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The Association Between Happiness and Self-Rated Physical Health of African American Men: A Population-Based Cross-Sectional Study

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Abstract

Happiness and self-rated physical health are included in national surveys to assess health perceptions and subjective well-being among individuals. Studies have reported that happiness impacts physical health; however, little is known about the association between happiness and self-rated physical health among African American men (AAM). The objective of this study is to examine this relationship.

Participants were 1,263 AAM aged 18+ years from the National Survey of American Life who rated their happiness and physical health. Interviews were conducted between 2001 and 2003. Self-rated physical health was defined as how individuals rated their own physical health and happiness as how individuals perceived their subjective well-being. Three multivariate logistic regression models were used to examine the relationships between happiness and self-rated physical health.

It was observed that AAM who were happy were more likely to be married, to be employed, and earn more than $30,000 annually compared to AAM who were not happy. AAM who were happy were less likely to rate their physical health as fair/poor relative to AAM who were not happy. When controlling for demographic and socioeconomic factors, AAM who reported being happy had lower odds of rating their physical health as fair/poor compared to AAM who reported not being happy.

Findings suggest that AAM who are happy report better physical health than those who report not being happy. Public health promotion strategies focusing on AAM should consider happiness as a promising influence that may positively impact physical health.

Keywords

health, African American men, disparities, race, ethnicity, self-rated health, men's health, happiness, subjective well-being

Self-rating of physical health (SRH) is one of the most common tools used by national surveys and epidemiological studies to assess health perceptions among individuals. Studies have reported that a person's own judgment of his or her general health is a potent forecaster of future morbidity and mortality, even after controlling for variables like gender, age, and socioeconomic status (Idler & Benyamini, 1997; Idler, Leventhal, McLaughlin, & Leventhal, 2004; Idler & Kasl, 1991; Larsson, Hemmingsson, Allebeck, & Lundberg, 2002; McGee, Liao, Cao, & Cooper, 1999; Mossey & Shapiro,

1982; Vuorisalmi, Lintonen, & Jylhä, 2005). The World Health Organization (WHO) defines health as "a state of

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complete physical, mental and social well-being and not merely the absence of disease or infirmity" (World Health Organization, 1946), suggesting that perhaps there are health problems that cannot be diagnosed using clinical procedures. In fact, the WHO recommends the use of SRH to assess the health of individuals (Picavet, Bruin, Nossikov, & World Health Organization, 1996). Mossey and Shapiro (1982) reported SRH to be far better in predicting late mortality than objective health measures such as clinical examinations or diagnoses from health-care workers. SRH has the potential to capture other components of poor health that cannot be detected through biomedical means or medical examinations (Eriksson, Unden, & Elofsson, 2001). SRH is a viable predictor of overall physical health, perhaps better than clinical diagnoses.

Understanding the association between variables like happiness and SRH can help in responding to important questions about the health of a population. Veenhoven (2008) defines happiness as "the overall appreciation of one's life as a whole." It is widely believed that happiness, also known scholarly as subjective well-being, leads to good physical health and vice versa. Studies have used robust methodologies and techniques to demonstrate a positive correlation between happiness and health (Diener & Chan, 2011; Diener, 2012; Sabatini, 2014; Veenhoven, 2008). In fact, Sabatini (2014) and Veenhoven (2008) have demonstrated a potential causal relationship between happiness and health, implying that happiness can lead to good health.

To understand the causal relationship between happiness and health or longevity, Veenhoven (2008) analyzed 30 longitudinal studies that followed participants over time, controlling for baseline variables including objective and subjective health, age, and gender and determined that 53% of the longitudinal studies reported that the initially happiest people live longer. Notwithstanding the existing literature on the relationship between happiness and health, important questions remain. Studies on this subject have not used nationally representative samples, making it impossible to generalize the results across all populations and have used broad national data that may result in ecological fallacy. Bjørnskov (2008) states that if the relationship between health and happiness is to have any impact on policies, it is necessary that such association should be causal and robust in individual level studies.

Understanding the relationship between happiness and physical health particularly among African American men (AAM), a marginalized population with disproportionately poor health outcomes (Bond & Herman, 2016) that continues to experience institutional and societal discrimination (Smelser, Wilson, & Mitchell, 2001), is crucial for public health interventions. According to Bond and Herman (2016), AAM have worse outcomes in life expectancy, infant health outcomes, age- and cause-specific morbidity and mortality, insurance coverage, and access to adequate health care compared to African American women and Caucasians. The marginalization of Black men is further detailed in the statement "Blacks are arrested, convicted and incarcerated at far higher rates than whites or any other ethnic or racial group" (Smelser et al., 2001), which can negatively impact their happiness and physical health. Poor health outcomes and institutional discrimination have the potential of negatively impacting happiness among AAM as compared to men from other ethnic groups, making AAM a concern for public health research.

Using a nationally representative sample from the National Survey of American Life (NSAL), the relationship between happiness and SRH among AAM is explored. The hypothesis that AAM who are happy will have higher rates of self-rated physical health compared to AAM who are not happy was analyzed.

