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Providers' HIV-related avoidance attitude and patient satisfaction

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Abstract

Objectives This article explores the associations between medical care providers' attitudes towards patients living with HIV (PLH) and the service satisfaction reported from general patients.

Methods Data were collected from 40 county-level hospitals in China, including 1760 service providers and 1000 patients receiving medical services from the hospitals. Provider and patient assessments were conducted by self-administered questionnaires and face-to-face interviews, respectively. Random-effect regression models were used to examine relationships between the providers' avoidance attitudes and patient satisfaction at the hospital level while taking into account variations in demographics and professional experience within each hospital.

Results and Conclusions Service providers' avoidance attitudes towards PLH were negatively associated with general patients' satisfaction with service providers at the hospital level. The relationship was strong and significant whether or not adjustments were made for background characteristics. Medical care providers' stigmatizing attitudes towards PLH could be a reflection of the providers' general outlook with all patients. This study underscores a broader focus for HIV-related stigma reduction interventions in medical settings at both individual and institutional levels, targeting attitudes towards both patients with HIV/AIDS and the general patient population.

Introduction

Stigma and discrimination towards patients living with HIV/AIDS (PLH) remains prevalent in medical settings and prevents PLH from being tested, receiving services and adhering to treatment recommendations.[1–9] Previous studies have demonstrated that health-care providers' HIV-related stigmatizing attitudes towards PLH are negatively associated with patients' satisfaction with health services.[10–12] As the AIDS epidemic in China continues to spread and HIV testing becomes more widely available, the number of PLH seeking health care will increase and PLH

will come across stigma and discrimination. Understanding the various dimensions of HIV-related stigma in medical settings is the initial step in successfully solving this problem.[13–15]

Stigmatizing attitudes and behaviours in medical settings have been identified as beyond being associated with HIV/AIDS. Stigmatizing attitudes and behaviours have been documented towards female and minority patients[16,17] as well as patients with mental illness,[18,19] cancer[20] or other disorders.[21–23] As most studies on the relationship between providers' stigmatizing attitudes and patient satisfaction are disease-specific, there is a need to reconsider stigma issues and circumstances in a more general framework. We hypothesized that the impact of providers' stigmatizing attitudes towards a specific condition would go beyond the patients with the condition to influence services for other patients. We aimed to investigate the avoidance attitudes of service providers towards PLH and linked attitudes to patients' general satisfaction at the hospital level.

Methods

Study sites and sampling

Analyses in this article used baseline data collected from October 2008 to December 2009 from 40 county-level hospitals as part of an intervention study. Two groups took part in the study: (i) service providers working at the hospitals and (ii) patients seeking services at the hospitals during the data collection period. All 40 hospitals in the study have a comparable number of providers, patient beds and average patient visits. In China, medical care and services are delivered through service providers from hospitals and clinics at provincial, city, county and township levels as well as village health clinics. County hospitals were chosen because of their unique position in this hierarchy, as they are the most advanced local hospitals accessible to most Chinese residents.[24,25]

In contrast to many Western countries, most residents of China do not have a primary care physician.[26–28] Instead, they normally go to a hospital for medical care without an appointment. Thus, a person going to a hospital is likely to see the doctor who is on outpatient duty and available at the time of the visit. A different doctor could be seen during each visit, depending on who is on duty at the time of the visit. Given this cultural context, we recruited separate provider and patient samples from each hospital and assessed their relationships at the hospital level.

Data collection

To be eligible for this study, participants had to be aged 18 or older; work (for service providers) or receive services (for patients) at a participating hospital; and voluntarily agree to participate and sign the informed consent forms. All study documents and procedures were approved by the Institutional Review Board at the University of California, Los Angeles, and the Chinese Center for Disease Control and Prevention. All participants were paid 50 yuan (US $7.50) for their participation.

To recruit providers, our research staff approached randomly selected providers with standardized scripts to ensure all ethical issues were covered. Recruitment ended when we reached the target sample of 44 providers from each hospital. On average, the refusal rate was about 5% across all hospitals.

