources that facilitate or impede health service utilization (e.g. health insurance), and the need variables pertaining to physical illness.

The *Traditional* predisposing variables selected were: age, gender, number of children that participants were caring for at the time of interview, marital status, and employment status. The *Vulnerable* predisposing variables were any report of substance use during previous four weeks - alcohol, tobacco, marijuana, or hard drugs such as cocaine, crack cocaine, methamphetamine, injected drugs, or 'any other street drug'; place of residence; and psychological distress. Psychological distress was measured by the Brief Symptom Inventory (BSI) instrument (Iwamasa & Kooreman, 1995). The BSI consists of 53 items covering nine symptom dimensions. Respondents rank each item (e.g., "your feelings being easily hurt") on a 5-point scale ranging from not at all to extremely (Derogatis, 1975). The instrument has been used extensively in assessing psychiatric symptoms among medically ill patients, including HIV-infected individuals (Derogatis, 1993). The current study used only the depression, hostility, and anxiety subscales that were included as continuous variables in the analyses. The three subscales had a range of 0–5 each and alpha reliability scores of 0.75, 0.79, and 0.63, respectively. We created an overall 'psychological distress' scale by adding the mean subscales scores. This psychological distress scale had a range of 0–5 with a higher score suggesting higher psychological distress. The scale had an alpha reliability score = 0.88.

The *Traditional* enabling variables selected were: annual household income, having a usual place of care, and social support. Social support was measured by the 12-item Multidimensional Scale of Perceived Social Support (Zimet, Dahlem, Zimet, & Farley, 1988). This instrument measures perceived social support from family, friends, and

significant others using a 7-point Likert-type response ranging from 'Very strongly disagree' to 'Very strongly agree'. The reliability score for the current sample was alpha =0.95. The mean score for the scale had a range of 0–6 with a higher score suggesting greater social support. The *Vulnerable* enabling variable was self-efficacy. Self-efficacy was measured by the 10-item General Self-Efficacy Scale (Schwarzer & Jerusalem, 1993). The 4-point Likert-type responses ranging from 'Not at all true' to 'Exactly true' were summed up into a composite score which had a range of 0–40; a higher score suggested greater self-efficacy. This instrument has been used in numerous studies with excellent reliability. The reliability score for the current sample was alpha =0.90.

The Traditional need variables were: self-rated health status, and evaluated health status. Participants were asked whether they were in excellent, very good, good, fair, or poor health as a measure of their health status. Evaluated health status was measured by asking participants whether during the past 12 months a medical provider had told them that they had or have had STD, tuberculosis, liver or kidney problem, heart disease or high blood pressure, stomach or digestive problem, diabetes, hepatitis C, allergies, asthma or breathing problems, or mental health problems. The *Vulnerable* need variables were: use of the emergency room in the past year, and admission to a hospital in the past year.

The dependent variable, regular use of HIV primary care services, was measured by asking participants to report the number of HIV primary care visits they had completed during the 12 month period preceding the baseline interview. Participants who reported four or more visits were considered as having used HIV primary care regularly (CDC, 2009).

Statistical Analysis

We used means and frequencies to examine the distribution of the sample's socio-demographic and psychological characteristics. We employed univariate logistic analysis to evaluate the unadjusted association of the dependent variable with each of the predisposing, enabling, and need variables described above. Two variables, education and psychological distress that were significantly associated with the dependent variable at alpha < 0.10 were entered into a multivariate logistic model to evaluate their independent association with the dependent variable. (Hosmer & Lemeshow, 2000).

