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THE IMPACT OF MULTIPLE SOCIAL CATEGORIES ON HEALTHCARE OUTCOMES

by

TIFFANY S. PERKINS

A dissertation submitted to the Graduate Faculty in Psychology in partial
fulfillment of the requirements for the degree of
Doctor of Philosophy, The City University of New York

2003

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Abstract

THE IMPACT OF MULTIPLE SOCIAL GROUPS ON HEALTHCARE OUTCOMES

by

Tiffany S. Perkins

Adviser: Professor Deborah L. Coates

Research has often neglected the interconnected nature of social categories. The purpose of this secondary data analysis was to examine the individual and interactional effects of three social categories, gender, poverty, and disability, on various healthcare outcomes: (a) type of insurance, (b) type of provider, (c) perceived health status, (d) satisfaction with usual source of care, and (e) comprehensiveness of services.

The 2,076 African American participants were part of the Agency for Health Research Quality's Medical Expenditure Panel Survey, a nationally representative survey that collects detailed information on the health status, access to care, healthcare use, expense, and health insurance coverage of the civilian noninstitutionalized population of the United States. It was designed to help understand how changes in public and private health insurance, and other dynamics of today's market-driven healthcare delivery system continue to affect the kinds, amounts, and costs of American healthcare.

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The model that included the individual effects of gender, poverty, and disability predicted type of insurance and perceived health status. When two-way interactions between social categories were introduced, the model predicted type of insurance and perceived health status. Finally, when the gender-poverty-disability interaction was added, the model predicted type of insurance and comprehensiveness of services, which was not significant in the model of individual effects or in the model of two-way interactions. Subsequent analyses indicated that the relationships between poverty and the two variables of perceived health status and type of insurance changed significantly, depending upon whether or not the respondent had a disability.

As a summary point, the comparison of all low status levels within social categories (e.g., women with a disability in the lowest poverty category) to all high status levels (e.g., men without a disability in the highest poverty category) indicated that respondents who represented all high status levels within social categories had better healthcare outcomes than respondents who represented all low status levels within social categories. The implications of the findings are that individuals who belong to low status levels within social categories are more likely to be targets of institutional discrimination. However, this holds true for certain variables and not for others, suggesting the need to look not only at multiple social categories, but also at the role played by different types of outcomes.

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Chapter 1

Introduction

Institutional policies and practices may present systematic advantages and disadvantages to some individuals based on race, ethnicity, gender, disability, or economic standing. Systematic disparities across groups may be due in part to institutional discrimination (Jones, 1972/1997). Institutional racism can be imposed upon individuals as they navigate complex social systems on a daily basis. These include physical and mental healthcare, educational, and occupational systems. James Jones defined institutional racism as

> those established laws, customs, and practices that systematically reflect and produce racial inequalities in American society. If racist consequences accrue to institutional laws, customs, practices, the institution is racist whether or not the individuals maintaining those practices have racist intentions. Institutional racism can either be overt or covert (corresponding to de jure and de facto, respectively) and either intentional or unintentional. (p. 438)

Jones' definition focuses on racism that results from race- and ethnicity-based discrimination; however, institutional discrimination on the basis of race, ethnicity, gender, social class, and disability is evident in the United States. Research on institutional discrimination has focused traditionally on educational, economic, media, and judicial institutions. Recently, researchers have begun to

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focus on the negative physical and mental health consequences of discrimination. For example, institutional discrimination can have negative affective consequences for the target of the discrimination and has been shown to increase hypertension and stress-related illnesses (e.g., Jones, Harrell, Morris-Prather, Thomas, & Omawale, 1996; Swim & Stangor, 1998). Institutional discrimination in healthcare facilities may be manifested as systematic disparities across groups in various healthcare outcomes, such as access to, quality, and utilization of healthcare services. Institutional discrimination in a healthcare institution may have particularly detrimental and even fatal consequences by influencing those factors, which play a major role in shaping the response to health problems, satisfaction with services, and perception of health and healthcare needs. For this reason, healthcare outcomes are a traditional area for research on discrimination.

The traditional healthcare model, on which the healthcare systems base practices, dictates that individuals are treated based on signs, symptoms, and laboratory indicators of disease or illness progression. Traditional reliance upon this model, with its dependence on professional diagnoses and specific symptom- or disease-based treatments, has precluded an understanding of how disparities in healthcare outcomes can be the result of discriminatory institutional practices. Research on disparities in healthcare has provided an important counterpoint to epidemiological research, which focuses on biological or physical indicators of health disparities. Clinical or epidemiological researchers are concerned with assessing efficacy, that is, demonstrating potential benefits—typically of drugs—

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under controlled conditions. In contrast, research on disparities in healthcare is concerned with assessing the processes and outcomes of routine healthcare to determine whether, where, and how practice might be improved to achieve better quality, accessibility, and utilization.

Research on healthcare outcomes has shown that reliance upon the traditional healthcare model may result in faulty or, at best, impartial interpretations of healthcare outcomes. Such research typically has focused on disparities between levels within social categories, such as between genders or among racial group categories, or across categories of socioeconomic status. In fact, disparities in healthcare outcomes have been found within various social categories. Gender differences have been found in (a) prescription of psychotropic medications (Ashton, 1991), (b) prognosis for alcohol treatment (Vannicelli & Hamilton, 1984), (c) prescribed activity restrictions (Safran, Rogers, Tarlov, McHorney, & Ware, 1997), and (d) evaluation of coronary disease (Judelson, 1997). Racial differences have been found in the provision of mental healthcare and in-patient services (Flaherty & Meager, 1997). Furthermore, persons with disabilities have been denied appropriate gynecological care because obstetricians and midwives are often unknowledgeable about how specific disabilities may interfere with pregnancy (Nosek, Howlan, Rintala, Young, & Champong, 1997).

Disparities within any system may occur as a result of the levels within any number of social categories to which a person belongs. Individuals belong to an infinite number of social categories based on gender, skin color, ethnicity, sexual

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preference, visible and invisible disabilities, profession, religion, age, political affiliations, and numerous other social categories. Social categorization involves defining social selves and identifying—either correctly or incorrectly—the social categories to which others belong. The process of social categorization may begin as an unbiased cognitive task. However, embedded in this process is the tendency to assign positive or negative attributes to levels within social categories.

The use of social categories can create a complex picture of individuals and groups. This complexity has not been represented in research on institutional discrimination. A description or interpretation of differences in healthcare outcomes cannot be explained adequately by examining only a single social category, such as gender differences or ethnic group differences. Single social categories have provided researchers with useful descriptive information about the distribution of healthcare services across groups. However, interpretations should not be made without specifying how categories, such as race and ethnicity in particular, are conceptualized or without understanding social categories within their historical context.

Social categories, when applied to individuals, interact and are therefore inherently intersectional or interconnected. Simply stated, intersectionality is a process in which social categories interact to influence outcomes. The complexity of understanding intersectionality is based upon four facts about social and psychological functioning and research.

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First, many social categories represent status variables. Status variables are typically viewed as consistent characteristics of an individual, such as race, ethnicity, and gender. Status variables can be ascribed, such as race, gender and age. They can also be achieved and transient, such as occupational prestige (doctor, lawyer), expertise in any area (scholar, consultant), or athletic ability.

Second, society is stratified. That is, social categories are positioned within status hierarchies in society (Tajfel, 1978). Some levels within categories are positioned at the low end of particular hierarchies, such as woman, ethnic minority, and economically disadvantaged. This results in individuals facing more risk of systematic social disadvantages (Banaji & Dasgupta, 1998; Jones, 1972/1997; Landrine, Klonoff, Alcaraz, Scott, & Wilkins, 1995). Conversely, certain levels within social categories are positioned on the high end of particular hierarchies, such as man, light-skinned, and "wealthy, and receive many systematic societal advantages. In fact, researchers have documented consistently that persons in certain social category levels, such as women and persons with dark skin and/or with the lowest incomes and/or with visible disabilities, are traditionally the targets of various types of discrimination (e.g., Benokratis, 1997; Bowe, 1984; Fine & Asch, 1988; Jones; Fujiura, Yamaki, & Czechowicz, 1998).

Third, the way in which individuals interpret their experiences and the way in which researchers organize data to represent individuals' experiences are markedly different. For example, correspondence between personal, self-reflective accounts of how multiple social category intersections influence outcomes and

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researchers' treatment of each social category as an insular entity are not in agreement. Anderson and Hill-Collins (1998) have summarized the complexity of this notion:

> The point is not just that people are diverse, as if that were a nice and interesting fact of life, but that race, class, and gender are fundamental axes of society, and as such, are [all] critical to understanding people's lives, institutional systems, contemporary social issues, and the possibilities for social change. (p. 2–3)

Finally, Zack, Schrage, and Sartwell (1998) asserted, "It is misleading to talk about any one category in isolation from the others, because individual identities are the results of combinations of categories in specific historical context" (p. 5). Although personal accounts have demonstrated the inherent problems with examining and giving preference to one particular social category, researchers have continued to preference certain categories over others. Thus, while information may be available on gender, ethnicity, race, socioeconomic status, disability, and other social categories, one or two particular categories, typically gender and ethnicity, have tended to be the focus of discussions (e.g., Benokratis, 1997; Bowe, 1984; Fine & Asch, 1988; Jones, 1972/1997).

Extant research on healthcare outcomes has illustrated disparities based on single category membership, such as gender differences in the prescription of psychotropic medications. Typically, this research has been conducted by assessing one social category and one specific outcome. It is rare that analyses

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have included an individual's multiple social categories or multiple outcomes within one analysis. Furthermore, this research makes a significant contribution to extant research by looking quantitatively within a group (i.e., African Americans) whose members have traditionally been the target of discrimination. Therefore, this study used multiple techniques and considered status variables in conjunction with subjective ratings within a group of African American respondents to explore different perspectives from which researchers can understand the role of multiple social categories on healthcare outcomes.

Summary of Research Objectives

The primary objective of this research was to illustrate that using multiple social categories along with multiple operationalizations of healthcare outcomes presents a more complete picture of disparities in healthcare. The complexity created by consideration of multiple social categories and multiple outcomes warrants a divergence from the more simplistic, univariate analyses that examine single predictors and outcomes to methodologies that are capable of handling the complexity of multiple predictors and multiple outcomes. Therefore, another objective of this research was to utilize multivariate methodologies to describe and to explain the relationships among social categories and healthcare outcomes.

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Chapter 2

Review of the Literature

The Role of Social Categorization

Over the past century, a considerable body of literature has been generated to describe the phenomenology of the social self and the personal, interpersonal, and social conflicts with which individuals must grapple in order to achieve a unified sense of the social self. Writings on the self have proliferated in the realm of interpersonal or social relationships research and literature, beginning in 1892, when William James proclaimed, "A man has as many social selves as there are individuals who recognize him and carry an image of him in their mind" (1892/1981, p. 179). While James' assertion was dramatic and theoretically profound for that period, it is a now considered a fair approximation of the integration of objectivity and subjectivity in the process of social categorization. That is, there are self-ascribed and externally-ascribed categories. Contemporary theories of the social self typically have been based on the work of Henri Tajfel and John Turner (see Tajfel, 1978; Tajfel & Turner, 1979). Rooted in the work of Bruner (1957) and Allport (1954), Tajfel proposed social identity theory, which addresses the issues of social categorization and how categorization facilitates stereotyping. Stereotyping may ultimately lead to an individual—by virtue of belonging to a group to which a negative stereotype is associated—becoming a target of discriminatory practices.

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From Bruner's (1957) work, Tajfel (1978) developed the idea of the dynamic relationship between the cognitive accessibility of categories and their correspondence to the categories that exist in society. Based on Allport's (1954) work in defining prejudice, Tajfel emphasized how faulty and inflexible generalization of social categories leads to stereotyping (the cognitive process), prejudice (derogatory attitudes or beliefs), and ultimately the display of discriminatory behaviors toward members of a particular level within a social category because of membership in a particular level of that category. Social categorization involves a classification of the social world into groups using one or more criteria. These criteria and other related factors provide the starting content for group stereotypes. Stereotypes may begin as nonevaluative deductions of social reality, but they can quickly become distorted and lead to social advantage or disadvantage. Often visible defining characteristics, such as physical appearance, age, and evidence of impairment facilitate social categorization.

