Urban-Rural Differences in Motivation to Control Prejudice Toward People With HIV/AIDS: The Impact of Perceived Identifiability in the Community

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ABSTRACT: Context: HIV/AIDS is occurring with increasing frequency in rural areas of the United States, and people living with HIV/AIDS in rural communities report higher levels of perceived stigma than their more urban counterparts. The extent to which stigmatized individuals perceive stigma could be influenced, in part, by prevailing community attitudes. Differences between rural and more metropolitan community members’ attitudes toward people with HIV/AIDS, however, have rarely been examined. Purpose: This study investigated motivation to control prejudice toward people with HIV/AIDS among non-infected residents of metropolitan, micropolitan, and rural areas of rural New England. Methods: A total of 2,444 individuals were identified through a random digit dialing sampling scheme, and completed a telephone interview to determine attitudes and concerns about a variety of health issues. Internal or external motivation to control prejudice was examined using a general linear mixed model approach, with independent variables including age, gender, community size, and perceived indentifiability within one’s community. Findings: Results showed that community size, by itself, was not related to motivation to control prejudice. However, there was a significant interaction between community size and community residents’ perceptions about the extent to which people in their communities know who they are. Conclusion: Our results indicate that residents of rural areas, in general, may not show a higher level of bias toward people with HIV/AIDS. The interaction between community size and perceived identifiability, however, suggests that motivation to control prejudice, and potentially the subsequent expression of that prejudice, is more complex than originally thought.
attributes or characteristics that are devalued by others experience prejudice, discrimination, stereotyping, and exclusion. Because stigma arises from an affected person’s experiences with unaffected community members, the extent to which an affected person perceives stigma can be influenced by prevailing community attitudes. The more negative community attitudes are toward people with HIV/AIDS and groups known or assumed to be at risk for HIV/AIDS, the more likely it is that people with HIV/AIDS residing in these communities will perceive that they are stigmatized.

Heckman and colleagues found that the perception of discrimination and fear of discovery was greater among HIV-infected individuals living in rural rather than urban communities. Early studies suggested that these perceptions may be accurate: rural community members appear to have more negative attitudes toward people with HIV/AIDS than those in large cities. These studies, however, were conducted during the first decade of the HIV epidemic, and overt expressions of AIDS-related stigma appear to have decreased over time.

While initial reactions to people with HIV/AIDS may be negative and relatively automatic, responses can be adjusted, based on the degree of one’s motivation to control prejudice. The ability and motivation to control automatic responses may be what is responsible for the difference between prejudiced and non-prejudiced individuals. Many people are externally motivated by societal norms not to be (or not to appear to be) prejudiced toward stigmatized groups. Previous research has demonstrated that expressions of prejudice depend on whether people are externally motivated by social disapproval to appear non-prejudiced and whether their behavior is identifiable. Research on the effects of public versus private expressions of prejudice is important for understanding differences in how motivation to control prejudice might affect expressions of prejudice in rural and urban areas. One aspect of living in small communities is that people are more likely to know each other than are people in urban areas. This makes people more identifiable (less anonymous) in small communities, which increases the social pressure people experience. Highly identifiable people may conform more to social pressures with respect to prejudice than people who are less identifiable. Thus, both community size and perceived identifiability could affect how externally motivated community residents are to avoid acting prejudiced toward people with HIV/AIDS.

Higher perceived stigmatization among people with HIV/AIDS living in rural areas could indicate that rural community norms are more accepting of behaviors that allow the enactment of HIV/AIDS stigmatization than more urban communities. Thus, there may be lower levels of internal motivation to control prejudice in rural areas than urban areas.

The goal of this study was to compare motivation to control prejudice toward people with HIV/AIDS among residents of rural, metropolitan, and micropolitan communities. We hypothesized that community size and the degree to which people perceived themselves to be identifiable within their communities would be related to whether they were externally motivated to control prejudice toward people with HIV/AIDS. In addition, we hypothesized that people in rural areas might be less internally motivated to control prejudice toward people with HIV/AIDS than their urban counterparts.