Methods

The NSAL is a project under the Program for Research on Black Americans carried out by the University of Michigan's Institute for Social Research. The NSAL was developed as one of three nationally representative surveys for the National Institute of Mental Health Collaborative Psychiatric Epidemiology Surveys. The NSAL has a total sample of 6,199 consisting of 3,570 African Americans, 1,006 non-Hispanic Whites, and 1,623 Blacks of Caribbean descent (Caribbean Blacks) ages 18 years and older. The largest sample of the NSAL, the African American sample, is a nationally representative sample of households across the 48 bordering states (Jackson et al., 2004). For this study, 1,263 AAM provided complete information on happiness, self-rated physical health, marriage, education, income, employment, and age. In this study, the term African American refers to survey participants who self-identified as Black without any ancestral ties or ethnic heritage with the Caribbean. During the interview, participants who self-identified as Black, but responded yes to any of the following criteria were not classified as African American: (a) they were of West Indian or Caribbean descent, (b) they were from a country included on a list of Caribbean area countries presented by the interviewers, or (c) their parents or grandparents were born in a Caribbean area country.

The NSAL participant interviews lasted 2 hr and 30 min. Among the survey participants, ~86% (5,331) completed a face-to-face interview and the rest of the interviews occurred fully or partially by telephone. The data were collected between February 2001 and March 2003. The overall final response rate for the total sample was 72.3% (6,199), consisting of 70.7% (3,570) African Americans (Jackson et al., 2004).

Table 1. Distribution of Select Sample Characteristics of 1,263 African American Men From the NSAL, 2001 to 2003.

Variable	Happy n = 159	Not happy n = 1,104	p value
Age (mean ± SE)	42.1 ± 0.6	40.5 ± 1.1	.080
Married (%)	51.5	35.4	.001
Less than 12th-grade education (%)	76.9	76.0	.789
Employment (%)	72.8	61.7	.012
Income <30,000 (%)	41.9	53.9	.006
Fair/poor physical health (%)	15.6	31.6	<.001

Note. NSAL = National Survey of American Life, *SE* = standard error.

Ethics Statement

This study consisted of secondary analysis of existing, deidentified, publicly available data from the NSAL. These data were downloaded from the Inter-University Consortium for Political and Social Research website (https://www.icpsr.umich.edu/icpsrweb/). As defined by the Department of Health and Human Services regulations 45 CFR 46.102, this study does not qualify as human subject research.

Measures

Dependent Variable: Self-Reported Physical Health

The NSAL used the global SRH to measure physical health. Participants were asked, "How would you rate your overall physical health at the present time? Would you say it is excellent, very good, good, fair, or poor?" The responses were coded into a binary variable, grouping "excellent," "very good," and "good" as the reference group (coded 0), and "fair" or "poor" as the comparing group (coded 1).

Independent Variable: Happiness

The NSAL measured happiness by asking participants, "Taking all things together, how would you say things are these days—would you say you are very happy, pretty happy, or not happy?" A binary variable was created to identify men who reported "very happy" and "pretty happy" (coded 1) versus those who reported as "not happy" (coded 0 [reference]).

Covariates

The following covariates were used in the analysis: age, education, income, employment, and marital status. Marital status was grouped into married, which included married or living with a partner as if married, and not married (reference group), which included never married, divorced, or widowed. Education was classified into high school or less and greater than high school (reference group). Total family income was grouped into less than $30,000 and greater than or equal to $30,000 (reference group). Employment status was grouped into employed and unemployed (reference group). Participants' age was treated as a continuous variable.

Statistical Analysis

The average mean age and the proportional distribution of participants' characteristics with respect to the covariates and dependent and independent variables was examined. The dependent variable and all covariates were examined with respect to the independent variable, happiness. Logistic regression was used to determine the relationship between happiness and self-rated physical health, adjusting for the covariates sequentially. Three progressively complex models were developed during the analysis. Model 1 examined the relationship between happiness and self-rated physical health. Model 2 built on Model 1 by adding demographic factors including age and marital status. Model 3 added socioeconomic factors including education, employment, and income. Any observed relationship with a *p* value of less than .05 was considered statistically significant. STATA 14 (StataCorp, 2015) software was used for analysis in this study.

Results

The results in Table 1 show some of the key characteristics of the study population. There is significant difference in marital status, income, employment, and SRH comparing AAM who are happy to AAM who are not happy, but no difference in education and average age. AAM who are happy are more likely to be married (51.5%) and employed (72.8%) and less likely to earn less than $30,000 annually (41.9%) compared to AAM who are not happy (p-values < 0.002) (Table 1). Regarding physical health, AAM who are happy are less likely to report fair/poor physical health (15.5%) relative to AAM

Table 2. Association Between Happiness and Self-Rated Physical Health Among 1,263 African American Men From the NSAL, 2001 to 2003.