Social categorization is based on an assumption that society is hierarchically structured into social categories that have status relations to one another. The categories provide members with various social identities, that is, descriptions of who they are and evaluation of what that entails. Tajfel (1978) suggested further that people categorize themselves and others into "in-groups" and "out-groups," and compare their groups to other groups, and discriminate against the out-group to maintain high self-esteem. Tajfel's notion that a need to maintain self-esteem triggers the establishment of in-group and out-group

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categories has not gone unchallenged. However, the history of social groups, intergroup relationships, and the differential treatment received by many groups in society provide support for the role of status relationships among social categories.

Tajfel's (1978) theory addresses the role of social identities, as he referred to them, but does not deal with the fact that people can have many social selves, the combination of which may influence the definition of in-groups and out-groups. Moreover, the component of Tajfel's hypothesis that posits self-esteem as the desired outcome is not applicable to all social systems. For example, an institution, by its very nature as a legal entity, should function with systematically nonevaluative or neutral processes. Furthermore, Tajfel's theory focuses on the social category and not on how levels within social categories may interact. Thus, examining intersectionality on this more complex level of analysis involves a divergence from Tajfel's theory.

Social categorization lie at the heart of all aspects of personal, interpersonal, and social behavior by explaining how individuals define their experiences and how representation can be construed as reality. Both theories were conceptualized as ways of addressing missing social dimensions of human behavior. In the words of Jean-Claude Deschamps and Thierry Devos (1998), these theoretical foundations center around very old debates regarding "the search for personal identity versus the search for a social identity, what constitutes individual difference versus what constitutes similarity to others, social

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distinctiveness versus conformity...opposition between the diverse and the homogeneous" (p. 2).

Traditional Approaches to Analyzing the Role of Social Categories

In the social psychological literatures, ethnicity, gender, social class, disability, and other social categories have been examined as individual predictors of almost all psychological phenomena, including psychological marginality, perception of discrimination, interpersonal discrimination, gender behaviors, and psychological well-being (e.g., Aneshensel, Clark, & Frerichs, 1983; Banaji & Dasgupta, 1998; Frable, 1993; Landrine et al., 1995; Swim, Aiken, Hall, & Hunter, 1995). Three approaches that represent the ways in which the effects of social categories have been assessed are presented in the following section.

The first theoretical approach is illustrated in Figure 1. In this model, each social category is analyzed separately for its individual influence on a specific outcome. Figure 2 represents a second theoretical approach, in which each social category is individually analyzed for its contribution to different outcomes, which are analyzed independently.

In a third theoretical approach, social class or poverty has been analyzed as a mediator or moderator of the relationship between an individual's social category and an outcome, in this case being the target of discriminatory practices (Kluegel & Smith, 1986; Traux, Cordova, Wood, Wright, & Crosby, 1998; Wilson, 1980). In this third theoretical approach, it is acknowledged that ethnicity

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or gender, for example, may influence the social class to which one belongs. Social class, in turn, has the most significant effect on the outcome. In fact, it has been suggested that when social class is held constant, there are no effects of other social categories (Argyle, 1994). Bi-directional relationships, such as that between disability and social class, rarely have been analyzed. For example, medical expenditures associated with some disabilities often preclude movement from a low-income social class to one that is representative of higher income. According to Krause and Stoddard (1989), the link between *activity limitation* (a term used by the Census Bureau that is broader than *disability*) and family income is clear. In 1986, over one fourth of the people in families whose annual income was under $10,000 had activity limitations. Figure 3 presents an illustration of this third theoretical approach.

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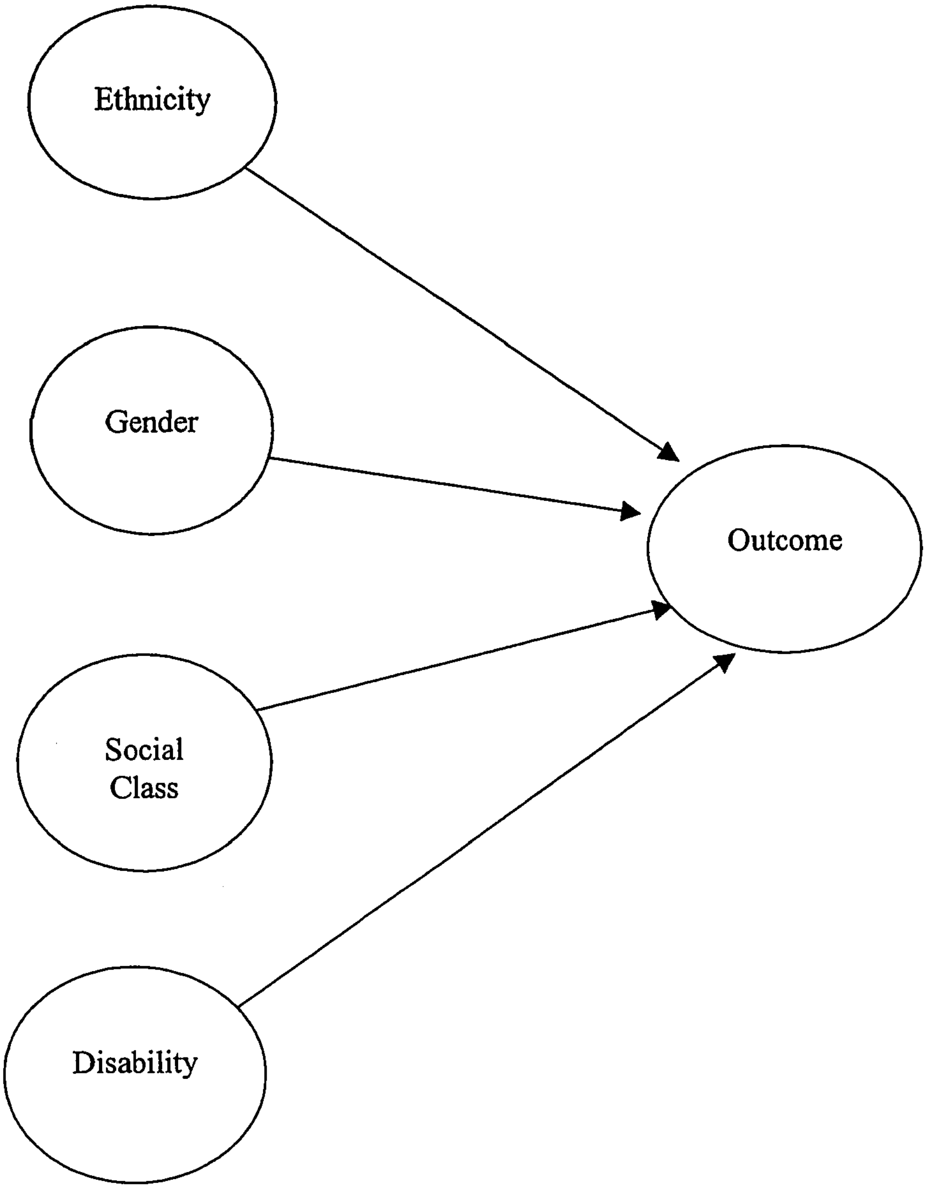

Figure 1. Social categories as individual predictors of a specific outcome.

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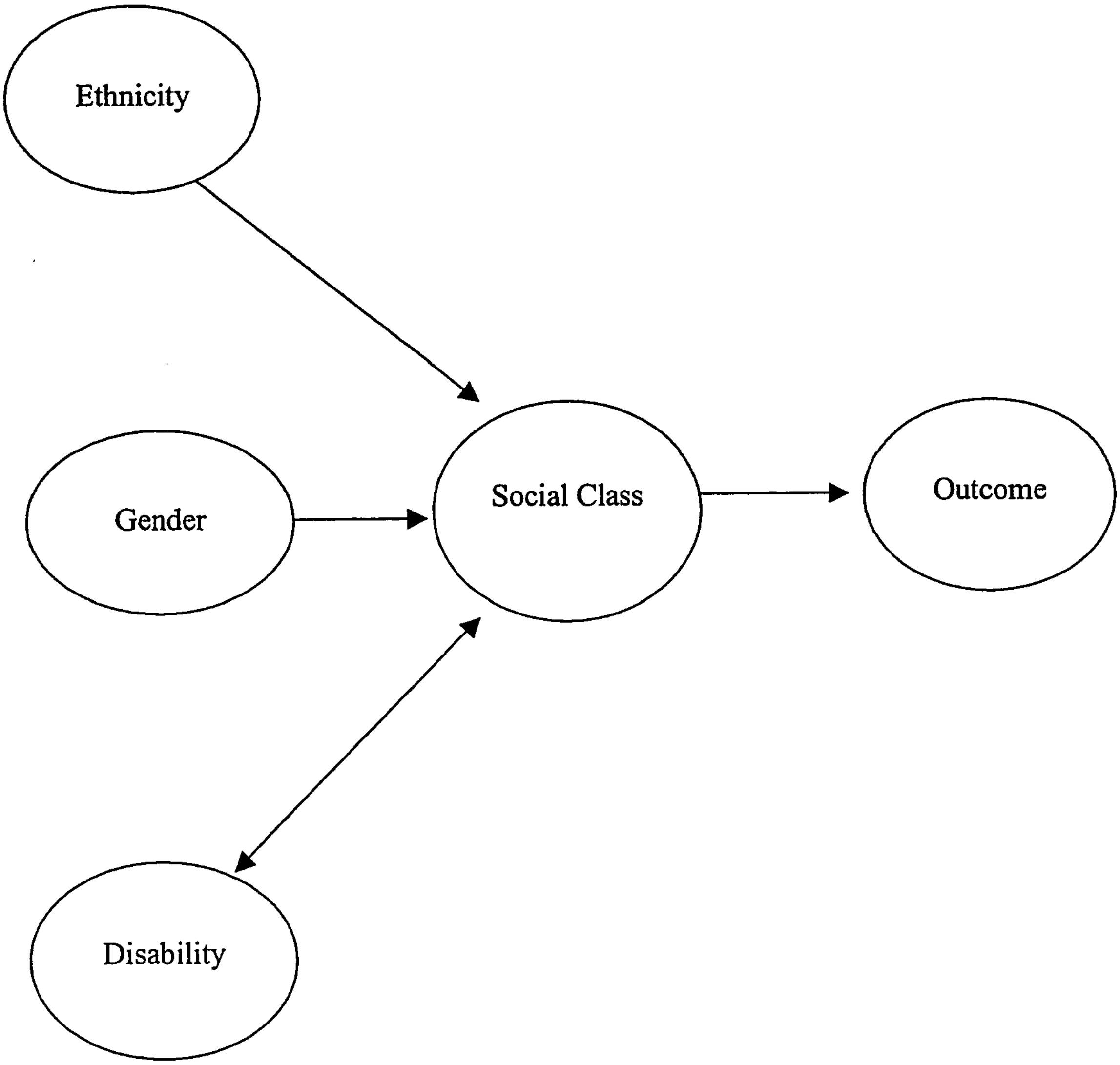

Figure 2. Social categories as individual predictors of independently-measured phenomena.