The Health Provider Survey, developed specifically for this study, was used for data collection. This self-administered questionnaire contained a total of 167 questions on topics ranging from demographics, medical training and practice, attitudes and behaviour intent towards patients living with HIV/AIDS. Providers filled out the survey alone in a private room, although a trained interviewer was available to answer questions during the assessment.

Twenty-five patients in each of the 40 hospitals were randomly approached to take part in a 'Health Service Study.' Interested participants would be given an informed consent in an interview room by research staff. Recruitment ended when a total of 25 patients from each hospital gave their consent to participate. The

refusal rate for patients was about 13% across all hospitals. Six patients across five hospitals were missing demographic information and were excluded from analysis; the analysis sample was reduced from 1000 patients to 994. Two providers were also missing demographic information. This did not reduce the sample size further because hospital-averaged observations rather than individual provider observations were analysed.

Patient assessment was conducted as face-to-face interviews. Trained assessment interviewers asked participating patients 66 questions regarding demographics, access to care, service satisfaction and individual health behaviours. The interviews lasted 30–45 min on average.

Instruments and measures

Providers: avoidance attitude of patients with HIV

An *avoidance attitude* measure was constructed to assess the level of avoidance intent among service providers towards PLH during their daily work. The measure was adapted from Herek[29] and featured eight items based on the following questions: (1) If HIV-positive patients visit the hospital, you are willing to provide all services needed; (2) If your superior asked you to do a physical examination of a known HIV-positive patient, you would be willing to do so; (3) If you worked with HIV-positive patients, you would provide the same quality of care to them that you provide to other patients; (4) You would interact with HIV-positive patients just like other patients; (5) You would wish that you could change your job so that you would not have to deal with HIV-positive patients; (6) You would feel afraid to interact with HIV-positive patients; (7) If you had to choose between a hepatitis B patient and an HIV-positive patient, you would select the former to provide service; and (8) If you were to choose between a leukaemia patient and a HIV+ patient, you would select the former to provide service. Responses to each statement ranged from 1 (*strongly agree*) to 5 (*strongly disagree*). By adding the eight items, we constructed a 40-point continuous measure. The directions of item 5, 6, 7 and 8 were reversed so that higher numbers indicate higher levels of avoidance attitude towards HIV-positive patients at work. Cronbach's alpha was 0.84, implying good inter-item reliability.

Patients: satisfaction towards providers

Satisfaction towards hospital service providers assessed the level of satisfaction among patients towards providers of the hospital where they received medical services. It was measured by nine items: (1) providers in this hospital respect me; (2) providers in this hospital are warm with me; (3) providers in this hospital follow working ethics; (4) providers in this hospital are careful to check everything with me; (5) I trust the providers in this hospital; (6) providers in this hospital are concern about my personal situation; (7) providers in this hospital are very helpful to me; (8) providers in this hospital can think from my perspective; and (9) providers in this hospital treat me with respect. All items were coded as 1 (*disagree*) to 3 (*agree*). By adding the nine items, we constructed a 27-point continuous measure. A higher score of the scale indicates a higher level of patient satisfaction towards service providers at the hospital. Cronbach's alpha was 0.87, implying good inter-item reliability.

We also collected the following demographic information: age, gender and education level from both providers and patients. For provider sample, professional data such as year of education and months in the medical field were also collected. Family income as an indicator of socioeconomic status was collected from patients only.

Statistical analysis

Descriptive statistics were used to summarize the demographic and background characteristics of providers and patients. To assess variation in avoidance attitudes towards PLH and patient satisfaction across hospitals, we report intraclass correlations (ICC = $\sigma_b/(\sigma_b + \sigma_w)$). Variation between ($\sigma_b$) and within ($\sigma_w$) hospitals was estimated by linear random-effect regression (i.e.

hierarchical linear regression). A Z-statistic is reported to indicate the significance of hospital variation (σ_b) in the model. The aim of this study was to examine the relationship between a provider's avoidance attitude towards PLH and general patient satisfaction towards providers. Given the fact that we could not link providers to patients at the individual level, we estimated this relationship at the hospital level. Patient observations from each hospital were linked to the mean of the provider observations from that hospital. Linear random-effect regression examined the association between patients' satisfaction with hospital-averaged providers' avoidance attitudes in a single-variable regression model and examined the same association in a multiple regression model, including additional covariates for individual patient and hospital-averaged provider background characteristics. We also tested the significance of two-way interactions between hospital-averaged providers' avoidance attitude and significant background characteristics by separately entering them as covariates into the multiple regression model. Random effects were included for each hospital to incorporate additional variability that is introduced by correlations between patient observations within hospitals. Regression models that do not include random effects would underestimate variation in the regression parameter estimate.