**Methods**

Participants. This was part of a larger study in which we interviewed 203 HIV-infected individuals residing in Vermont and northern New England. They were recruited from Comprehensive Care Clinics providing medical services to individuals with HIV/AIDS, community-based organizations, including AIDS Service Organizations, word of mouth, and advertisements in local media. Eleven to 13 community members, ages 18-75, were selected for each participant with HIV/AIDS. The goal was 12 community members interviewed per participant, providing 95% confidence to estimate community attitudes within 16%. This report is limited to data collected from the community sample.

Procedures. Interviews were conducted with the CI-3 Computer Aided Telephone Interviewing system using a random digit dialing sampling scheme to identify community members within the 3-digit telephone exchange of the participant’s telephone number or the telephone exchange for the participant’s town of residence. The interview lasted approximately 30 minutes and consisted of a range of questions regarding attitudes and concerns about various health issues affecting their communities. Questions about motivation to control prejudice toward several target groups, including people with HIV/AIDS, were also asked. Interviews were carried out between 2004 and 2006. Respondents were not compensated for their participation in this study, which was approved by the University of Vermont Institutional Review Board.
**Measures**

**Motivation to Control Prejudice.** Internal and external motivation to control prejudice scales were adapted from those devised by Pryor, Reeder and Landau\(^8\) to measure motivation to control prejudice toward people with HIV/AIDS. We included 3 items from the original internal scale (eg, “I attempt to act in non-prejudiced ways toward people with HIV/AIDS because it is personally important to me.”) and 3 from the external scale (eg, “Because of today’s politically correct standards, I try to appear non-prejudiced toward people with HIV/AIDS.”). Responses were recorded on a 4-point scale, ranging from 1 (strongly disagree) to 4 (strongly agree). Scores were calculated as the mean of the responses to the questions on each scale, and were computed such that higher values indicated increased motivation. The alpha coefficients for the internal and external motivation to control prejudice scales were 0.82 and 0.74, respectively.

**Community Size.** The size of the respondents’ residential community was based on that of the matched participant with HIV/AIDS; thus, each community member was clustered within the community of residence. Communities were classified as metropolitan, micropolitan, or rural using guidelines set forth by the Office of Management and Budget for core based statistical areas.\(^6\) Metropolitan counties have at least 1 urbanized area with a population of 50,000 or greater. Micropolitan counties have at least 1 urbanized area with a population between 10,000 and 50,000. All others are classified as rural. Nine metropolitan (42.4% of respondents), 10 micropolitan (38.4% of respondents), and 6 rural communities (19.2% of respondents) were represented in this survey.

**Identifiability.** The interview included 2 questions regarding respondents’ perception of their identifiability within their community. Respondents were asked to estimate (1) what percentage of people in their town knew them personally and (2) what percentage of people in their town knew who they were, but did not know them personally. Responses, which ranged from 0% to 100%, were dichotomized at the median response for each question (10% for the estimate of those who knew the respondent personally, and 20% for those who knew the respondent, but not personally).

**Other Demographic Characteristics.** Standard survey measures assessed age, gender, marital status, and race/ethnicity.

**Statistical Analyses.** The analyses were based on the General Linear Mixed Model, incorporating adjustments for clustered design.\(^7\) Preliminary results suggested that the pattern of factors influencing internal and external motivation differed; therefore, separate analyses were performed. The fixed effects included size of the community of residence, age, gender, and identifiability in the community, with model building to incorporate possible interactions. Random effects allowed adjustment for the intra-class correlation among community respondents within the same community. Reported results are those in which the covariance parameters are constrained to be positive. Since effect size (ES) estimates such as partial eta cannot be calculated with a mixed model, an ad hoc estimation of effect was calculated as the difference between the means divided by the standard deviation, incorporating the adjustment for clustering of individuals within the community. All analyses were performed using SAS, version 9.1.\(^8\)

**Results**

The response rate was 68%, resulting in a total of 2,444 completed interviews. Forty-eight percent of the sample were 40 to 59 years old, 26% were less than 40 years old, and the remaining 26% were 60 years of age or older. A majority of respondents were female (64.5%), and, consistent with the racial/ethnic distribution of Vermont, New Hampshire, Maine and northern New York, over 95% were white. Over 95% were high school graduates, with almost 39% having completed college.