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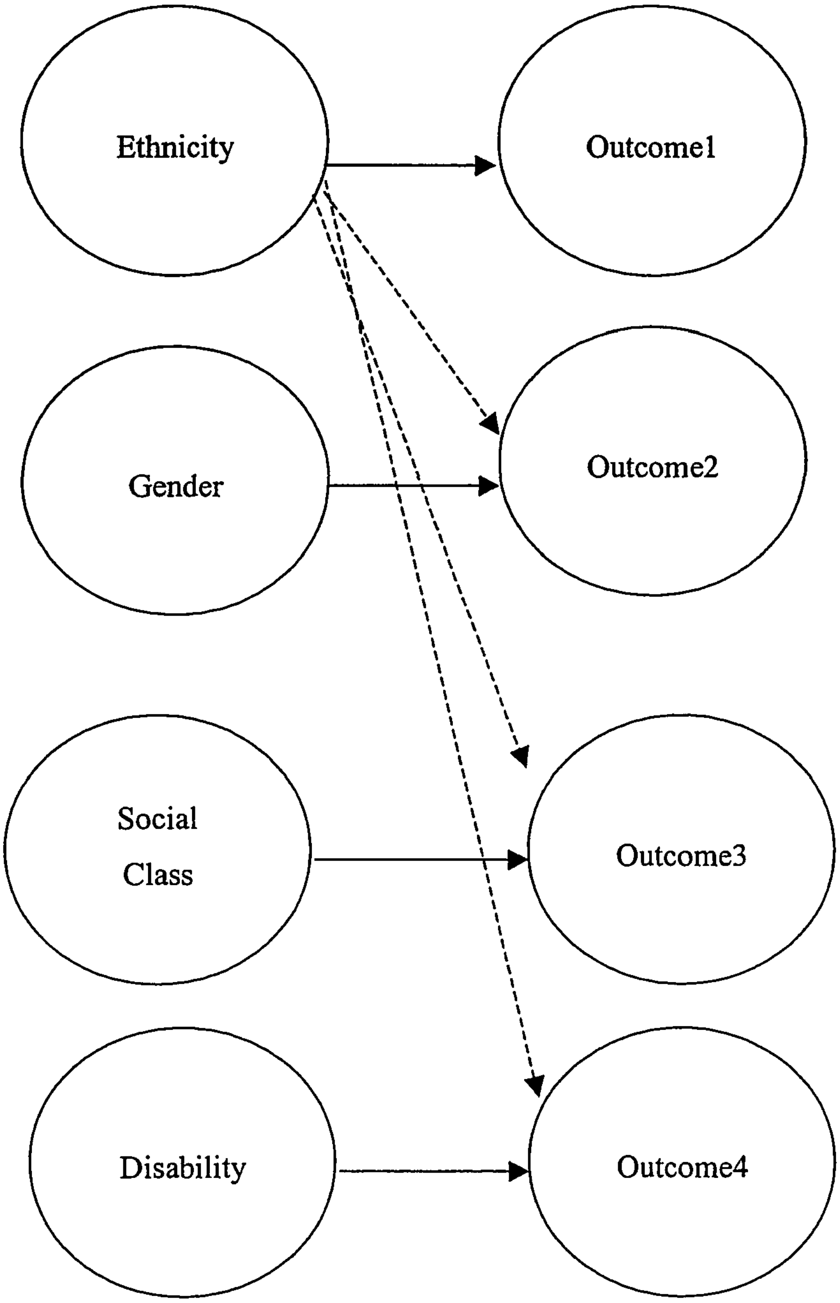

Figure 3. Social class as a mediator of social category and outcome.

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There are a number of methodological limitations of these three traditional theoretical approaches to research on social categories. Because in practice individuals often cannot separate one category from another, attending only to one social category for the purposes of analyses may be inappropriate. Furthermore, a more accurate conceptualization of a model may involve a combination of social categories that serve moderational purposes. Consider the following example, which is oversimplified as an aid to understanding the possible moderational effects of intersections. Perhaps combinations of social categories can ameliorate the risk of particular low-status social categories; for an African American woman in a high socioeconomic bracket, the high income may buffer the risk of social disadvantage that she would receive as a woman and/or as an African American. Additionally, the models typically used in psychological research to describe differences between groups represent one social category, such as ethnicity; focus on a specific outcome; and typically only investigate subjective perceptions. The questions that can be answered by these types of analyses, although meaningful, cannot address the complexity warranted by an analysis of intersectionality.

Towards an Understanding of the Role of Intersectionality

In an attempt to introduce more complexity into conceptualizations of intersectionality, Landrine et al. (1995) conducted an analysis of interpersonal discrimination based on Ransford's (1980) "multiple jeopardy-advantage" hypothesis. Ransford's sociological model addresses the intersection of group

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membership. Ransford posited that society is stratified not only by social class categories, but also by other categories, such as race, gender, disability, age, and sexuality. Landrine et al. argued that in societies that consist of many categories, where each category has a given status, the combination of many status categories creates a unique social situation that represents the intersection of the various statuses. This social situation is unique in that it is characterized by outcomes that cannot be accounted for solely by one category, but can be explained by the interaction of many categories. Additionally, the authors contended that people who belong to more than one low-status category may be doubly disadvantaged, while those who belong to more than one high-status or ruling category may be doubly advantaged. To test Ransford's multiple jeopardy hypotheses, and to examine the interactive effects of social groups in interpersonal discrimination, the authors examined research published between 1980 and 1992 in social and feminist psychological journals. Four journals were reviewed: (a) *Journal of Personality and Social Psychology,* (b) *Journal of Social Psychology,* (c) *Personality and Social Psychology Bulletin,* and (d) *Psychology of Women Quarterly.* These four journals were chosen because they were thought to be representative of the prevalent topics in psychology. Approximately 5% (271) of the total number of articles (5,538) were on interpersonal discrimination. Of the total number of articles on interpersonal discrimination, 3% focused on gender; 1% on ethnicity, and less than 1% on age, social class, or sexual orientation. None was on disability. Only three studies (labeled below as studies 1, 2, and 3)

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(Mathnes, Brennan, Haugen, & Rice, 1985; Shutter, 1982; Yarkin, Town, & Wallston, 1982) examined the effects of multiple social categories.

Based on Ransford's (1980) model, which is anchored in the methodology of univariate Analyses of Variance techniques, if each level within a category, only one of the low-status levels, or neither level has no main effect, but contributes to interaction effects, this is labeled the Multiple Jeopardy Additive type (MJA). For example, if one is a Black woman and a significant main effect is found for race but not gender, or no main effect for either is found but the interaction between race and gender is significant, this is the MJA type. If, on the other hand, each low-status category —that is, both race (Black) and gender (woman)—has a main effect and contributes to the interaction effect, this is labeled the Multiple Jeopardy Interactive type (MJI).

In study 1, Shutter (1982) examined initial conversations among Black and White women and men who were assigned to dyads of the same or different gender, race, and gender by race. Behavior was unobtrusively observed while dyads were in a waiting room. Discrimination was defined as "ignoring/avoiding (not talking to or barely talking to) a person with whom one is sitting in a small waiting room" (p. 198). Discrimination was operationalized as (a) asking the other person personal questions; (b) asking other types of neutral questions, such as the time; (c) the amount of time the partner was spoken to; and (d) the total number of questions of any type asked. There were no main effects for gender or race, but there were race-by-gender interactions. Behavior was contingent upon the gender

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and race of both participants. Some of the findings include: (a) Black participants asked women more questions than they asked men, and White participants asked men more questions than they asked women; (b) women asked more questions of partners of the same race, and men asked more questions of partners of the other race; and (c) when the dyad consisted of a Black person and a White person, black men asked both White men and White women an equal number of questions, whereas Black women asked questions only of White women, and did not ask White men any questions. These findings suggested that Black women and men discriminated against men, whereas White women and men discriminated against women. Because there were no main effects and only interaction effects, these findings supported Ransford's (1980) MJA hypothesis.

In study 2, Yarkin, Town, and Wallston (1982) investigated causal attributions for success made by White women and men about the performance of White and Black men and White and Black women. Each participant read one description of a highly successful banking officer who was requesting a promotion. The gender of the stimulus person was varied by first name. Race was varied by undergraduate institution, either American University or Howard University (a historically black university); and by community service, either Chamber of Commerce or the National Association for the Advancement of Colored People. Discrimination was operationalized as the participants' ratings, on a scale from 0–9, of the extent to which ability, motivation, task difficulty, and luck played a role in the stimulus person's success. When the stimulus person was

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presented as a woman, success was attributed more to luck and motivation than to ability. When the stimulus person was Black, success was attributed more to motivation than to ability. Supporting Ransford's (1980) MJI hypothesis, both main effects of race and gender and interaction effects were found. In the interaction effect, White men's success was attributed more to ability and less to luck and motivation than the other groups.

In study 3, conducted by Mathnes, Brennan, Haugen, and Rice (1985), White women and men from eight age groups rated the physical attractiveness of models (operationalization of discrimination) that differed by gender and age. The analyses revealed main effects for the gender and age of the model as well as a significant age-by-gender interaction; however, the nature and direction of effects was unclear. Therefore, Landrine et al. (1995) excluded this paper from their conclusions. Not surprisingly, intersectionality was not a prevalent topic in the three studies. Focus was primarily on gender and race, and although information was most likely available about other social categories of the participants, it was not utilized. Although these studies have provided valuable information about the possible ways in which discrimination is manifested across gender (male vs. female) and race (Black vs. White) in the interpersonal context, they focused narrowly on two racial categories only, with no consideration of other social category memberships that might influence the outcomes, such as ethnicity and disability.

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The problems lie not only in the narrow focus of the two studies that were eligible for consideration (Shutter, 1982; Yarkin et al., 1982), but also in Ransford's (1980) initial hypothesis. The methodological model presented no conceptual framework, and was based on a particular type of data analysis technique rather than on attempts to find conceptual links between the meaning assigned to and the influence of belonging to multiple categories. More importantly, the use of simple univariate models did not take into consideration the possible moderational variables, the incomplete interpretation, or the potential for misinterpretations based on findings from the analysis of only one or two narrowly constructed social categories, or the reality that categories exist in social hierarchies.

Another problem is that the authors (Shutter, 1982; Yarkin et al., 1982) focused on subjective perceptions and arbitrarily contrived situations (i.e., personal interactions in waiting rooms, impersonal written descriptions of people, and photographs of models), which may not be an accurate depiction of behavior. In other words, intersectionality was not examined in a real-world context. These studies fell into the same trap as much of the previous research in the social sciences of not addressing the importance of contextualizing multiple social category memberships. These omissions, along with the Ransford's (1980) model's interpersonal focus, limit the generalizability of this perspective. The conceptual basis of the model is reduced to a statistical algorithm, somewhat

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arbitrary in its explication of intersections, and incapable of addressing the complexities of multiple social categories.

Conceptualizing Intersectionality

Self-reflective experiences, in which an individual is able to reflect on and assess the impact of social and psychological phenomena, provide a clearer perspective on the difficulties in singling out particular social categories. A number of narrative accounts have included a consideration of those intersections that traditionally have been excluded (Comas-Diaz & Greene, 1994; MacPherson & Fine, 1995; Reid, 1994). These personal accounts described the immediate social contexts and their relationships to historical contexts. In the following scenario, Sartwell (of Zack, Schrage, & Sartwell, 1998) wrote not only about the intersection of gender, ethnicity, and class, but also about how context influences the interpretation of intersections:

> Every person lives at intersections.... I am not only a man; I am a middle-class white man. But identities are so much more complicated than that: each person has her own, for one thing...no two people have exactly the same identity because no two people have exactly the same relations to exactly the same people. Say two men are both lawyers doing similar work at major law firms in New York, making the same salary, both married with one child, both black, and so on. Nevertheless, they are connected in different ways to different people and they are not, interchangeable: if they

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> switched lives, for example, their wives would notice the difference. (p. 329)

Some intersections are consistently more likely to be discussed than others. For example, intersections between gender and various other categories have been discussed most frequently. In fact, gender and race (Bento, 1997; Feagin, 1992; Jean & Feagin, 1997), gender and social class (Argyle, 1994; Franklin, 1991; Lipman-Blumen, 1984), and gender and disability (Blakorby & Wagner, 1996; D'Amico & Marder, 1991; DeLoach, 1989; Fine & Asch, 1988) have received a substantial amount of attention. In response to traditional feminist scholarship focused on gender, many women began to question whether gender could be separated from race or ethnicity so easily in considering the subordinated status of women (de la Torre & Pesquera, 1993; Hill-Collins, 1992; Hooks, 1984; Hurtado, 1989; Moraga & Anzaldua, 1981). Furthermore, these women began to advance a theoretical position that took into account more than gender and race, but other social identities or categories, such as sexual orientation, ethnicity, and culture (Alvarez, 1995; Anderson & Hill-Collins, 1998; Anzaldua, 1990; Cua'draz, 1996; Pierce & Pulido, 1994).

These self-reflective experiences typically have been documented by qualitative research. It is within the broadly defined and interdisciplinary domain of qualitative methodologies such as narratives, interviews, ethnographies, and biographies that issues of intersectionality have been given the most attention by behavioral scientists and have been described most clearly. By emphasizing the

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meaning of intersectionality, qualitative researchers have contributed to a more thorough conceptual understanding of what it means to exist in a combination of racial, sexual, class, and disability categories. In fact, only through narrative have multiple social group membership and intersectionality been authentically addressed, in its real-world context, in everyday situations, and by individuals who have to negotiate and make sense of the intersections. Across the many disciplines, diverse populations of women have begun to write anthologies (Anderson & Hill-Collins, 1998; Anzaldua, 1990; de la Torre & Pesquera, 1993), case studies (Romero, 1992), and textbooks focusing on intersectionality (Anderson & Hill-Collins). Most of the authors emphasized not focusing on one category over another, situating the data within context, and focusing on the individual response while contextualizing the data in response to societal inequalities. Qualitative research can offer a more complete description of how intersectionality functions, but can not provide objective measurement. Therefore, ideally, both quantitative and qualitative techniques should be used when conducting research.