All analyses were conducted using SAS 9.2 software (SAS Institute Inc., Cary, NC, USA). Random intercept regressions were modelled with the PROC MIXED procedure.

Results

Characteristics for participating providers and patients are summarized in Table 1. Ages of the provider sample ranged from 18 to 68 years old, with a mean of 36. Two-thirds of the providers were women. Slightly more than half (51%) of the sample had post-high school education and nearly 24% reported more than 16 years of education. Nearly half (49.2%) of the participants were doctors, with nurses (42.8%) and laboratory technicians comprising the remainder of the sample. About 24% of the participants reported serving in the medical field for 7 years or less and 26.0% for 21 years or longer.

The patient sample was older than the provider sample, with a mean age of 37.9; 59% of the sample were women. About 25% reported an education level of primary school or lower, and nearly 40% had a high school education or

Table 1 Description of provider sample (n = 1760) and patient sample (n = 1000)

Demographic characteristics	Number (%)
Service providers	
Age (in years)	
18–30	511 (29.1)
31–40	748 (42.5)
41–50	396 (22.5)
51 or older	104 (5.9)
Gender	
Female	1188 (67.5)
Male	572 (32.5)
Years of education	
12 years or less	443 (25.2)
13–16 years	897 (51.0)
17 years or more	419 (23.8)
Profession	
Doctor	866 (49.2)
Nurse	754 (42.8)
Laboratory technician/other	140 (8.0)
Years in medical field	
7 years or less	422 (24.0)
8–14 years	442 (25.1)
15–20 years	438 (24.9)
21 years or more	458 (26.0)
Avoidance attitude scale (Mean ± SD)	18.6 (4.2)
Patients	
Age (in years)	
18–30	379 (38.0)
31–40	259 (26.0)
41–50	158 (15.8)
51 or older	202 (20.2)
Gender	
Female	589 (58.9)
Male	411 (41.1)
Education	
Primary school or lower	247 (24.7)
Junior high	356 (35.6)
High school or higher	397 (39.7)
Family income (in Yuan)	
< 2000	429 (43.1)
2001 or more	567 (56.9)
Satisfaction with providers scale (Mean ± SD)	24.2 (3.5)

Table 2 Linear random-effect regression model for predicting patients' satisfaction from hospital-averaged providers' avoidance attitude, controlling for patient and provider socio-demographics

	Patient satisfaction		
Covariates	Coefficient	SE	*P*-value
Characteristics of providers at hospital level			
Avoidance attitude	−0.74	0.15	<0.01
Age	−0.19	0.29	0.51
Gender (Male)	−4.14	1.60	0.01
Year of education	−0.48	0.39	0.22
Months in medical field	0.029	0.024	0.22
Characteristics of individual patients			
Age	−0.00040	0.0083	0.96
Gender (Male)	0.090	0.22	0.68
Year of education	−0.090	0.030	<0.01
Patient income (≥2000)	0.23	0.23	0.33

higher. Among patient participants, 33.7% reported a family income of 1000 yuan or less per month, 41.9% reported 1001–3000 yuan and 24.4% reported family income more than 3000 yuan. The median family income of patients in the study was 2000 yuan.

Table 2 presents results from the multi-variable linear random-effect regression on the relationship between providers' HIV-related avoidance attitudes and patient satisfaction, controlling for socio-demographics. HIV-related avoidance attitudes (ICC = 0.047, $Z = 3.01$, $P < 0.01$) and patient satisfaction (ICC = 0.17, $Z = 3.69$, $P < 0.01$) varied significantly across hospitals. Demographics accounted for little of the hospital variation in avoidance attitudes as noted by negligible changes in the ICC (=0.050) after adjusting for provider demographic characteristics in Table 2. Demographics and avoidance attitudes accounted for some hospital variation in patient satisfaction (ICC = 0.043 after adjusting for all model covariates in Table 2). However, a fair amount of variation remained, highlighting the importance of our modelling approach that includes random effects to adjust for unexplained variation across hospitals.

