

Health Related Quality of Life among Racial/Ethnic Minorities in a Northern Rural Area

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Background

Health disparities are defined as differences in health status occurring by gender, age, race/ethnicity, income, and geographical location (Carter-Pokras & Baquet, 2002). Racial/ethnic minority populations, especially African Americans, suffer disproportionately from premature morbidity and mortality when compared to Caucasians. For example, in the United States, African Americans die prematurely from heart disease, most cancers, and stroke significantly more often compared to people of any other race/ethnicity (Office of Minority Health, 2009). In New York State, mortality rates from AIDS, asthma, stroke, diabetes, heart disease, and homicide are highest among African Americans (New York State Department of Health [NYSDH], 2007). According to the NYSDH, African Americans living in New York are more likely to become pregnant as teenagers, less likely to receive prenatal care, and more likely to suffer infant and maternal mortality. The Keiser Foundation estimated that 24% of Hispanics and 21% of African Americans living in New York State are without health insurance, compared to 10% of people who are White (Keiser Family Foundation, 2009). In the United States, determinants for racial/ethnic disparities in health are not fully understood; however, most would agree the causes are socially determined.

Health status varies by income and education (CDC, 2011; Cohen, et al., 2010; World Health Organization, 2010), and in the United States, racial/ethnic minorities, with the exception of Asian Americans, are poorer and less educated in comparison to Caucasians (US Census, 2010). Socioeconomic status then limits access to health insurance, and those who do not have health insurance tend to suffer more severe ill health compared to those with insurance (Neilson & Garasky, 2008). However, and interestingly, even in countries with universal access to care, health disparities by income persist (Beiser & Stuart, 2005; Public Health Agency of Canada, 2004), so access to care cannot explain the existence of socioeconomic and, by extension, racial/ethnic disparities in health. In contrast, some have examined the influence of quality of care. For example, Jha, et al. (2003) found that African American women participating in the HERS study were less likely to receive preventative care for heart disease than White women, despite having higher risk factors. Similar results were reported by Smith-Bindam, et al. (2006) in their study of breast cancer screening and by Fincher, et al. (2004) in the diagnosis and treatment of cardiovascular disease in African Americans. While access to care may not help us understand disparities in health, quality of care may.

Recent research suggests that differences in health by race/ethnicity stem from both individual and institutional racism (Williams, Neighbors, & Jackson, 2003). For example, Gee (2002) reported that among racial/ethnic minorities, perceptions of racism were related to poor self-reported mental health. In other studies, perceptions of racism and institutional racism were related to blood pressure (Krieger, 1990; Brondolo, Rieppi, Kelly, & Gerin, 2005) and cardiovascular health (Bhalota, et al., 2007; Fincher, et al., 2004; Wyatt, et al., 2003).

Another significant determinant of health disparities is geographical location. Populations in rural areas often carry an excess burden of disease, regardless of race/ethnicity. According to Bennett, Olatosi, and Probst (2008), compared to those living in urban areas, people residing in rural areas were more likely to report ill health, diabetes, and obesity and were less likely to be physically active, to have insurance or a primary care provider, or to receive cancer/preventative screenings. Because disparities in health exist by race/ethnicity and rural-urban living, racial/ethnic minorities living in rural areas face increased burden of disease compared to racial/ethnic minorities in urban areas.

Using data from national surveys such as the Behavior Risk Factor Surveillance System, Mainous, King, Garr, and Pearson (2004) reported African Americans in rural areas were significantly less likely to have managed diabetes when compared to both Whites living in rural areas and African Americans in urban areas. Additionally, Slifkin, Goldsmith, and Ricketts (2000) found African Americans living in rural areas had higher rates of infant mortality, cardiovascular disease, and diabetes compared to African Americans living in urban areas.

These grim statistics have increased nationwide efforts to address the health disparities, but few have addressed the dual impact of race/ethnicity and rurality, especially where race/ethnicity is a factor in rural communities that are not racially segregated. These communities present a persistent and unique need. Therefore, the aim of this exploratory study was to examine the health-related quality of life among racial/ethnic minorities (community members and students) living in a rural, primarily Caucasian community in northern New York. In doing so, the following research questions were addressed:

- Health Status
 - What is the health status of racial/ethnic minorities in the county?
 - How does the health status of racial/ethnic minorities in county compared to those who are Caucasian?
 - Access/use of health resources
 - What health-related resources are available to people living in the county?
 - Do people in the county perceive these health-related resources to be culturally appropriate?
 - Do these uses/perceptions of resources vary by race/ethnicity?
 - Racial Discrimination
 - Do racial/ethnic minorities living in the county perceive racism while in the county?
 - How do perceptions of racism among racial/ethnic minorities compare to those among people who are White?
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- How are perceptions of racism associated with health status and does this vary by race/ethnicity?