Interdisciplinary Perspectives on Intersectionality

Most psychological research focused on outcomes of social category membership have provided at least a cursory attempt at explaining how social categories function in a given situation. Theories (e.g., social categorization, nigrescence—a theory of Black racial identity) that facilitate an understanding of many of the cognitive and affective functions of social categories and their

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influence on social behavior either speak very generally as if the tenets of the theory apply to any social category or have not looked across multiple social categories for a multi-categorical analysis of function.

Recently, the importance of understanding intersectionality has been discussed in many other disciplines and areas of inquiry. In addition to psychology, significant theoretical contributions have been made by other social and behavioral scientists, philosophers, legal theorists, lawyers, and critical race theorists who seek to show that the legal system perpetuates status hierarchies on the basis of skin color. Other applied, research, or clinical areas are also attempting to integrate intersectionality into their discourse. The literature and authors mentioned here represent a mere sampling of the discussions that are generating a clearer understanding of intersectionality.

The various theoretical and methodological attempts to understand social categories have suggested that an analysis of intersectionality may involve the inclusion of the following considerations, which are discussed in the next sections: (a) interconnected nature of social categories, (b) importance of context, and (c) the role of both subjective ratings and status variables.

The Interconnected Nature of Social Categories

Philosophy has played a particularly crucial role in bringing the interconnected nature of categories and their inherent status to the forefront of philosophic, academic, and pragmatic debates. Many philosophers have argued

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persuasively that contemporary categorizations, particularly ethnicity, race, and social class, fail all tests of philosophical meaning. They have argued that an understanding of intersectionality, even at this early stage of development and analysis, is beginning to become constrained by the inability of disciplines to broadly conceptualize (Zack, 1997; Zack et al., 1998). In *Philosophy: The Big Questions: Race, Class, Gender, and Sexuality,* Zack et al. summarized the dilemma of the interconnected nature of social categories:

> There is no such thing as a "pure" social identity....The gender system in the African American community, for example, is not the same as the gender system in the white community, for a variety of historical reasons. So, what it means to be a woman for a black woman is not necessarily the same as what it means to be a woman for a white woman...what it means to be a gay man is very different in wealthy communities than in poor communities...So in trying to take into account the experiences and interests of groups that are diverse, feminism, critical race theory, and gay studies have had to get more and more complicated; they have had to begin to listen to divergent voices, and they have had to give up some of their central tenets. The identities to which they appealed—"woman," "gay person," "poor person," [or] "black person"—were too simple: so simple in fact that many or even most people those movements tried to represent did not find themselves represented. (p. 327)

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Aida Hurtado's (1997) writings on the race/ethnicity and gender intersections in assimilation and acculturation also emphasized the inherently connected nature of social categories, such as gender and race, that have practical significance to individuals and are inherently related to behavior. Her work has emphasized that because gender has typically been studied only as a control or background variable, there are intrinsic dilemmas in understanding culture and cultural transformations. According to Hurtado,

> In the study of multiple social identities the field of psychology has taken context out of the study of individuals so that the mainstream, which favors dominant groups, is indeed, the context that is "natural" (although never acknowledged as explicitly gendered or racialized) for all individuals regardless of race/ethnicity, class, gender, and sexuality. By ignoring social identities in our study of individual psychological characteristics, we have a priori made dominant social identities the only "normal" context for all human beings—an implicit bow to the assimilation/acculturation framework. (p. 316)

Likewise, Kennelly, Misra, and Karides (1999) discussed the necessity of considering the interconnected nature of status categories of race, class, and gender in order to understand how the academic labor market contributes to the valuation of certain intersections. For example, in conducting an analysis of gender, race, and class representations in academia over a 10-year period, the authors found that, although European American women, minority (i.e., African

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American, Asian, and Latina) women, and minority men have increased their presence in academia, they (a) are still underrepresented compared to their proportions in the population and even more underrepresented as the rank of the position increases, (b) are underrepresented in the well-paid fields, and (c) are more likely to gain employment at lower prestige teaching-oriented colleges than at high-prestige research universities. European American men represented the majority of the academic population, the well-paid fields, and the higher-prestige universities (Kennelly et al.).

The interconnected nature of social categories has been addressed in community psychology with a focus on the organizational structure and its influence on the correspondence between group membership in the community and that in the workplace (Bond, 1999). Bond stated that workplaces tend to have status categories and hierarchical structures, such as high and low status groups that produce skin-color privilege or gender privilege. Thus, phenomenologically, white-skinned women and all dark-skinned persons inhabit different workplaces from their white-skinned male counterparts. Their experiences of policies, demands, meeting procedures, social interactions, promotions, rewards, and other informal and formal exchanges may be different than their White male coworkers (Bond). Though research has tended to ignore intersections, it is important for organizations to create contexts that involve both the acknowledgment of intersections and an understanding of how the institutional context renders some intersections less visible and often less legitimate.

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In a social system that reinforces the elevation of masculine qualities over feminine qualities, researchers have attempted to understand how the status associated with race, gender, and class affects individuals across different stages of the lifespan (McGuffey & Rich, 1999). Specifically, McGuffey and Rich focused on how children negotiate gender boundaries in middle childhood (age 5–12) play. *Hegemonic masculinity* is a predominant way of doing gender relations in which gender order status quo is enforced. The *gender transgression zone* is the area of activity where boys and girls conduct heterosocial activities. McGuffey and Rich demonstrated how research in hegemonic masculinity and gender transgression has revealed that race and class intersect with gender in complicated ways for boys and girls in middle childhood. According to the authors,

> Boys in middle childhood organize themselves in a definite hierarchical structure, in which the high-status boys [determined by athletic ability] decide what is acceptable and valued.... [They] revealed little to no racial or class segregation in the hegemonic hierarchy. Boys of various racial and class designations held positions of high authority in the power structure....Girls' boundaries are less defined than boys. The tendency toward a single hierarchy is quite rare. The highest status girl was generally the one considered the most sociable and the most admired by others in the immediate clique as well as by others in the camp. Girls often separated on racial and class divisions. Since white girls formed smaller associations

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> based on precamp friendships from their neighborhoods and school, class and race had visible consequences for girls' cliques (p. 17).

The results suggested that "race and class intersect with gender to influence hegemonic masculinity in middle childhood… [which] not only regulates boy's homosocial boundaries but also controls the rules of gender transgression for both boys and girls" (p. 625).

Throughout the 20th century, similar issues of understanding multiple social category membership have arisen in the courtroom. For example, the 1981 case of *Rogers v. American Airlines* allowed employers to prohibit women from wearing braided hairstyles to work. The plaintiff, a Black woman, sued her employer on the basis of ethnic and gender discrimination, arguing that the two types of discrimination were interconnected because the hairstyle is characteristic of many Black women. In their decision that employers should be allowed to decide on appropriate hairstyles for employees, the court treated ethnicity, gender, and employee status as independent of each other, thereby acknowledging only the social category of employee and ignoring the role of ethnicity and gender (Caldwell, 1997).

Similarly, in the 1976 case of *DeGraffenreid v. General Motors*, a Maryland district court granted partial summary judgment in favor of the defendant in a race and gender discrimination suit brought by five Black women. The court stated that the plaintiffs were entitled to file for two suits, one for race discrimination, and one for sex discrimination, but not one for the combination of

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race and sex. In support of their decision, the court stated that Black women did not constitute a special class, distinct from other women, which must be protected as a unique group (Wing, 1997).

Understanding the interconnected nature of social categories is also emerging in family studies, issues in mental retardation, and speech as a way of broadening narrow discourse and obtaining phenomenological meaning in these disciplines. Hill-Collins (1998) emphasized that investigating how race, class, gender, and nationality influence traditional themes within the confines of traditional family studies might enhance the field of Black family studies. The field of family studies only recently has begun to acknowledge the diverse meanings associated with the words *normal*, *nuclear*, and *immediate*. This field would be greatly enhanced if biological families were no longer considered as a group of men and women from the same lineage, but rather distinct individuals making a unique contribution to behavioral outcomes.

Robinson and Rathbone (1999) made a similar plea to researchers in the area of mental retardation to explore how race/ethnicity, class, and disability influence the provision of healthcare and support services. Researchers have tended to look at disparity in provision of health-related services across ethnic group or social class categories. However, the discussion has not yet moved into the realm of looking across the numerous social categories to investigate differential health services outcomes. Similarly, Carlson (1999) suggested that language, terminology, and the concomitant rhetoric creates and perpetuates

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hierarchies based on race, gender, class, and economic status. According to Carlson, the impulse to create order facilitates the use of linguistic terms to represent categories. This leads to the “paradox of purity” in which the intersection of social categories—Black woman or White man, for example—assume such collective power and meaning that it contradicts any possible definition based on individual motivations.

The Importance of Understanding Context

Analyses of intersectionality require the consideration of historical context. Historical context is of utmost importance because it aids in interpretation of outcomes based on the intersection of histories, which is rarely considered in the discussion of results. Even within specific ethnic group categories, there is variation in relation to history. Though both may have ancestors who endured slavery, Black men and Black women have unique relationships with United States history that effect present-day status. For example, Martha Kyrillidou’s (2000) research on the Association of Research Library’s Annual Salary Survey, which tracks trends in Association of Research Library professionals’ salaries across the United States and Canada over the last 20 years, reported that on average Black women earn $46,979, the lowest salary of all groups, followed by Black men at $50,417, White women at $51,448, and White men at $55,045. The years of experience differential may have explained some of these disparities but it did not explain the difference between salaries for Black men and women, as

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Black women tended to have more experience compared to Black men. Similarly, in an analysis of family structure, gender, wealth, and race, Oliver and Shapiro (1997) have documented that the average income of Black female heads of households is approximately $4,000 less than Black male heads of households; the net worth (i.e., value of all assets less any debt) of Black male heads of households, while only constituting 11% of the net worth of White male heads of households, is still more than double the net worth of Black female heads of households.

Acknowledgment of the crucial role played by historical context in understanding social categories and intersections becomes even more critical when considering the merger of intersections that have markedly different histories. Furthermore, historical context must also be considered to understand how contexts may change the interpretation of social categories and intersections. For example, according to Markus, Kitayama, and Heiman (1998) many Asian women grow up in their native country speaking predominantly their native language and valuing the "fundamental connectedness or interdependence of those within an in-group. The self is made meaningful in reference to the relationship of which the self is a part" (p. 884). Other Asian women grow up in the United States speaking both their native language and English and exposed to a strong belief in independence from others. The authors stated, "The self is made meaningful primarily by a set of internal attributes such as motives, abilities, talents, or personalities" (p. 884). These two different groups of women may have different

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expectations of the husband/wife relationship, for example. Although both groups may speak the native language and have knowledge of their native culture, their historical experiences will differ, thereby possibly influencing their interpretation of the social categories of ethnicity and marital status.

Within the last few years, literature in the education field has begun to address issues of the intersectionality of race, class, and gender, specifically (e.g., Foster, 1999; Grogan, 1999). The literature typically has focused on the history of educational research on race, class, and gender and the ongoing debate of equity and equality in education research. This literature has been accompanied by research, typically but not exclusively narratives that have helped to develop the area of intersectionality in education. However, the research has focused narrowly on the context of low-income African American youths (e.g., Cousins, 1999; Jackson, 1998; O'Connor, 1999). The research that has been conducted in the field of education exemplifies a central complexity involved in intersectionality: how context gives certain categories advantage over other categories. For example, in order to maintain the authenticity of the individual voices, Davidson (1996) used excerpts from interviews to illustrate the multiple, complicated, and often conflicting ways in which students negotiate social category membership around peer relations and school culture.

Similarly, O'Connor (1999) used narratives derived from 46 low-income African American public school, tenth-grade students in Chicago to assess how students incorporate dominant narratives of status categories into their vision of

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what needs to be done to be successful in the United States. Although all of the interviewees maintained that having a personal work ethic was a significant determinant of success, the corresponding co-narratives articulated how structural restraints limited the efficacy of intersections in the school environment. For example, when asked whether or not African American boys and girls were given an equal chance of doing well in school, a Black male responded,

> No, because black females are helped more. They are helped more cause black males are usually stereotyped. You know, all black males going to be in jail. And they think, well, since you going to be in jail, ain't no use of...really teaching you nothing....A lot of times when you talk out in class—and like if a white kid or a black girl says something to the teacher like the teacher is saying something out of pocket or out of hand or something, and you be like, "Well, I don't agree believe in that." And the teacher seems to think that because you raise your voice, and you be like, "Well, I don't like [that]," they think, well, he would hurt me or something. So they call security. But then it's different with the white kid or the black girl, they just talk to them. They be like, "I'm going to call your mother" or something like that. But if you be that way, they be like "I'm going to call security." (p. 143)

Likewise, Cousins (1999) used a cultural and relational anthropological framework of social class to make a similar point that the way in which students negotiate multiple categories and meanings assigned to categories affects the

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influence of structural restraints and contexts. Using a quantitative methodology, Jackson's (1998) research on the self-concept of African American college women also demonstrated how context (racial and gender composition of schools) and a particular group's history in the American educational system influence the connection between race and gender.