Hospitals with a higher level of HIV-related avoidance attitude among service providers were significantly associated with less patient satisfaction, both controlling ($B = -0.74$, SE = 0.15, $P < 0.01$) and not controlling for other predictors in the model ($B = -1.02$, SE = 0.16, $P < 0.01$). Hospitals with a lower proportion of male providers ($B = -4.14$, SE = 1.60, $P < 0.01$) and fewer years of education among patients were associated with greater satisfaction with service providers in the hospital where they received medical services ($B = -0.090$, SE = 0.030, $P < 0.01$). Two two-way interactions between hospital-averaged provider avoidance attitudes and significant background characteristics (the proportion of males per hospital and patients' years of education) were not significant.

Discussion

Attitudinal indicators are often seen as individual attributes, but collectively, individual attitudes and behaviours are often influenced by the perception of how other individuals in a social group behave. Our examination of the relationship between provider attitudes and patient satisfaction at the hospital level revealed several critical findings regarding social group behaviour. Social norms theory provided us with a framework to understand the relationships found at the hospital level. Goold and Lipkin[30] suggested that organizational culture could affect staff attitudes and thereby affect patient satisfaction. Barnato and colleagues[31] reported that staff perception of informal norms regarding patient–doctor familiarity was related to variation in end-of-life treatment intensity. It was also reported in a previous study that the personal attitudes of service providers matched their perceived social norms (i.e. their reported personal attitudes may result from a blend of social reality and personal interpretation).[32] At the institutional level, deeply rooted norms within each hospital can play an important role and result in various levels of avoidance attitude towards patients among the hospitals involved. Institutional norms could also be influenced by other factors such as education, training and policy implementation. For instance, HIV-related stigma and discrimination in different hospitals might be attributed to

structural factors shared by all providers. Providers' avoidance of PLH could be related to the lack of universal precaution supplies and procedures in the hospital, and the fear of contracting HIV.[7,8] Therefore, to achieve attitudinal and behavioural changes, interventions and training programmes for service providers should undertake the task of changing social norms in the medical community.

This study found that providers' avoidance attitudes towards PLH were highly negatively correlated with general patients' satisfaction with service providers in the hospital. How providers in medical settings perceive or feel about patients influence their behaviours towards patients and, in turn, affect patients' satisfaction. Beach and colleagues[33] found that patients who are better 'liked' by their physicians are more satisfied with their care. It is possible that a provider's stigmatizing attitude towards patients with certain diseases could be related to his/her attitude towards patients with other characteristics. Previous studies suggest that service providers' negative attitudes towards patients are possibly related to their own work stress or emotional exhaustion.[34–38] Thus, providers' HIV-related avoidance becomes a reflection of general attitudinal problems towards all patients with or without HIV/AIDS. Service providers' stigmatizing attitudes towards a specific condition may go beyond the patients with the condition and influence services for other patients as well. Our findings call for a broader focus to HIV-related stigma interventions among service providers.

Several limitations need to be addressed. First, the patient sample was selected from the hospital waiting rooms, which might not be representative of all patients visiting the facilities. Second, only basic demographic and background variables were included in the analyses; other potential factors related to patient satisfaction or provider attitudes were not accounted for. Moreover, because this was a cross-sectional study, the temporal direction of the association under study cannot be identified. Finally, information bias was also possible because all the measures in this study were self-reported.

Despite these limitations, this study has implications for designing and implementing stigma reduction interventions in medical settings. Our study suggests that HIV-related stigma may reflect part of providers' general attitudes and behaviours. Thus, HIV-related stigma reduction interventions in hospital settings need to address factors at both individual and institutional levels, target stigmatizing attitudes towards all patients and reinforce professional conduct and medical ethics.

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Conflict of interest

No conflicts of interest have been declared.

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