	Odds ratio [95% confidence interval]		
Variables	Model 1	Model 2	Model 3
Happy	0.40 [0.26, 0.61]	0.37 [0.23, 0.58]	0.40 [0.24, 0.66]
Age		1.03 [1.02, 1.04]	1.02 [1.01, 1.03]
Married		0.77 [0.55, 1.07]	1.21 [0.86, 1.72]
Education			0.70 [0.45, 1.07]
Employment			0.41 [0.26, 0.66]
Income			2.70 [1.86, 3.93]

Note. Model 1 logistically regresses self-rated physical health on happiness. Model 2 adjusted for age and marital status. Model 3 adjusted for age, marital status, education, employment, and income. NSAL = National Survey of American Life.

who are not happy (31.6%, *p* value < .001; Table 1). Comparing AAM who are happy to AAM who are not happy, there was no significant difference with respect to age (42.1 vs. 40.5, *p* value = .08) and attaining less than or equal to 12th-grade education (76.9% vs. 76.0%, *p* value = 0.79), respectively (Table 1).

Results in Table 2 show the association between happiness and self-rated physical health. AAM who are happy (odds ratio [OR] = 0.40, 95% confidence interval [CI] = [0.26, 0.61]) have 60% lower odds of rating their physical health as being fair or poor compared to AAM who are not happy. After adjusting for age and marital status, AAM who are happy (OR = 0.37, 95% CI = [0.23, 0.58]) have 73% lower odds of rating their physical health as poor or fair compared to AAM who are happy. After controlling for demographic and socioeconomic factors in Model 3, the results were similar to what was observed in Model 1. Compared to AAM who are not happy, AAM who are happy (OR = 0.40, 95% CI = [0.24, 0.66]) have 60% lower odds of rating their health as fair or poor.

Discussion

Many studies have explored the relationship between happiness and self-rated physical health (Diener & Chan, 2011; Diener, 2012; Sabatini, 2014; Veenhoven, 2008). However, little is known about this relationship among AAM. The purpose of this study was to explore the relationship between happiness and self-rated physical health among AAM using nationally representative data from the NSAL.

Findings from this study indicate that AAM who are happy have lower odds of rating their physical health as being fair or poor compared to AAM who are not happy, even after controlling for various demographic and socio-economic factors. AAM who are happy are more likely to rate their physical health as being good, very good, or excellent compared to AAM who are not happy.

These results support the findings of early studies on the relationship between happiness and SRH (Eriksson et al., 2001; Sabatini, 2014). After controlling for endogeneity, one study reported that happiness was the most significant and strongest predictor of self-reported health (Sabatini, 2014). A study by Pettit et al. (2001) identified happiness as a strong predictor of self-reported positive physical health, which, in turn, is an important measure of the overall health of an individual, capturing important health factors beyond the measures of objective health by health-care providers (Eriksson et al., 2001).

Happiness has been reported to influence immunity, which has a strong influence on health. Cohen et al. (2006) administered rhinovirus and influenza virus to a group of volunteers after assessing for emotional styles (happiness) and other variables at baseline. The volunteers were followed for 5 to 6 days to determine infection and signs and symptoms. It was reported that happiness or positive emotions was associated with greater resistance to developing a cold. Rosenkranz et al. (2003) conducted a similar study, but focused on negative affective style and reported that study participants with more negative emotions (not happy) had a weaker immune response and were at greater risk for poor physical health than people with positive affective style. It is possible that AAM who reported being happy have a better immune system relative to AAM who reported not being happy, which may explain why SRH varies between the two groups.

People who are happy are more likely to live a healthy lifestyle, avoid overeating, smoking, and excessive drinking of alcoholic beverages (Sabatini, 2014; Veenhoven, 2008), are less likely to commit suicide or become victims of suicide (Frey, 2011), and are more likely to monitor their body weight and engage in physical activities (Rasciute & Downward, 2010; Veenhoven, 2008). It is possible that AAM who reported being happy also tend to live lifestyles that promote health compared to AAM who reported not being happy. Veenhoven (2008) concluded that the size of the health effect between happy and unhappy people is like the difference between smoking and not smoking.

The cross-sectional nature of the data used for this analysis makes it impossible to infer causality between happiness and self-rated physical health. Notwithstanding this limitation, this study has well-founded strengths.

The participants for this study are from a nationally representative sample, which makes it possible for generalizability. Among the many survey questions that are used in measuring subjective health, Vuorisalmi et al. (2005) demonstrates that the global self-rated physical health question "How would you rate your overall physical health at the present time? Would you say it is excellent, very good, good, fair, or poor?" used in the NSAL is better in measuring subjective physical health compared to other forms of comparative survey questions such as "How would you describe your health compared to that of your age peers; is it better, about the same, or worse?"

This study analyzed the relationship between happiness and self-rated physical health among AAM, controlling for various covariates. The findings in this study conclude that happiness is associated with self-rated physical health among AAM. Future research is needed to elucidate factors that promote happiness among AAM to better inform policy makers and public health agencies on the subject. A longitudinal study of the impact of happiness on the health of AAM will help confirm whether there is a potential causal relationship between happiness and self-rated physical health among this population.

Declaration of Conflicting Interests

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