Weber (1998) offered suggestions for acknowledging and addressing intersectionality in the classroom environment. The experience in the classroom should represent the "diversity of human experience and the multiplicity of critical perspectives" (p. 13). Weber asserted that researchers and theorists are beginning to critique the lack of consideration of intersectionality; however, commonalties across race, class, gender, and sexuality categories are also not considered. To aid in teaching and research on race, gender, class, and sexuality, Weber presented six common themes that must characterize this scholarship. Social categories and intersections (a) have to be historically contextualized to aid in interpretation of outcomes; meanings vary across historical time periods, nations, and regions; (b) have meaning that developed out of group struggles over valued resources; (c) are socially constructed power relationships; (d) have meaning at the micro level of individual's daily lives and at the macro level of community, society, and institutions; (e) are connected to each other and simultaneously expressed; and (f) operate on both societal and individual levels.

Critical race theory was developed in the early 1980s with the works of Derrick Bell, who wrote in the context of the justice system, questioning the basic

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assumptions of the law's treatment of people of color. (Crenshaw, Gotanda, Peller, & Thomas (1995). Critical race theory has become a development in contemporary legal studies, created primarily—but not exclusively—by intellectuals of color. These theorists seek to expose the law's role in upholding White supremacist thought, doctrine, and status hierarchies and how the professed ideals of "rule of law" and "equal protection" are systematically eclipsed by intersections, with differential outcomes based on the specific intersections (Crenshaw et al., 1995). Legal theorists have included this type of information in their writings on violence against women of color (Crenshaw, 1995). For example, Crenshaw explained how other dimensions of their identities, such as race and class, often shape violence experienced by women. Crenshaw put forth two notions of how race and gender intersect to influence the interpretation of violent behavior. First, structural intersections represent intersections of race and gender that make the experience of domestic violence, rape, and reform qualitatively different for White women and Black women. Interventions based solely on the experience of women, without taking into consideration that all women do not share race and social class categories, will be of limited assistance. Second, political intersections represent the feminist and anti-racist politics that have, in effect, contributed to the marginalization of women of color. According to Crenshaw, if race and patriarchy are not adequately interrogated, feminism and anti-racism will replicate and reinforce the oppression of people of color.

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Likewise, Roberts (1995) discussed the disproportionate prosecution of Black women drug abusers, even though the rates of fetus-endangering drug abuse are virtually the same between Black and White pregnant women. Roberts argued that this discrepancy is due to an inability of legal systems to consider the simultaneous effects of race, gender, and context for this population, thereby consistently stereotyping Black women as irresponsible mothers.

Green (1990) introduced the intersection of race and gender to understanding the socialization process. For example, within relationships between Black mothers and daughters, various aspects of physical appearance, such as skin color, may be a salient characteristic. A mother's overt or covert messages regarding skin color preferences may transmit conflict about skin color to the daughter. Green, like other sociologists and psychologists, often discussed racial or gender socialization, but dismissed other types, such as socialization into a heterosexual or particular class perspective. Green also did not discuss the consequences of the socialization process as a result of the intersections.

One obvious aspect of socialization, which is similar to the outcome of social categorization, is the process of labeling. Social categories are labeled to facilitate information processing (Heckert & Best, 1997). According to Heckert and Best, labeling theory begins with the understanding that deviance—that which has been labeled as stigmatized by society—varies across time, place, and category. The theory conceptualizes the way in which labeling impacts social groups. Heckert and Best extended labeling theory to address the intersections of

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race, gender, attractiveness, and stigma. They emphasized the importance of context by including not only those categories that have traditionally been targets of discriminatory practices, but also seemingly neutral categories, such as hair color.

Contextualizing Social Categories within a Historical Perspective

Race, gender, class, and disability are prevalent categories in most literature and discourse on intersectionality. These categories and each of their subgroups, such as gender and the subgroups of men and women, have historical relevance that make it difficult to generalize across subgroups. For this reason, and as an aid to interpretation of outcomes, it is necessary to understand the historical context of each group. The information presented here is not meant to be an exhaustive representation of each social category, but rather an attempt to highlight those issues that make consideration of historical context an integral part of an analysis of intersectionality.

Race/Ethnicity. Racial categories are often used interchangeably with cultural and ethnic labels (Coates, 1998). Although there may be some real overlap, in many instances the overlap is perceived but not actual (Coates). In fact, both race and ethnicity are often viewed as individual categories that merge to form another unique intersection. For example, one can be a dark-skinned or a light-skinned Puerto Rican, and each skin color, along with the ethnicity, has its own relationship with United States history (Reyes, 1999). Some theoretical

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positions hold that race, in particular, is a socially constructed category that has little to do with genetic differences among groups (Zuckerman, 1990).

Part of the conceptual confusion may stem from what Marable (2000) referred to as differential evolutionary tracts. According to Marable, race "is a dynamic social construct that has its roots in the transatlantic slave-trade, the establishment of plantation economies based on enslaved labor, and the ideological justification for the vast extermination of millions of indigenous Americans" (p. 1). Ethnicity, on the other hand, according to Marable, is a fairly recent concept that "surfaced as an important category of analysis in the writings of sociologists during the Great Depression, as a means to describe the diverse immigrant populations that came largely from Southern and Eastern Europe" (p. 1). However, not all researchers have agreed as to the meaning and significance of ethnicity. Phinney (1996) posited that thinking of ethnicity as discrete categories is not as meaningful as identifying those aspects of ethnicity that may impact behavior. She identified three aspects as being crucial to understanding behavior: (a) cultural norms and values; (b) strength, salience, and meaning of ethnic identity; and (c) experiences and attitudes associated with being considered a member of an ethnic minority group.

Racial and ethnic classifications have always been closely associated with political and social agendas and have long been sources of discrimination. In fact, according to Coates (1998),

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> The social significance of race has to be considered in the context of racism. Racism is the classification of persons based on false biological differences to support the notion that some racial groups are more superior to others and some inferior to others. (p. 7)

Discrimination on the basis of skin color or physical attributes continues to be a large source of contention among people in the United States. Although the 13th, 14th, and 15th amendments of the constitution outlawed discrimination based on race, the court also applied "rationality" tests to other cases of discrimination. If it was felt that a particular law was rational or was supported by a "reasonable goal," it was allowed. For example, during World War II, when faced with a Japanese attack, the court supported Japanese internment by ruling that it was rational to discriminate against persons of Japanese descent who lived in the United States (McWhirter, 1994). Thus, while racial discrimination was legally outlawed, it was supported in practice.

Over the last century, the designation of racial categories has been the topic of numerous debates. The first designation of racial categories was done with the 1790 census, with the purpose of distinguishing the money and property holders, namely White males, from the rest of the population (Edmonston, Goldstein, & Lott, 1996). This first census included five categories: (a) free White males 16 years and older, (b) free White males under 16 years old, (c) free White females, (d) all other free persons, and (e) slaves. Although not listed in a separate category, American Indians were counted separately for taxation purposes

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(Edmonston et al.). When slavery became illegal in some states, further categories were created to separate Blacks into free and slave categories (Edmonston et al.). The current census classification system is inconsistent, representing phenotype and race (e.g., Black), ethnicity (e.g., Latino), nationality (e.g., Asian American), or geographic location (e.g., Pacific Islander). The United States Office of Management and Budget implemented this system in response to the equal opportunity mandates during the Civil Rights Movement (Omi, 1997). These categories were created solely for the purpose of statistical, administrative, and civil rights compliance (U.S. Office of Management and Budget, 1977). Moreover, the routine use of a seemingly homogeneous White category has meant that White minorities, such as the Irish and various European American groups, have remained unidentified, even though they also constitute many ethnic and racial intersections. The power implication of this has been that these groups have been denied ethnicity in favor of being a member of a powerful in-group of homogeneous white-skinned persons. Regardless of the power privilege, many groups have attempted to assert their ethnic identity into group classifications. For example, Arab Americans are now classified as White, but have lobbied for a category designated as Middle Eastern (Omi).

Social class. There is a similar definitional problem in defining class. Social class typically has been defined in economic or financial terms, with little consideration of the social determinants of class, such as education, occupational prestige, or the psychological aspects of class. Most people can say what their own

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class is, and yet the definition remains illusive. Some sociologists have measured class by prestige of occupation. Others have defined it as power, and have measured it as income or wealth and property. For social survey purposes, class usually has been measured in Britain by occupation and in the United States by income or education, though this is becoming less true as time passes (Argyle, 1994).

Social class is often defined with the poverty threshold as the reference point. The U.S. Department of Labor has defined the poverty threshold as a family of four with a yearly income of $12,000 or less (Garner, Short, Shipp, Paulin, & Nelson, 1998). More than 30 million Americans fall into this category, mostly White women, 10 million of whom are full-time workers (Garner et al., 1998). Even more recently, class has been viewed as a vehicle of oppression rather than a mere circumstance. Research has uncovered that class has just as much influence, if not more, than ethnicity and gender, particularly in the assessment of discriminatory practices. Thus, classism—discrimination against an individual on the basis of his or her social class—in addition to other more traditional "isms," is beginning to be discussed in an interdisciplinary context in many journals.

Researchers have argued that class is a unique category, one that has a bi-directional relationship with some, but not all, of the other categories. It has been suggested that not only does social class affect the likelihood of getting a disability, but also once one has a disability it will likely affect one's social class (Fujiura et al., 1998). Gender and ethnicity are ascribed, whereas disability and

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social class can be achieved. Therefore, this bi-directional relationship does not exist between gender or ethnicity and social class. Social class also has a similar interconnected relationship with occupation. Unlike the relationship between gender and occupation and, to a lesser degree, between ethnicity and occupation, occupation is often a proxy variable for social class.

Social class may present problems for research that is not posed by analyses based on race, gender, or disability. For example, Lynch and O'Neill (1994) postulated that success in the education system requires a person to abandon certain features of the original class backgrounds, while allowing for greater social mobility. That is, class loses its defining marginalizing features because the structural relationship between class and education is fundamentally different than the relationship between class and other categories. Higher income generally comes with educational attainment and, ultimately, middle-class conversion. Although this idea of middle-class conversion may be accurate, that is, individuals can transcend categories of class, ethnic minorities that have middle-class social status still remain more economically disadvantaged than their White counterparts (Massey & Denton, 1993; Oliver & Shapiro, 1997).

Research has shown that the focus on social class as the main social category may not be warranted. In the United States, many differential health outcomes are believed to be the result of socioeconomic status. However, an evolving body of research finds racial categorization to have a strong effect on mental health variables, independent of socioeconomic status. For example, a

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recent study (Takeuchi, 1999) assessing health outcomes for 50 states found a strong association between racial composition and health. The greater the minority composition, the poorer the child health profiles. When race was included as part of the statistical model, income was not a significant predictor of health outcomes These analyses suggested that simply focusing on income inequality will not resolve racism and its consequences (Takeuchi).

Gender. Many women have argued against the narrowly defined definitions and roles that have been placed upon them. For example, over 1,000 years ago in Kyoto, Japan, women invented Japanese literature, kept their own homes even after marriage, were encouraged by society to take on lovers, and were judged by the music and art they produced rather than by any standard of marital service or fealty (Fisher, 1999). In Britain, as early as 1792, Mary Wollstonecraft, a radical thinker, dismissed the idea that women were inferior and demanded equal opportunity in education and work (Fisher).

Although the women's liberation movement has been moderately successful in unifying women as a larger group outside of other distinguishing factors, such as race and class, women continue to be idealized and narrowly defined by their gender (see Benokraitis, 1997). Today, policies are constantly being amended to end discriminatory practices against women in employment, compensation and advancement, education, mental health treatment, and to end the trivializing and devaluing of crimes against women (Benokraitis; Jackson, 1999).