RESULTS

Socio-demographic characteristics, health status and access to care

The study sample was divided equally between male and female. More than half of the study participants (55%) had no children in their care, and 26% were living with a spouse or a partner. Approximately 75% of the participants did not graduate from high school, reported an annual income of $5,000 or less, and were older than 44 years of age (mean and median age: 51 years). Only 16% of the participants were employed, and 71% reported living in their own place. More than half of participants had been told in the previous year that they had a cardiovascular condition (including high blood pressure) and 18% were told they had diabetes. Almost half of participants (47%) considered themselves in poor/fair health. The UM/JMH clinic was a usual place of care for 59% of participants, 91% had a case manager, and almost all (95%) were taking antiretroviral HIV medication (data not shown). Thirty-one percent of participants had received care at the emergency room and 28% were hospitalized in the preceding 12 months. The participants reported very low substance use - only 2% of participants reported past four week alcohol use; 12% reported past four week smoking; and none reported marijuana or hard drug use (data not shown). The mean scores for the Anxiety, Hostility, and Depression subscales were 0.55 (SD: 0.44, range: 0–2.30), 0.92 (SD: 0.64, range: 0–2.40), and 0.83 (SD: 0.57, range: 0–3.00), respectively. The mean

score for the overall psychological distress score was 0.75 (SD: 0.48, range: 0–2.41). The mean scores for the social support and the self-efficacy scales were 3.80 (SD: 1.2, range: 1–6) and 23.00 (SD: 6.0, range: 10–40), respectively.

Seventy-nine percent of the participants had completed four or more visits with a medical provider, including 9 participants who had completed more than 10 visits.

Univariate Analysis (Table 2)

Predisposing Variables: There were no differences in the distribution of age, gender, relationship status, employment status, number of children in care, and residential status between those who had and those who had not used HIV primary care services regularly. There was a significant association between education level and regular use of HIV care. Compared to participants without formal education, participants who had an elementary education and a high school education were respectively 2.64 and 5.14 times more likely to have used HIV primary care regularly (OR = 2.64; 95% CI: 0.87–8.02; $p < 0.10$ for elementary vs. no formal school attendance; and OR = 5.14; 95% CI: 1.19–22.22; $p < 0.05$ for high school vs. no formal school attendance). Mental status was also significantly or close to being significantly associated with regular HIV care use. For every unit increase in the hostility, anxiety, and depression scales, participants were respectively 56%, 64%, and 55% less likely to have used HIV primary care regularly (OR = 0.44; 95% CI: 0.20–0.97; $p < 0.05$ for the hostility subscale; OR = 0.36; 95% CI: 0.12–1.04; $p < 0.10$ for the anxiety subscale; and OR = 0.45; 95% CI: 0.12–0.87; $p < 0.10$ for the depression subscale.) For every unit increase in the overall psychological stress scale, participants were 69% less likely to have used HIV primary care regularly (OR= 0.31; 95% CI: 0.12–0.87; $p < 0.05$). The Hosmer & Lemeshow test was not significant for any of the univariate models, which indicated that all the estimated models fitted the data well.

Enabling and Need Variables: None of the enabling or the need variables were significantly associated with the dependent variable ($p >= 0.10$).

Multivariate analysis (Table 3)—Education and psychological distress were statistically associated with regular use of care. The Hosmer & Lemeshow test ($\chi 2 = 6.90$, $df = 7$, $p = 0.44$.) was not significant, which indicated that the estimated model fitted the data well. Compared to participants with no formal education, participants who had completed elementary school and those who had completed high school were respectively 2.97 and 7.44 times more likely to have used HIV health care services regularly (OR= 2.97; 95% CI: 0.93–9.47; $p < 0.06$ for elementary vs. no formal school attendance; and OR=7.44; 95% CI: 1.26–26.72; $p < 0.01$ for high school vs. no formal school attendance). The higher their level of psychological distress the less likely participants were to have used primary medical care (OR=0.29; 95% CI: 0.10, 0.82; $p < 0.01$).

DISCUSSION

The current study analyzed data from a survey of HIV positive Haitian immigrants seeking care at an HIV primary care clinic to investigate factors that may facilitate or prevent this population from regularly using primary health care services. The data presented here describe a population who faces serious health-related challenges in terms of co-occurring general and mental health disorders which are compounded by difficult socio-economic circumstances. Despite the fact that low education and poor mental health status are potential barriers to adequate health care utilization for this population (Saint-Jean & Crandall, 2005a; Saint-Jean & Crandall, 2005b), the great majority of participants had managed to stay connected to care and to take their antiretroviral medicines.