**Identifiability in the Community.** Respondents’ estimates of the percentage of people in their community who knew them personally, and the percentage who knew who they were, but not personally, differed by community size ($F[2, 197] = 24.92, P < .01, F[2, 197] = 37.47, P < .01$, respectively), with metropolitan residents estimating lower percentage than micropolitan and rural residents. Rural and micropolitan residents did not differ in identifiability on either measure. Residents of metropolitan communities estimated that they were known personally by 14.5% ± 20.5 (mean ± standard deviation) of the people in their town, compared to micropolitan residents, who estimated being known personally by 22.3% ± 24.3 of town members, and rural residents who estimated being known personally by 23.5% ± 24.6 of their community. Respondents’ estimates of the percentage of the community who knew who they were, but did not necessarily know them personally, were higher at 21.1% ± 24.7,
Table 1. Gender and Age Differences in Motivation to Control Prejudice Toward People With HIV/AIDS

<table>
<thead>
<tr>
<th>Gender</th>
<th>Internal Motivation to Control Prejudice Mean (SD)*</th>
<th>External Motivation to Control Prejudice Mean (SD)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Females</td>
<td>3.26 (0.49)</td>
<td>2.65 (0.62)</td>
</tr>
<tr>
<td>Males</td>
<td>3.05 (0.48)</td>
<td>2.51 (0.56)</td>
</tr>
<tr>
<td>Age Group</td>
<td></td>
<td></td>
</tr>
<tr>
<td>18-39 years of age</td>
<td>3.29 (0.50)</td>
<td>2.60 (0.64)</td>
</tr>
<tr>
<td>40-59 years of age</td>
<td>3.19 (0.51)</td>
<td>2.58 (0.63)</td>
</tr>
<tr>
<td>60 year of age and older</td>
<td>3.06 (0.44)</td>
<td>2.62 (0.52)</td>
</tr>
</tbody>
</table>

*Responses on a 4-point scale where higher values indicate greater motivation.

Impact of Identifiability in the Community on Motivation to Control Prejudice.

**Being Known Personally.** When corrected for age and gender, neither size of community of residence nor personal identifiability (being known personally by 10% or more of the community compared to being known personally by less than 10% of the community) was related to internal motivation to control prejudice (Table 2; F[2, 197] = 1.54, P = .22 for community size; F[1, 2,296] = 0.53, P = .46 for being known personally).

Similarly, external motivation to control prejudice did not differ with size of the community of residence (F[2, 197] = 0.18, P = .83). On the other hand, external motivation to control prejudice was influenced by the percentage of the community to whom the respondent was known personally (F[1, 2,292] = 22.83, P < .01, ES = 0.20), with those known by 10% or more of the community reporting higher external motivation scores (2.66 ± 0.61) than the less well-known community members (2.53 ± 0.60).

**Being Known, But Not Personally.** The results differed when the measure of identifiability was the percentage of the community to whom one is known, but not necessarily known personally (Table 2). When corrected for age and gender, community size interacted with perceived identifiability to influence internal motivation (F[1, 197] = 3.57, P = .03). Examination of the simple effects suggests that among those who perceive themselves to be more well known, internal motivation to control prejudice is lower for those living in rural communities than those living in metropolitan or micropolitan communities.