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The 1999 Beijing Fourth World Conference on Women brought to light many of the challenges to the improved economic and health status of women (M2 PressWire, 1999). The majority of people in poverty—making less than $2.00 a day—are women. Women often have a tenuous link with employment because they, on average (a) have fewer opportunities for vocational training, (b) are often the ones to stay home and take care of the children, and (c) more often occupy low-paying positions. Because of the tenuous links that women have with employment, they bear the burden of adjustment in times of economic crises. Furthermore, although women live longer lives, they do not live healthier lives. Women have different health needs than men. Nearly 600,000 women die each year from reproductive causes, and they are more vulnerable to communicable diseases such as tuberculosis, malaria, and HIV/AIDS (M2 PressWire).

Gender stereotypes have remained fairly consistent over time. Attitudes about the appropriate roles of women and men have continued to change (Deaux & LaFrance, 1998) although this discussion of change is rarely infused with issues of other social categories. The feminist movement, similar to the Civil Rights Movement and the Disability Rights Movement, has helped to create an environment of more liberal ideology. While previous forms of gender roles—social positions, functions, and responsibilities traditionally ascribed to men and women—are waning, new forms of role discrimination are quickly replacing them. Thus, although women are no longer expected to be "bare-footed and in the kitchen," it is still somewhat controversial for women to defend their political and

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economic rights (Swim et al., 1995). Likewise, gender identity—the meanings and traits that an individual associates with being male and female—has become a topic of controversy with the assertion that masculinity versus femininity is not as clear cut as originally conceptualized (Deaux & LaFrance, 1998). In fact, one can be both masculine and feminine, which defies all attempts to define outcomes in terms of male and female trait characteristics.

Disability. Traditionally, history has not accurately depicted the life of an everyday person with disabilities and their contributions to society (Smithsonian Magazine, 2000). The word *everyday* is used for two reasons:

1. Unlike people who belong to high status categories, the everyday man or woman is most likely to be the target of discrimination because of a disability.
2. When disabilities are portrayed, it is often through specific icons, such as Helen Keller's triumph over deafness or Franklin Roosevelt's struggle with polio.

Much as history has tended to separate disability from major affairs or make it a separate part of history, society has tended to place persons with disabilities in the periphery of existence.

Disability is typically considered to be a deviation from societal norms, and is defined in several different ways. One of the earlier definitions of disability (Nagi, 1979) described disability as a form of inability or limitation in performing roles and tasks expected of an individual in a social environment. In 1997, The Federal Individuals with Disabilities Education Act categorized disability into 13

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categories: autism, deaf-blindness, deafness, hearing impairment, mental retardation, multiple disabilities, orthopedic impairment, other health impairment, serious emotional disturbance, learning disability, speech or language impairment, traumatic brain injury, and visual impairment. The more recent Americans with Disabilities Act (1998) definition, while having created a more inclusive definition of disability, has also contributed to nosologic confusion by collapsing all types disabilities into one category. Thus, research following the Americans with Disabilities Act has talked about "disabilities" instead of the specific type of disability.

A historic barrier for persons with disabilities has been the unwarranted assumption that they have only limited access to societal activities. Social policies based on paternalism, custodialism, and discriminatory legislation, and often justified by social Darwinism, have attempted to contain persons with disabilities (Longmore, 1987). These policies went unchallenged until after the Civil Rights Movement of the 1960s (Longmore). Also, according to Oliver (1990), the rise of capitalism, with its emphasis on individual progress, success, achievement, and independence, has fostered public space arrangements that create more isolation and exclusion for people with disabilities (Hahn, 1988; U.S. Commission on Civil Rights, 1983).

Under the Fourteenth Amendment, no state may deny to any person within its jurisdiction the equal protection of the laws. Equal protection for persons with developmental disabilities took the form of institutionalization, initially for their

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protection against themselves and ultimately for society's protection against them (Wolfensberger, 1975). However, with the advent of deinstitutionalization, mothers and fathers with mental and physical disabilities are living in the communities and raising their own children and are in constant interaction with others (Holburn, Perkins, Vietze, 2001). Depending on the effect of the disability on day-to-day functioning and its influence on interactions with others, a disability may become incorporated into one's self-definition. Perhaps this process is similar to how gender or ethnicity is incorporated into self-definition.

Often, people with disabilities are treated in a manner consistent with gender or ethnic group discrimination. In a study of 665 health practitioners from Chinese, Italian, German, Greek, Arabic, and English Australian communities (Westbrook, Legge, & Pennay, 1993), participants used a social distance scale to rate the attitudes of people in their communities toward 20 disability groups. In all communities, people with asthma, diabetes, heart disease, and arthritis were the most accepted. People with more stigmatized and visible disabilities, such as AIDS, mental retardation, psychiatric illness, and cerebral palsy, were the least accepted (Westbrook et al.).

Multiple Healthcare Outcomes: Subjective Ratings and Status Variables

An analysis of intersectionality must consider multiple healthcare outcomes, both the subjective outcomes and more objectively defined outcomes that may be impacted based on social experience among race, ethnicity, gender,

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social class, disability, and other social categories of interest. Subjective ratings may be perceptions and attitudes, for example. Status variables represent a position or circumstance relative to that of others. Conducting an analysis of intersectionality without including both subjective ratings and status variables may lead to misinterpretations of healthcare outcomes. On the level of a single social category, this concern has been substantiated. For example, although research has shown that doctors are more likely to prescribe psychotropic medications to women than to men, a recent study by Di Caccavo and Reid (1998) found this to be true only if the doctor had a more negative attitude toward the female patient than toward the male patient. If, on the other hand, the doctor felt more positive about the female patient than about the male patient, this trend was reversed, with men more likely to be prescribed drugs and women more likely to be given non-drug alternatives. In fact, neither the doctor's attitude toward the patient nor the patient's gender alone exerted significant influence on the doctors' treatment decisions. Only the intersection of the patient's gender—the social category—with the doctors' attitude—a subjective rating that was predicated on some hierarchical status issue toward the patient—significantly influenced the doctors' treatment decisions.

A Context for Analyzing Intersectionality: Disparities in Healthcare

Any institution has nonevaluative, systematic processes that, in theory, should preserve the equality of the institution's interactions with individuals and

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groups of people. For healthcare institutions, the traditional healthcare model is the dominant modus operandi. The traditional healthcare model dictates that individuals are treated based on signs, symptoms, and laboratory indicators of disease or illness progression. This model depends upon the licensed expert, professional diagnoses, and specific symptom- or diseased-based treatments. However, sole reliance upon this model clouds research perspectives, thereby precluding an understanding of how differential health and healthcare outcomes across social categories can be the result of institutional practices.

Healthcare research is a broad field of inquiry concerned with understanding and optimizing the quality, accessibility, and efficiency of healthcare. Research on the influence of multiple social categories and on disparities in healthcare can provide an important counterpoint to epidemiological research, which focuses on the biological or physical indicators of health disparities. Clinical/epidemiological researchers are concerned with assessing efficacy, demonstrating potential benefits, such as of certain drugs, under controlled conditions. In contrast, research on the indicators of discrimination in healthcare is concerned with assessing the processes and outcomes of routine healthcare to determine whether, where and how practice might be improved in terms of quality, accessibility, and utilization. Furthermore, research on indicators of discrimination in healthcare that takes social categories into account can contribute to eliminating the dearth of extant research on differences across social categories.

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Research on Social Categories and Disparities in Healthcare

In 1992, congress implemented a Medicare payment system based on relative value units, the sum of work, practice, and malpractice value units (Goff, Muntz, & Cain, 1997). The total relative value unit is multiplied by a dollar conversion factor to set the reimbursement for all Medicare procedures. A study was undertaken to compare total relative value units for gender-specific procedures (Goff et al.). The pairs were matched so that the amounts of work required and level of difficulty for the procedures would be as close to identical as possible. Using the Federal Register, researchers compared 24 pairs of gender-specific procedures. In 80% of the cases, male-specific procedures had higher relative value units. Work relative value units were 49% higher for urologic procedures than for gynecologic procedures. Overall relative value units were 83% higher for urologic procedures than for gynecologic procedures. Finally, male-specific surgeries were reimbursed at an amount that was 37% higher than that for female surgeries (Goff et al.). Although this research demonstrated the insidious nature of discrimination in healthcare, it did not provide information on other social categories.

Another study investigated inequalities in the system for listing patients for cadaveric renal transplants (Kasiske, London, & Ellison, 1998). Data were collected from 238 United Network for Organ Sharing centers on 41,596 patients. The Transplant Candidate Registration Form included the following variables:

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gender, age, history of previous kidney transplant, highest education level achieved, race/ethnicity, employment status, and projected payment source. To remove possible bias for general access to healthcare and referral for transplantation, the analysis was limited to 5,944 patients who had a previous transplant and found similar results. It was found that ethnic minorities, defined as Black, Hispanic, Asian, and other; participants with less education; and participants with fewer financial resources were less likely than their counterparts to be listed for renal transplants. The results of the Kasiske et al. study focused on ethnicity. While there appeared to be information available about other social category memberships, this information was not included in a comprehensive analysis.

Likewise, in a similar study of renal transplants that addressed intersections, the authors retrospectively analyzed patients who were receiving peritoneal dialysis (Delano, Macey, & Friedman, 1997). Sixty-one percent of the participants were women; 39% were men. Sixty-seven percent of the participants were Black; 17% were White; 10% were Hispanic, and 6% were Asian. Despite the preponderance of Black and women patients, the majority of the patients who received kidney transplants were White men. Thus, even in a program in which the majority of the patients are Black and women, White men were more likely to receive a renal transplant. Although the size of the study precludes generalization to a nationally representative population, it is a clear indicator of how the research can be enhanced by incorporating two social categories into analyses.

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A study of growth hormone treatment in the United States also discussed dual intersections (August et al., 1990). Approximately 1,600 children met classic criteria for growth hormone deficiency. Although boys accounted for the majority of the group, girls were comparatively shorter than boys at diagnosis. Similarly, Black children were shorter than White children at diagnosis, and their overall representation was low compared with their percentage in the at-risk population. These data suggest possible inherent biases in the diagnostic process, which may perpetuate underascertainment or late diagnosis, specifically for Black girls. Based on individual analyses that indicated differences across race and gender, August et al. reached a conclusion that focused on Black girls. While analyses like these can provide information about which respondents are more or less likely to receive an outcome, it cannot incorporate the complexity of looking across multiple levels and within multiple categories to present a more complex picture of children who are likely to receive and benefit from growth hormone treatment.

In addition to physical medical procedures, bias has also been documented in the provision of mental health services. In one study (Flaherty & Meager, 1997), 66 Black male patients and 36 White male schizophrenic patients were matched on degree of pathology and were rated on several variables—time in the hospital, privilege level, medication given, and therapy receipt. The results indicated that Black patients spent less time in the hospital, obtained a lower privilege level, were given more psychotropic medications, were secluded and restrained more, and were less likely to receive recreational and occupational

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therapy (Flaherty & Meager). Sample size in small cross-sectional studies prevents the use of many multivariate techniques because of lack of statistical power. However, by matching on particular variables, Flaherty and Meager attempted to account for many factors that may produce differential outcomes.

This review of the literature on disparities in healthcare illustrated that researchers have paid little attention to intersectionality. While there are a couple of exceptions to this unitary view of social categories, studies that focused on dual category membership tended not to recognize the importance of assessing multiple types of outcomes. Moreover, analyses that are based on a single predictor and a single outcome cannot, by nature of their methodologies, present a complete picture of the role of multiple social categories and multiple healthcare outcomes. This study advances social category research and research on healthcare by not focusing on only one social category, but by focusing on all social categories and identifying how individual social categories and their intersections influence subsequent healthcare outcomes.

Research Questions, Hypotheses, and Predictions

The overarching research question in this secondary data analysis was to investigate the relationships among traditional social categories and various healthcare outcomes within respondents of African descent. By comparing racial/ethnic groups, disparities in healthcare for African Americans have been extensively documented. Yet, this research represents the first documented effort

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at formulating a comprehensive understanding, grounded in social psychological theory, of how social categories within African Americans contribute to healthcare disparities.

Social categories include gender, poverty status, and disability. Healthcare outcomes include two status variables: (a) type of provider (person, facility or person in facility), and (b) type of insurance (private, public or uninsured). Healthcare outcomes include three subjective rating variables: (a) perceived health status (a 1–5 rating scale from *poor* to *excellent*), (b) satisfaction with usual source of care (USC)—(a scale composed of five variables), and (c) comprehensiveness of services provided by the USC, (a scale composed of three variables). This study addressed the research questions enumerated below. Corresponding predictions follow each hypothesis.