Only approximately one quarter of the sample had completed high school, only 8% reported an annual household income of $10,000 or more, and 16% were employed. Similar findings for this population, in terms of severe socio-economic challenges, have been described in previous research by the authors of this study and others (US Census, 2000; Saint-Jean & Crandall, 2005a; Saint-Jean & Crandall, 2005b). Additionally, the low proportion of participants who are high school graduates replicates findings reported for other populations with predominantly heterosexually transmitted HIV, which indicates that the HIV epidemic affects primarily the socio-economically vulnerable members of these groups. Low educational level has emerged as an important potential barrier to the use of regular HIV care by the target population. Compared to participants with no school attendance or formal education, individuals who attended elementary or high school were much more likely to adhere to a regular schedule of visits. This may indicate that perhaps for this foreign born, non-English speaking, and low socioeconomic sample, confronted with all kinds of daily challenges, those with lower education may be subject to additional barriers preventing them from adequately accessing life-saving care. Despite these odds, however, approximately 80% of participants were connected to care and placed on antiretroviral medicines. This may be explained by the fact that most of the participants were recruited from a HIV primary care clinic where they had been assigned a case manager. HIV-positive individuals who have case managers are more likely than those who don't to receive benefits advocacy and other services (Katz et al., 2001), have fewer barriers to receipt of health care (London et al., 1998), and report greater utilization of health care services (London et al., 1998; Katz et al., 2001; Mizuno et al., 2007) which, in turn, has been linked to better health outcomes (London et al., 1998).

The rates of co-occurring disorders described are unprecedented for this population, and may stem from the fact that this sample was recruited in a medical setting that attends mostly to low socio-economic HIV positives. This confirms previous findings that this population exhibits high rates of life-threatening conditions such as diabetes and high blood pressure (Saint-Jean & Crandall, 2005). Additionally, the finding that participants were subject to high levels of psychological distress which may have had negatively affected their use of primary care services has been reported by previous studies which have noted that many of their patients were subsequently diagnosed with major depression or other mental health disorders (Rotheram-Borus, Murphy, Reid, & Coleman, 1996; Basta, Reece, & Shacham, 2008). The authors of these studies have recommended that mental health services be fully and routinely integrated into the medical care of HIV patients (Rotheram-Borus et al., 1996; Basta et al., 2008). In addition to improved access to health services, other potential benefits of mental health care for these patients may include enhanced adherence to HIV medication, lower-risk sexual behaviors, increased disclosure of serostatus to sex partner, and improved overall quality of life (Basta et al., 2008).

This study did not find a significant association between regular use of primary care and any of the enabling and need variables. This may be attributed to the study's small sample size. Medical need is not considered a very important determinant of the use of discretionary health services in the Andersen model (Gelberg et al., 2000), especially among populations with severe competing needs. The study used a convenience sample recruited among attendees of an urban health center that traditionally provides care to low-income and otherwise socially disadvantaged populations and where most were provided a case manager. Readers should thus use caution before generalizing these findings to all HIV positive Haitians in the county. Prior research by the study authors has found that legal status is a major determinant of utilization of health services among Haitian immigrants (Saint-Jean & Crandall, 2005a; Saint-Jean & Crandall, 2005b). Unfortunately, the present study's dataset did not include any information on the legal status of participants, which prevented us from taking this factor into consideration during the statistical analyses.

CONCLUSION

Despite these limitations, this preliminary study offers valuable insights into the circumstances of an important group of HIV positive Haitians, and the factors that may hinder adherence to life-saving care by this population. The findings emphasize the need for health care practitioners to pay close attention to the education levels of their Haitian patients, as well as their mental health status. The data also suggest that once these individuals are linked to care and offered assistance with their daily challenges there is a high likelihood that they will maintain an adequate level of adherence to care.