Methods

Sample & Procedure

This cross-sectional, descriptive study examined the health-related quality of life and use of health resources of racial/ethnic minorities living in a rural county in northern New York. ($n=1300$) were from a small, rural county in northern New York. In 2008, it was home to 109,000 people and approximately 6,500 of them were people of color (US Census, 2010). Ninety-four percent of the population is White, 2.4% Black, 1.1% American Indian/Alaskan Native, 2.0% Hispanic/Latino, and 0.9% Asian American, and 0.9% multi-racial. Contributing to the diversity of the county are four local area colleges. At one institution, 12% of students are racial/ethnic minorities, a number which has been increasing since 2004 while at another, 17% of faculty and 9.4% of the student body are racial/ethnic minorities. While data on the SES of minorities is not readily available for county, as a whole 16% of this population lives below the federal poverty level. Additionally, The USDHHS (2009) has labeled 17 of the county's towns as medically underserved.

All participants ($n=1039$) completed a 79-item survey assessing (a) demographics; (b) health status; (c) use/perceptions of local health resources; and (d) perceived racial discrimination (the perceived racial discrimination findings will be reported elsewhere). The survey included 11 items from the Behavior Risk Factor Surveillance System (CDC, 2009) to assess health-related quality of life, 4 questions assessing access to and perceptions of the availability of health information in the county, and 2 questions to assess access to health care services and insurance. All items were scored using 5- or 6-point Likert scales.

After IRB approval was obtained, participants were recruited to complete the survey in two ways: using (a) online and (b) face-to-face methods.

Online survey procedures: First, the survey was made available to participants online, using Survey Monkey, an online survey software tool. To recruit members to the online survey, the researchers contacted the Offices of Institutional Effectiveness at four local universities to request permission to distribute the survey to their students, faculty, and staff. Three of the four colleges agreed to do this, while one declined.

Once permission was granted from the three universities and IRB approval obtained, the researchers requested an invitation email along with the link to the survey be sent to the students, faculty and staff using the email distribution lists. The participants who viewed the email were instructed to click on the link to the survey, confirm informed consent, then complete and submit the survey. One week after the initial email requesting their participation, another email was sent as a reminder that the survey link was available. The same email was sent one more time, 2 weeks after the initial invitation email.

The online survey was also advertised on the St. Lawrence County Minority Health Project website. The researchers created a press release to advertise the project and to request/solicit participation. Three local newspapers published the story that included a link to the website, which then included a link to the survey.

Paper-pencil survey procedures: The paper-pencil versions of the survey were also distributed to participants using intercept interview and snowball sampling procedures. Participants were recruited by student research assistants who located themselves in the Student Unions (or other central location) at each of the three local Universities and at local businesses/organizations in 5 of the largest towns in the county. At these locations, research assistants approached (intercepted) those entering and asked them to complete the survey. The research assistants also asked participants to distribute the survey to other people they know who share their race/ethnicity (snowballing). If they agreed, the research assistants provided them copies of the consent form and survey and self-addressed, stamped envelopes with instructions for completing and returning the documents.

Data Analysis

All data were analyzed using SPSS 18.0. Demographics were assessed using frequencies while comparison research questions were measured using t-test, OneWay ANOVA, and Univariate General Linear Models. Significance was set at $p = .05$.

Results

Sociodemographic Characteristics

A total of 51 individuals completed the paper-pencil version of the survey and 1249 completed it online. Of the surveys completed online, 261 were not usable because they were incomplete, leaving a total sample of $n=1039$. As seen in Table 1, 29.7% were male and 70.3% female. Additionally, 90.9% were White, .8% Native American, .9% Asian American, 3.8% Black/African American, and 2.1% Hispanic/Latino. The distribution of race/ethnicity in our participants is representative of the county where, according to the US Census (2011), 94% is White, 2.4% Black, 1.1% American Indian/Alaskan Native, 2.0% Hispanic/Latino, and 0.9% Asian American, and 0.9% multi-racial. However, because the sample size for racial/ethnic minorities was small, the race variable was re-coded into 2 groups (Caucasians and Racial/Ethnic Minorities) for all additional analyses.

Insert Table 1

The mean age of the sample was 32.94, ages ranged from 18 to 84, and most of the respondents were between the ages of 18 and 34 years. Additional sociodemographic characteristics of the sample are reported in Table 1. In this sample, age (Caucasians were older than racial/ethnic minorities; $X^2 = 20.003, p = .001$), sexual orientation (more Caucasians reported being heterosexual and more racial/ethnic minorities were bisexual; $X^2 = 9.813, p = .007$), and relationship status (more racial/ethnic minorities were single; $X^2 = 22.734, p = .000$) varied significantly by race.