Research Question 1

What is the relationship between social categories (gender, poverty, and disability) and each healthcare outcome?

Prediction 1.1: The models that include interaction effects will account for more variability in type of insurance over and above the model that includes main effects only.

Prediction 1.2: The models that include interaction effects will account for more variability in type of provider over and above the model that includes than the model that includes main effects only.

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Prediction 1.3: The models that include interaction effects will account for more variability in perceived health status over and above the model that includes main effects only.

Prediction 1.4: The models that include interaction effects will account for more variability in satisfaction with usual source of care over and above the model that includes main effects only.

Prediction 1.5: The models that include interaction effects will account for more variability in comprehensiveness of services provided by the usual source over and above the model that includes main effects only.

Research Question 2

What is the relationship between low-status categories and healthcare outcomes?

Prediction 2.1: Respondents who belong to all low-status levels within social categories (women, with a disability, below the 100% poverty level) will be significantly more likely to be uninsured compared to their high-status counterparts.

Prediction 2.2: Respondents who belong to all low-status levels within social categories (women, with a disability, below the 100% poverty level) will be significantly more likely to use a public healthcare facility than to have a private practitioner, compared to their high-status counterparts.

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Prediction 2.3: Respondents who belong to all low-status levels within social categories (women, with a disability, below the 100% poverty level) will have significantly poorer perceived health status compared to their high-status counterparts.

Prediction 2.4: Respondents who belong to all low-status levels within social categories (women, with a disability, below the 100% poverty level) will be significantly less satisfied with their usual source of care, compared to their high-status counterparts.

Prediction 2.5: Respondents who belong to all low-status levels within social categories (women, with a disability, below the 100% poverty level) will receive significantly less comprehensive services from their usual source of care, compared to their high-status counterparts.

Research Question 3

What are the moderational effects of social categories on healthcare outcomes?

Prediction 3.1: Poverty (above the 100% level) will buffer the relationship between having a disability and poorer healthcare outcomes.

Prediction 3.2: Poverty (above the 100% level) will buffer the relationship between being female and poorer healthcare outcomes.

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Research Question 4

What is the relationship among the multiple social categories and multiple healthcare outcomes?

Prediction 4.1: There will be significant main effects of gender, poverty category, and disability on the overall healthcare outcomes model.

Prediction 4.2: There will be significant interactions among gender, poverty, and disability on the overall healthcare outcomes model.

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Chapter 3

Methods

Description of the Medical Expenditure Panel Survey

A congressionally mandated report by the Institute of Medicine indicated that racial minorities tend to receive lower-quality healthcare than Whites, even when insurance status, income, age, and severity of conditions are comparable (Cohen, 1997). The committee made a number of recommendations for removing disparities, including increasing healthcare provider's awareness of the problem, expanding patient education programs, and improving the enforcement of anti-discrimination laws. The Agency for Health Research Quality has taken this one step further by acknowledging that improving healthcare also requires the elimination of disparities in healthcare, which requires the collection of reliable data on healthcare. The Medical Expenditure Panel Survey (MEPS) is one such effort.

MEPS is the third in a series of medical expenditure surveys conducted by Association for Health Research Quality (AHRQ). It is a nationally representative survey that collects detailed information on the health status, access to care, healthcare use and expenses, and health insurance coverage (including what respondents pay for coverage) of the U.S. civilian noninstitutionalized population and nursing home residents. It is designed to help understand how the dramatic growth of managed care, changes in private health insurance, and other dynamics

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of today's market-driven healthcare delivery system have affected, and are likely to affect, the kinds, amounts, and costs of American healthcare (Cohen, 1997).

MEPS consists of four components:

1. Household Component (HC) – objective is to produce annual estimates for a variety of measures of health status, health insurance coverage, healthcare use and expenditures, and sources of payment for health services. The HC consists of several rounds of interviewing covering 2 calendar years, making it possible to determine how changes in respondents' health status, income, employment, eligibility for public and private insurance coverage, use of services, and payment for care are related.

2. Nursing Home Component (NHC) – presents data on the characteristics of facilities and services offered, expenditures and sources of payment on an individual resident level, and resident characteristics (including functional limitation, cognitive impairment, age, income, and insurance coverage).

3. Medical Provider Component (MPC) – supplements information received from respondents to the HC. The MPC presents information that can be used to estimate the expenses of people enrolled in HMOs and other types of managed care plans.

4. Insurance Component (IC) – consists of two subcomponents. Subcomponent 1 is the household sample, which presents detailed information on the health insurance held by and offered to respondents to the HC. These data can be linked back to the original HC to analyze individual behavior and choices made

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with respect to healthcare use and spending. Subcomponent 2 presents national, regional, and state-level estimates of the amount, types, and costs of health insurance available to Americans through their workplace (Cohen, 1997).

This study utilizes only the Household Component (HC).

MEPS Sampling Units

The sampling framework for the MEPS HC is drawn from respondents to the National Health Interview Survey (NHIS), conducted by the National Center for Health Statistics. NHIS provides a nationally representative sample of the U.S. civilian noninstitutionalized population, with oversampling of Hispanics and Blacks. A subsample of 10,500 households was drawn from NHIS sampling frame for the initial 1996 MEPS HC panel. Every 5 years the HC sample size is increased. Beginning with the 1997 panel, policy-relevant population subgroups are oversampled. The subgroups initially targeted include adults with functional impairments and children with functional limitations.

The MEPS sample is a subsample of the NHIS dwelling units or households. A reporting unit for the MEPS data was defined as a person or group of persons in a household who were related by blood, marriage, adoption, or other family associations. When unrelated persons lived in the same household, the household was separated into multiple reporting units. All persons in a reporting unit were to be interviewed at the same time (Cohen, DiGaetano, & Goskel, 1999). The public use data set contained one record for each of 22,601 persons from the

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Household Component of the 1996 Panel of the Medical Panel Expenditure Survey.

Criteria for Assessing Database Quality

Data that are used by someone other than the person who collected them are referred to as secondary data. These data can be obtained from a number of sources including established archives, private companies, or principal investigators. The benefits of using secondary data are that the researcher (a) has neither the time nor the financial investment in the database; (b) has neither the time nor the finances to collect such a large, representative population; and (c) gains access to a large database with numerous subpopulations that may be of use. In short, the use of secondary data analyses allows researchers to conduct studies that would otherwise require considerable funding, long-term record collection, and multiple assessments. In addition, with secondary data, one can obtain the benefit of the data to ask important questions that were not posed as part of the initial study. On the other hand, with secondary data analyses, the researcher does not have the control over how the instruments are designed and implemented, what questions are asked, how the data are collected, or how carefully they are cleaned and documented. For example, when researchers collect data, they have a clear understanding of how those data should appear (in a frequency table, for example). Therefore, one is more quickly able to spot and correct errors. If one uses secondary data, all of the subtleties that were involved in making coding

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decisions and in imputing the data may not be known, and errors in the data may be difficult to resolve. The primary challenge with secondary data is to assure that the data appropriately address the research questions in order to prevent the dilemma of altering the hypotheses to fit the data.

The questions a researcher needs to ask when evaluating secondary data sources for use include the appropriateness of the study's unit of analysis and sampling, the variables and their values, and levels of measurement. Based on the research of Reva Basch (1990) and other researchers, the list below illustrates the criteria that were considered when assessing the quality and usefulness of the potential databases for this paper:

1. Consistency – the extent to which records within a database follow the rules with regard to field assignments, field tags, indexing, and other data elements.

2. Coverage/Scope – the extent to which the database covers the subject area, that is, its standing as an authoritative database in its area.

3. Relevancy – the extent to which the database is capable of answering the research questions put forth by the researcher.

4. Timeliness – the frequency with which the database is completed (or updated for longitudinal data collection)

5. Accuracy/Error rate – the percentage of errors that occur in fields critical to the anticipated analyses; documentation on data cleaning; a log for all database errors; corrections submitted in a timely manner.

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6. Accessibility/Ease of use – accessibility of software needed for researcher to utilize data; presence and detail of codebook.

7. Integration – the degree to which the overall database structure resembles that of other databases of the same type that are likely to be searched with it.

8. Missing data – detailed documentation on imputations and missing data.

9. Documentation – timeliness, accuracy and readability of both print and online documentation; the extent to which users are informed of database limits and useful features.

10. Support – toll-free number for customer service, online support, availability, location, and cost of training.

11. Level of analysis – the extent to which the data allow the researcher to examine data on the levels—in this case, individual, group, and institutional level—posed by the research questions.

Procedures for MEPS HC Data Collection

The HC uses an overlapping panel design in which data are collected through a preliminary contact followed by a series of five rounds of interviews over 2 1/2 years. Employing computer-assisted personal interviewing technology, data on medical expenditures and use for 2 calendar years are collected from each household. This series of data collection rounds is launched each year on a new sample of households to provide overlapping panels of survey data and, when

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combined with other ongoing panels, can provide continuous and current estimates of healthcare expenditures (Cohen, 1997).

Variables and Measures

Tables 1–4 list descriptive statistics on all variables that were utilized in the analyses. For variables with missing data, in each case the missing data represented less than 10% of the sample. The disability variable in Table 1 had a missing percentage of 4%; type of provider in Table 3 had a missing percentage of 7%; and the perceived health status variable in Table 4 had a missing percentage of 1%.

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Table 1

Percentages and Sample Sizes for Levels of the Social Categories

Variable	Percentage	*n*
Gender		
Female	58.1	1,206
Male	41.9	870
Poverty status		
Less than 100% poverty line	26.1	542
100–124% poverty line	5.8	121
125–199% poverty line	17.2	357
200–399% poverty line	27.1	563
at least 400% above	23.7	493
Any limitation (Disability)		
Yes	24.5	488
No	75.5	1,506

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Table 2

Percentages and Sample Sizes for Combinations of the Social Categories

Category combinations		Descriptions	%	*n*
All status				
	All low status	(female, below poverty level, disability)	6.32	126
	All high status	(male, above poverty level, no disability)	27.48	548
Two high statuses				
	High status disability and poverty	(female, above poverty level, no disability)	31.59	630
	High status gender and poverty level	(male, above poverty level, disability)	5.97	119
	High status gender and disability	(male, below poverty level, no disability)	5.37	107
One high status				
	High status disability	(female, below poverty level, no disability)	11.08	221
	High status poverty level	(female, above poverty level, disability)	9.28	185
	High status gender	(male, below poverty level, disability)	2.91	58
Missing				82
Total				2076

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Social Categories

Data regarding respondents' categories of gender, poverty status, and disability are presented in Table 1. Table 2 shows combinations of social categories in terms of status.

Gender. The respondents were asked to report either male or female for their gender. When gender of the respondent was not available from the NHIS interview and was not ascertained during the MEPS interviews, it was assigned in the following manner. The person's first name was used to designate gender (25 cases were resolved this way). If the person's first name provided no indication of gender, then family relationships were reviewed (0 cases). If neither of these approaches made it possible to determine gender, then it was randomly assigned (3 cases).

Race/Ethnicity. Although research has documented disparities in healthcare across racial/ethnic groups, there is no documented effort to understand multiple social categories within a sample of African Americans. Therefore, only respondents who identified their race/ethnicity as Black were utilized for analyses.

Disability. The MEPS data include measures of disability that address whether or not respondents have any of the following disabilities:

1. ADL (Activities of Daily Living); IADL (Instrumental Activities of Daily Living—using the telephone, paying bills, taking medications, preparing light meals, doing laundry, or going shopping);

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2. functional limitations (e.g., walking, lifting, standing, reaching, bending);
3. use of assistive technology and social/recreational limitations;
4. working at a job, doing housework, going to school limitations;
5. cognitive limitations (e.g., experience confusion or memory loss, have problems making decisions, require supervision for their own safety);
6. vision problems; and
7. hearing problems.

Disability was dichotomized (i.e., "yes" or "no" to any disability type) in order to investigate the overall effect of having any type of disability. Also, the sample size of many of the disability types was inadequate, and many of the respondents would have been excluded from analyses were each type of disability analyzed separately.