Table 2. Effect of Community Size and Identifiability on Motivation to Control Prejudice*

<table>
<thead>
<tr>
<th>Locus of Motivation to Control Prejudice</th>
<th>Size of Residence</th>
<th>Known Personally to Less Than 10% of the Community Mean (SD)*</th>
<th>Known Personally to 10% or More of the Community Mean (SD)*</th>
<th>Known, but not Personally, to Less Than 20% of the Community Mean (SD)*</th>
<th>Known, but not Personally, to 20% or More of the Community Mean (SD)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internal</td>
<td>Metropolitan</td>
<td>3.22 (0.51)</td>
<td>3.20 (0.50)</td>
<td>3.21 (0.49)</td>
<td>3.22 (0.53)</td>
</tr>
<tr>
<td></td>
<td>Micropolitan</td>
<td>3.18 (0.47)</td>
<td>3.17 (0.50)</td>
<td>3.15 (0.47)</td>
<td>3.19 (0.51)</td>
</tr>
<tr>
<td></td>
<td>Rural</td>
<td>3.18 (0.51)</td>
<td>3.14 (0.49)</td>
<td>3.23 (0.49)</td>
<td>3.11 (0.50)</td>
</tr>
<tr>
<td>External</td>
<td>Metropolitan</td>
<td>2.55 (0.61)</td>
<td>2.66 (0.64)</td>
<td>2.56 (0.60)</td>
<td>2.64 (0.65)</td>
</tr>
<tr>
<td></td>
<td>Micropolitan</td>
<td>2.50 (0.59)</td>
<td>2.68 (0.61)</td>
<td>2.52 (0.59)</td>
<td>2.67 (0.62)</td>
</tr>
<tr>
<td></td>
<td>Rural</td>
<td>2.57 (0.57)</td>
<td>2.62 (0.57)</td>
<td>2.64 (0.58)</td>
<td>2.58 (0.57)</td>
</tr>
</tbody>
</table>

*Responses on a 4-point scale where higher values indicate greater motivation.
motivation to control prejudice is associated with more favorable attitudes, while higher external motivation is associated with more explicit bias.\textsuperscript{11,14} Similar results were seen when the target of prejudice were people with HIV/AIDS.\textsuperscript{19}

To our knowledge, this is the first study to compare urban-rural differences in community members’ motivation to control prejudice toward people with HIV/AIDS. Overall, respondents tended to report that they were motivated to control prejudice toward people living with HIV/AIDS. This supports the findings of the national samples studied by Herek and colleagues,\textsuperscript{6,20} who suggest that overt expressions of prejudice toward people with HIV/AIDS are not endorsed by the majority of non-infected community members. Interestingly, community size alone did not predict differences in internal or external motivation to control prejudice. The lack of a main effect for community size suggests that community members’ expression of prejudice is influenced by more than the size of the town in which they live. Indeed, our results suggest that internal and external motivation to control prejudice toward people with HIV/AIDS are a function both of community size and of how identifiable people believe they are in their community, a relationship that differs for internal and external motivation.

The influence of perceived identifiability in the community was dependent upon whether identifiability was measured as being known personally by members of the community, or being known, but not personally. No attempt was made to examine the accuracy of the respondents’ estimates of perceived identifiability because our focus was on community residents’ perception of how well known they are, rather than the actual percent of the community that either knows them or knows who they are. People who reported being known personally by 10% or more of their community were more externally motivated to control prejudice. This is consistent with the conceptualization of external motivation, which posits that the evaluations and approval of others are important motivators. Thus, the more people with whom one interacts directly, the more important it may become to appear non-prejudiced.