As seen in Table 1, employment did significantly vary by race/ethnicity ($X^2 = 5.082, p = .024$), but that is likely because 48% of racial/ethnic minorities were students, compared to 34% of Caucasians. Highest level of education also varied significantly by race/ethnicity ($X^2 = 13.271, p = .021$), but again, this could be the result of age differences as more racial/ethnic minorities in the sample were under the age of 45 years (91% vs 73.1%). However, a univariate ANOVA controlling for age still showed a significant difference in education by race/ethnicity ($F(2, 1030) = 157.241, p = .000$).

There were also significant differences in household income, where the mean income for racial/ethnic minorities was \$30-39K and 40-49K for Caucasians ($F(1, 1032), p = .000$). Again, when controlling for age, the significant differences remain ($F(2, 1030) = 89.748, p = .000$).

Access to Health Care/Information

Results from ANOVA analyses indicated no significant differences between race/ethnicity and having insurance, meaning the proportion of racial/ethnic minorities having health insurance was not significantly lower than the proportion of Caucasians with health insurance. Interestingly, however, as seen in Table 2, the type of insurance they had was significantly different ($X^2(7,) = 47.827, p = .000$), where Caucasians were more likely to have some version of non-public insurance than racial/ethnic minorities.

Insert Table 2

Results also confirmed that racial/ethnic minorities reported the cost limited their ability to visit the doctor significantly more often than Caucasians ($F(1, 990) = 17.042, p = .000$).

Additionally, racial minorities were significantly less likely to use health related services in the county ($M = 2.98$) compared to Caucasians ($M = 3.62; F(1, 1032) = 17.051, p = .000$). There was no difference in ease at which health information was obtained in the county. Racial/ethnic minorities reported being less likely finding the information they need when they look for it but the difference was not statistically significant. Finally, racial/ethnic minorities reported that

health information meets the needs of someone of their race/ethnicity significantly less often than Caucasians ($F(1, 912) = 49.961, p = .000$).

Insert Table 3

Quality of Life Indicators

Findings indicated 55.6% of Caucasians and 47.2% of racial/ethnic minorities reported being in very good or excellent health and these differences were not significant. However, as seen in Table 4, there were significant differences in some quality of life indicators. Results from a one-way ANOVA indicated that racial/ethnic minorities reported having significantly more mental health problems than Caucasians. For example, racial/ethnic minorities reported feeling significantly more sad, blue, or depressed ($F(1, 1031) = 7.193, p = .011$) and significantly more worried, tense, and anxious ($F(1, 1031) = 5.550, p = .040$) compared to Caucasians. They were also significantly less likely to report getting the emotional support they need ($F(1, 1031) = 11.759, p = .001$). Finally, Caucasians reported being more limited because of physical/mental/emotional problems. This was true even when controlling for age ($F(2, 1032) = 14.495, p = .000$).

Insert Table 4

Racism

To calculate the impact of racism on health status, a items measuring experiences with racism in the county were summed to obtain a total perceived racism score. Lowest possible score was 26, indicating no experiences with racism and 156 was the highest score, indicating experiencing racism almost all of the time. Results indicated significant differences in the experience of racism by race/ethnicity, with a $X = 28.51$ for Caucasians and $X = 46.5$ for Racial/Ethnic minorities ($t = 17.687, p = .000$). These perceptions of racism were also significantly correlated with general/overall health status ($r = -.081, p = .007$) so that as perceptions of racism increase, health status decreased in this sample. Additionally, racism was significantly correlated with all measures of quality of life (See Table 5)

Insert Table 5 Here

Discussion

Previous studies have indicated disparities in health are magnified when racial/ethnic minorities reside in rural areas. Results from this study build on those findings by exploring the extent of those disparities in rural areas that are predominantly Caucasian. Results confirm the well-being, especially mental health, of racial/ethnic minorities living in rural areas is significantly worse in comparison to Caucasians. Additionally, perceptions of racism, experienced more often by racial/ethnic minorities, are related to health status.

In rural areas that are predominantly White, the racial/ethnic population is often disregarded or ignored leaving their unique health issues unaddressed (Probst, Moore, Glover & Samuels, 2004). This lack of attention is not likely intentional, but because the population seems invisible, so small that those practicing in the health field fail to see the need to address them specifically. However, findings from this study indicate that need does in fact exist.

Not only is there a need to address the health needs, but findings from this study also indicate a need for community-wide education about racism, including what constitutes discriminatory acts at both the individual and institutional levels. The researchers are currently conducting focus groups with racial/ethnic minorities to explore how they experience racism as a first step in developing those educational efforts.