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Table 1

Characteristics of Study Sample

Domain	Variable		N (%) Mean ± SD
Predisposing Traditional	Age- years	26–44	23 (24.0)
		45–54	43 (44.8)
		55+	30 (31.2)
	Gender	Male	48 (50.0)
		Female	48 (50.0)
	Education	No formal	23 (24.0)
		Elementary	46 (47.9)
		Secondary	27 (28.1)
	Living with a Spouse/Partner		25 (26.0)
	Employed		15 (15.6)
	Caring for children		53 (55.2)
Predisposing Vulnerable	Place of Residence	Own	68 (70.8)
		Somewhere else	28 (29.2)
	Hostility subscale		0.92 ± 0.64
	Anxiety subscale		0.55 ± 0.44
	Depression subscale		0.83 ± 0.57
	Psychological distress scale		0.75 ± 0.48
Enabling Traditional	Income	$5,000 or less	75 (78.1)
		$5,001–10,000	13 (13.5)
		$10,001+	8 (8.3)
	Social support scale		3.8 ±1.2
	Clinic is usual place of care		57 (59.4)
Vulnerable Enabling	Self-efficacy scale		23 ± 6.00
Traditional Need	Had major diagnosis in past 12 months		58 (60.4)
	Self-rated health status*	Fair-Poor	45 (47.4)
		Good	28 (29.5)
		Very Good/Excellent	22 (23.1)
Vulnerable Need	Received care in ER in past 12 months		30 (31.2)
	Admitted to hospital in past 12 months		27 (28.1)

* n=96 for all variables, except for Self-rated health status which has n=95 due to one missing answer.

Table 2

Bivariate Associations of Regular HIV Primary Care Visits (4+ visits) in Past Year

Domain	Variable		OR [95% CI]
Traditional Predisposing	*Age (years)*		1.03 [0.97, 1.09]
	Male Gender		1.13 [0.43, 2.98]
	Education	*No formal*	1.0
		Elementary	2.64 [0.87, 8.02]
		Secondary	5.14 [1.19, 22.22]*
	Living with a Spouse/Partner		1.65 [0.50, 5.49]
	Employed		0.73 [0.21, 2.58]
	Caring for children		1.63 [0.86, 3.06]
Vulnerable Predisposing	*Living Arrangements - Own vs. elsewhere*		0.57 [0.20, 1.67]
	Hostility Subscale		0.44[0.20, 0.97]**
	Anxiety Subscale		0.36 [0.12, 1.04]*
	Depression Subscale		0.45 [0.20, 1.01]*
	Psychological Stress Scale		0.31[0.12, 0.87]**
Traditional Enabling	*Income*	*$5,000 or less*	1.0
		$5,001–10,000	0.83 [0.20, 3.40]
		$10,001+	0.42 [0.09, 1.94]
	Social Support Scale		1.01[0.98, 1.05]
	Clinic is usual place of care		1.30 [0.50, 3.51]
Vulnerable Enabling	*Self-efficacy Scale*		1.06 [0.98, 1.14]
Traditional Need	*Had major diagnosis in past 12 months*		0.92 [0.34, 2.50]
	*Self-rated health status***		1.25 [0.78, 2.01]
Vulnerable Need	*Received care in ER in past 12 months*		0.88 [0.31, 2.48]
	Admitted to hospital in past 12 months		1.33 [0.43, 4.07]

* $p < 0.10$;

** $p < 0.05$;

*** n=96 for all variables, except for Self-rated health status which has n=95 due to one missing answer.

Table 3

Final Logistic Model of Correlates of HIV Primary Medical Care Use (n=96 for both variables)

Domain	Variable	OR [95 % CI]
Traditional Predisposing	*Education*	
	No Formal	1.0
	Elementary	2.97 [0.93, 9.47]*
	Secondary +	7.44 [1.26, 26.72]**
Vulnerable Predisposing	*Psychological distress*	0.29 [0.10, 0.82]**

Hosmer & Lemeshow Test: Chi square: 6.90, df= 7, p = 0.44.

* p < 0.10;

** p < .0.05