On the other hand, although both internal and external motivations to control prejudice were related to the perception that one is recognized, this influence was dependent upon the size of the community in which one lived. We had predicted that internal motivation to control prejudice, stemming from personal beliefs and values, would be lower in rural than in urban communities, due to the social conservatism of rural areas. Instead, we found that although community size by itself was not related to internal motivation to
control prejudice, rural community members who reported being relatively well known, but not personally, were less internally motivated to control prejudice toward people with HIV/AIDS than rural community members who reported being less well known. Being better or less well known by people in the community was not related to internal motivation to control prejudice in metropolitan or micropolitan communities. This finding suggests that in rural areas, people who are identifiable by greater numbers of community members may be less likely to control their expressions of prejudice. Because of their more identifiable role in the community, the attitudes of this subset of individuals may be more influential than the attitudes of those who are less known in the community. Thus, the reports of greater perceived stigma by people with HIV/AIDS living in these rural communities may be a consequence of encounters with a highly identifiable subset of their community.

Among people living in micropolitan areas, being known, but not personally, is related to higher external motivation to control prejudice. This was not found in the rural communities, however, despite similar perceptions of community identifiability. Because micropolitan communities are intermediate in size between metropolitan and rural locales, people living in these communities may feel less certain about the congruence of their internal motivation with those of the surrounding community, yet more pressured to conform to prevailing standards. It is possible that social messages may be more mixed in these communities, leading residents, particularly those who perceive themselves to be more identifiable to both friends and strangers, to be more attuned to social cues. However, without asking respondents their perceptions of their towns, or determining social trends in these 3 types of communities (eg, political conservatism, beliefs about social norms not health related), this explanation is speculative.

These findings suggest that urban-rural differences in internal and external motivation to control prejudice are subtle, with small effect sizes. Because correlations between motivation to control prejudice and both implicit and explicit attitudes toward outgroups are moderate, it is likely that differences in attitudes are similarly subtle. Ultimately, the interaction of community members with the targets of prejudice is what is of interest, but the link between community prejudice toward people with HIV/AIDS and the stigma perceived by them has not yet been demonstrated. Equally unclear is the magnitude of differences in prejudice that can be perceived by stigmatized individuals. Thus, it is entirely possible that small, subtle differences in community prejudice can result in large differences in the perception of stigma by people with HIV/AIDS. Further research in this area is essential to understand the environment in which people with HIV/AIDS reside.

This is one of the few studies to examine motivation to control prejudice in a community sample. Because identification of the community sample was not proportional to the urban-rural distribution of the population in rural New England, it may not be representative of this region as a whole. Community members were, however, selected randomly within their community; thus, attitudes could be considered representative of those communities identified for examination. In addition, at least 1 resident of each community was HIV-infected, although that may not have been known to the community member being interviewed. We recognize that the metropolitan/micropolitan/rural classification may oversimplify the variability of the social ecology within counties. For example, a county identified as metropolitan may include pockets of rural areas. People living in these rural areas, however, may possess attitudes toward people with HIV/AIDS that are similar to residents of the nearby metropolitan area due to such things as work travel patterns and use of services in the urban center. It should be pointed out that, because this study was conducted in a largely rural section of New England, the population of the metropolitan communities is substantially smaller than the large centers that are normally considered metropolitan.

While this study was limited to an examination of motivation to control prejudice, the actual attitudes toward people with HIV/AIDS were not assessed, thus limiting our ability to examine possible urban-rural differences in attitudes. While both internal and external motivation are independently correlated with attitudes, previous work examining the exact nature of the influence does not clarify the combined effect of both sources of motivation, making a prediction of actual attitudes toward people with HIV/AIDS, and their potential to vary by community size, impossible in this study. The study was also limited to states with a low incidence of HIV infection. Thus, generalizability to larger metropolitan communities with a greater prevalence of HIV infection is limited.

In summary, our findings indicate that rural areas may not necessarily have a higher level of bias toward people with HIV/AIDS, at least as estimated by community motivation to control prejudice. However, there may be a few key residents in rural areas with relatively little internal compunction about being prejudiced who have disproportionate effects on the overall level of prejudice in a community. This might
explain why people with HIV/AIDS in rural areas report more perceived stigma than those living in other areas.

References