Findings also revealed that racial/ethnic minorities use health-related services less often than Caucasians. This finding is consistent with other studies and underuse of health care services has been cited as one determinant of racial/ethnic disparities in health (Baicker, Chandra & Skinner, 2005). To address this need, the researchers received a small grant from Research and Sponsored Programs at SUNY Potsdam to examine the cultural competence of health-related organizations in the county. The hope is that the findings from this study will be used to educate health care workers about the unique health needs of racial/ethnic minorities in the county and to advocate that health-related programs be designed to meet those needs. These efforts may increase the rate at which racial/ethnic minorities seek out health care services, and thus improve their health.

This exploratory study is not without its limitations. First, the sample size for the target population is quite small, but representative of racial/ethnic minorities in the county. This is an incredibly difficult population to reach and gathering the needed data requires time. Furthermore, because the priority sample was so small, it was statistically impossible to compare results between racial/ethnic minorities. As such, this study is on-going. Additionally, the survey did not ask the participants to identify their county of residence making it difficult to

conclude for certainty all resided in the county. However, the survey items assessing perceptions of racism did ask participants to report on their experiences in the county.

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Appendix A

Table 1
Sociodemographic Characteristics

Characteristics/Indicators	Caucasian (%)	Racial/Ethnic Minority (%)
*Age	18-24	68.5
	25-34	10.1
	35-45	12.4
	45-54	6.7
	55+	2.2
*Sex	Male	41.6
	Female	58.4
Health Status	Poor	0
	Fair	15.7
	Good	37.1
	Very Good	31.5
	Excellent	15.7
*Education	Less than High School	0
	High School/GED	4.5
	Some College	40.4
	Associates Degree	12.4
	Bachelors Degree	27
	Graduate Degree	15.7
*Income	<\$19,999	36
	\$20,000-29,999	10.1
	\$30,000-39,999	11.2
	\$40,000-49,000	7.9
	\$50,000-59,999	13.5
	\$60,000+	21.3
*Employment	Unemployed	2.2
	Employed	49.4
	Retired	0
	Student	48.3
*Relationship Status	Single	68.5
	Married/Civil Union	16.9
	Partnered/Cohabiting	11.2
	Divorced/Separated	3.4
	Widowed	.0
	Other	.0
*Sexual Orientation	Gay/Lesbian/Bisexual/Other	12.6
	Heterosexual	87.4

* $p = .05$

Appendix B

Table 2

Percentage of respondents indicating type of health insurance

Race/Ethnicity	No Insurance	Employer-Sponsored Insurance	Medicaid	Family Health Plus	Medicare	Parent's Insurance	Student Insurance	Other Insurance
White	3.6	48	3.3	1.2	1.4	32.4	5.1	5.1
Racial/Ethnic Minority	6.7	23.6	13.5	1.1	4.5	29.2	12.4	9.0

Table 3

ANOVA analysis of access to health information

Indicator	Caucasian <i>M</i>	Racial/Ethnic Minority <i>M</i>	<i>P Value</i>
I use health-related services in <this county>	3.62	2.98	.000*
Overall, I find it easy to locate health information in my city/town/village	3.63	3.49	.282
In my opinion, the health information I obtain/use meets the needs of a person of my race/ethnicity	4.01	3.24	.000*
When I look for health information, I always find it.	3.64	3.43	.086

**One-way ANOVA, p = .05*

Note: 1 = strongly disagree, 5 = strongly agree

Appendix C

Table 4
ANOVA analysis of Quality of Life Indicators

Indicators	Caucasian	Racial/Ethnic Minority	<i>P value</i>
During the past 30 days	<i>M</i>	<i>M</i>	
1. How often was your mental health NOT good?	2.50	2.73	.069
2. How often was your physical health NOT good?	2.00	2.12	.285
3. Did poor health keep you from doing usual activities?	1.72	1.91	.083
4. How often have you felt very healthy and full of energy?	3.87	3.73	.340
5. How often have you felt sad, blue or depressed?	2.25	2.55	.011*
6. How often have you felt worried, tense, anxious?	2.75	3.01	.040*
7. **How often do you get the social/emotional support you need?	2.19	2.57	.001*
8. In general, how satisfied are you with your life?	1.67	1.82	.056

* $p=.05$

Note: 1 = Never, 6 = Almost all the time

***Reverse scoring on this item where 1=always and 5 = never*

Appendix D

Table 5

Pearson's Correlations between Perceptions of Racism and Quality of Life

Measure	Perceptions of Racism
1. During the past 30 days, how often was your mental health NOT good?	.105**
2. During the past 30 days, did poor health keep you from doing usual activities?	.116**
3. During past 30days, did pain make it hard to do usual activities?	.066*
4. During past 30days, how often have you felt very healthy and full of energy?	-.078*
5. During the past 30days, how often have you felt sad, blue or depressed?	.125**
6. During the past 30days, how often have you felt worried, tense, anxious?	.111**
7. How often do you get the social and emotional support you need?	.158**
8. In general, how satisfied are you with your life?	.156**

* $p = .05$, ** $p = .01$