Poverty status[1]. The MEPS database contains a categorized measure of poverty status. This variable was created by dividing family income (sum of person-level income, except tax refunds and capital gains) by the applicable poverty line (based on family size and composition). The resulting five categories are as follows:

1. negative or poor (less than 100% poverty line),
2. near poor (100–124% poverty line),

---

[1] Due to limitations of variables in the MEPS database, poverty will be used here as a proxy for social class. Also, social class is often defined with the poverty threshold as the reference point and previous studies have demonstrated its moderational or mediational influence (Kluegel & Smith, 1986; Traux, Cordova, Wood, Wright, & Crosby, 1998).

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3. low income (125–199% poverty line),
4. middle income (200–399% poverty line), and
5. high income (over 400% poverty line).

Poverty was dichotomized (i.e., below the 100% poverty level vs. above the 100% poverty line) in order to investigate whether or not there was a profound effect of being below the poverty level on healthcare outcomes.

Healthcare Outcomes

Research on disparities in healthcare has been concerned with assessing the processes and outcomes of routine healthcare to determine whether, where, and how practice might be improved to achieve better quality, accessibility, and utilization. There was not an extensive list of variables from which to choose in the MEPS database. The healthcare outcomes that will be discussed in this section were chosen or created based on presence in the database. The attempt was also made to address many of the larger issues of quality, accessibility, and utilization that are important to a comprehensive understanding of healthcare outcomes. Type of insurance coverage, type of provider, and perceived health status were readily available in the database. Comprehensiveness of services and satisfaction with the usual source of care were constructed from questions asked as part of the MEPS database.

Type of insurance. Respondents were asked if they were covered by any source of public and private health insurance (see Table 3). Public insurance

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holders included those not covered by private insurance and covered by one of the following public programs: Medicare, Medicaid, the Civilian Health and Medical Programs for the Uniformed Services and Veterans Affairs, or other hospital/physician coverage. Private health insurance was defined as insurance that is not public and is categorized as a general insurance source or specific insurance source, such as employer, union, or self-employment. Insurance that provides coverage for a single service only, such as dental or vision, was not counted. The uninsured were defined as respondents who were not covered by any of the public or private services. Respondents covered only by noncomprehensive state-specific programs, such as Maryland Kidney Disease Program, or private single-service plans (e.g., dental care) were not considered to be insured. For the purposes of analyses in this study, this variable was dichotomized (insured vs. uninsured) to analyze the effects of having any kind of insurance versus being uninsured.

Type of provider. Respondents were asked to classify their USC into one of the following three categories:

1. A facility: The respondent sees any available doctor in a facility where other patients go to see other doctors.

2. A private person in a facility: The respondent sees only the chosen doctor in a facility where other patients go to see other doctors. The doctor, in this second scenario, was chosen from a limited list based on insurance carriers.

3. A private person: The respondent sees only the chosen doctor in a private office.

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This variable was dichotomized into private physician versus facility to examine the effects of seeing a private doctor versus going to a facility (see Table 3).

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Table 3

Percentages and Sample Sizes for Levels of the Health Care Status Outcome Variables

Variable	Percentage	*n*
Type of Insurance		
Uninsured	17.8	369
Public	24.9	517
Private	57.3	1,190
Type of Provider		
Facility	51.2	794
Person (Facility)	16.7	259
Person (Private practice)	32.2	499

Perceived health status. The respondents were asked to rate their health at the time of the interview according to the following categories: excellent, very good, good, fair, and poor. This was a one-item subjective rating of health status. The results are presented in Table 4.

Satisfaction with usual source of care. This variable represents subjective rating of respondents' satisfaction with various aspects of healthcare (see Table 4). A number of questions in the MEPS database asked the respondents about their satisfaction with their USC. A USC is defined as a particular doctor's office, clinic, health center, or other place that the individual usually goes if he/she is sick

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or needs advice about his or her health. The following items were combined to create a continuous variable that assessed the respondents' satisfaction with healthcare by the usual source of care:

1. Does the USC provider listen?
2. How satisfied is respondent with USC staff?
3. How satisfied is respondent with quality of care?
4. How difficult is it to get an appointment?
5. How difficult is it to contact the USC by phone?

The scale ranged from 6–18, with a mean of 15.5, a standard deviation of 2.30, and a Cronbach's alpha of .70.

Comprehensiveness of services. Three questions in the MEPS database represent subjective ratings of comprehensive services and ask the respondent about specific types of services provided by the usual source of care. The following items were combined to create a continuous variable that measures comprehensiveness of healthcare services:

1. Do you go to USC for new health problems?
2. Do you go to USC for preventive treatment?
3. Do you go to USC for referral?

The scale ranged from 3–6, with a mean of 5.9, a standard deviation of .46, and a Cronbach's alpha of .78 (see Table 4).

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Table 4

Subjective Rating Health Care Outcome Variables

Variable	Percentage	*n*	Mean	*SD*	*Range*
Perceived health status			3.5	1.14	1–5
Poor	4.8	98			
Fair	15.0	307			
Good	27.5	564			
Very Good	29.2	598			
Excellent	23.6	483			
Satisfaction with the usual source of care (USC)			15.5	2.30	6–18
Comprehensiveness of services provided by the USC			5.9	.46	3–6

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Developing A Multimethodological Data Analytic Plan

This study addressed three methodological issues that arise when considering the interconnected nature of social categories and multiple healthcare outcomes. First is the need to include multiple social categories in any analysis. Second, the construction of social categories has created status hierarchies, and differences between statuses must be analyzed. Third, there exist not only multiple social categories, but also multiple outcomes that should be adequately assessed. These issues suggested the need for multivariate methodologies for exploring and analyzing data on intersectionality.

While univariate analyses of social categories typically address disparities in healthcare outcomes based on a particular social group membership, this study represented a comprehensive analysis of social categories that addressed (a) the interconnected nature and stratification of social categories as predictors of significant healthcare outcomes, (b) the inclusion of both status and subjective outcome variables, and (c) consideration of multiple outcomes. One argument that this study has made is that social categories are inherently interconnected. Analysis of a single social category is not a realistic representation of how individuals experience intersections, and statistical analyses should not be limited to a single social category. Additionally, because both individual social categories and their subsequent intersections are inherently hierarchical and stratified, it is important for the researcher to make interpretations based on this knowledge. Moreover, results that can portray the social category interactions that may make a

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person likely or unlikely to receive healthcare discrimination can enhance researchers' understanding of the influence of multiple social categories on healthcare outcomes.

Researchers of healthcare outcomes are increasingly seeking methodologies to manage the complex relationships between variables in an attempt to provide for more holistic and inclusive studies and models. In this study, multivariate techniques were used to handle the complexity of an intersectionality analysis in predicting healthcare outcomes, by utilizing multiple predictors and multiple outcomes and complex relationships. The multivariate models presented in this study used multiple categorical predictors to examine each healthcare outcome and multiple social category level groupings to examine the role of status, and examined the role of a set of social categories on a set of healthcare outcomes. By employing a multivariate methodology, this study differed from past research by attempting to identify patterns of interaction using multiple social categories as predictors. This research also sought to identify and to analyze the complex relationships that may be created when considering multiple healthcare outcomes.

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Chapter 4

Results

Gender, Poverty and Disability as Individual Predictors

Correlation coefficients were computed between each status category and each healthcare outcome. The correlational analyses in Table 5 include different types of correlations, such as the standard Pearson correlation, phi-coefficients, which are a special case of the Pearson correlation with binary variables, and point-biserial correlations, which correlate a binary variable and continuous variable. Therefore, Table 5 is labeled as "Correlations" without reference to a specific type.

The results of the correlational analyses in Table 5 indicated that there was a small, yet significant relationship between gender and perceived health status ($r = .08, p < .01$), gender and comprehensiveness of services ($r = .06, p < .05$) and gender and type of insurance ($r = .14, p < .01$) such that men were more likely to be insured, had better perceived health status and received more comprehensive services.

There was a moderate and significant correlation between disability and type of insurance coverage ($r = .35, p < .01$), such that respondents with no disability were more likely to be insured, and a moderate correlation between disability and perceived health status ($r = .42, p < .01$), such that respondents with no disability perceived their health to be better.

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There was a moderate correlation between poverty and type of insurance coverage ($r = .41, p < .01$), such that those above the poverty level were more likely to have private insurance. There was a small yet significant correlation between poverty and type of provider ($r = .08, p < .01$), such that respondents above the poverty level were more likely to have a private practitioner. Additionally, there was a small to moderate correlation between poverty and perceived health status ($r = .23, p < .01$), such that respondents above the poverty level perceived their health to be better.

There was only one significant relationship between any social category and either of the two scales, a small correlation between gender and comprehensiveness of services ($r = .06, p < .05$). Men receive more comprehensive services. The lack of correlation between social categories and scales was due in part to the skewed nature of the data. Table 6 and Table 7 indicate that the data were positively skewed. The tables are included as supplemental information for the reader, but for the purposes of analyses, the individual items were combined into two scales.

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Table 5

Correlations Among All Variables

		1	2	3	4	5	6	7	8
1. Gender	Correlation	1	.063**	.114**	.144**	-.003	.082**	-.039	.057*
	Sig. (2-tailed)		.005	.000	.000	.912	.000	.161	.025
	N		1994	2076	2076	1552	2050	1290	1541
2. Disability	Correlation		1	.157**	.352**	-.033	.421**	.019	.030
	Sig. (2-tailed)			.000	.000	.193	.000	.502	.246
	N			1994	1994	1516	1990	1263	1506
3. Poverty	Correlation			1	.411**	.083**	.231**	.042	-.010
	Sig. (2-tailed)				.000	.001	.000	.135	.709
	N				2076	1552	2050	1290	1541
4. Type of insurance	Correlation				1	.075**	.131**	.023	.000
	Sig. (2-tailed)					.003	.000	.406	.986
	N					1552	2050	1290	1541
5. Provider type	Correlation					1	.007	.186**	.048
	Sig. (2-tailed)						.786	.000	.060
	N						1552	1290	1541
6. Perceived health status	Correlation						1	.060*	.017
	Sig. (2-tailed)							.032	.495
	N							1290	1541
7. Satisfaction with USC	Correlation							1	.050
	Sig. (2-tailed)								.072
	N								1284
8. Comprehensiveness	Correlation								1

Note. *$p < .05$, **$p < .01$

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Table 6

Composition of the Satisfaction with Usual Source of Care (USC) Subjective Rating Scale

Variable	Percentage	*n*
Does the USC provider listen?		
No	3.5	53
Yes	96.5	1,481
How satisfied is respondent with USC staff?		
Not satisfied at all	.9	14
Not too satisfied	3.8	59
Somewhat satisfied	23.4	360
Very satisfied	71.8	1,104
How satisfied is respondent with quality of care?		
Not satisfied at all	.6	8
Not too satisfied	3.2	49
Somewhat satisfied	21.3	328
Very satisfied	74.9	1,151
How difficult is it to get an appointment with USC?		
Very difficult	9.2	125
Somewhat difficult	13.6	185
Not too difficult	36.6	499
Not difficult at all	40.6	553
How difficult is it to contact USC by phone?		
Very difficult	9.2	134
Somewhat difficult	16.3	238
Not too difficult	36.5	532
Not difficult at all	38.0	555

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Table 7

Composition of the Comprehensiveness of Services Provided by Usual Source of Care (USC) Subjective Rating Scale

Variable	Percentage	*n*
Does the respondent go to USC for new health problems?		
No	3.6	55
Yes	96.4	1,491
Does the respondent go to USC for prevention?		
No	3.5	54
Yes	96.5	1,492
Does the respondent go to USC for referrals?		
No	3.8	59
Yes	96.2	1,485

Interactions Among Gender, Poverty and Disability

The first research question investigated the relationship between each categorical predictor variable, interactions between and among the variables, and each healthcare outcome. Hierarchical linear regression analyses (for continuous outcomes) and hierarchical logistic regression analyses (for binary outcomes) were conducted using the SPSS software. Each categorical predictor variable was dummy-coded to a 0-1 category to represent female and male, below and above

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the 100% poverty level, and disability and no disability, respectively. Main effects were entered on step 1 (Model 1); all two-way interactions were added on step 2 (Model 2); and the three-way interaction between gender, poverty, and disability was added on step 3 (Model 3). The overall relationship in the linear regression was tested using an *F* statistic for the linear regression analyses and the Chi-Square statistic for the logistic regression analyses. In the linear regression, the standardized version of the weights produced by the analysis, standardized beta coefficients, shows the relative contribution of each variable in determining the overall relationship on any given step. The adjusted R-squared (R^2) was used to assess the improvement of one model or step over the previous. Significant changes in R^2 are reported at the bottom of Tables 8–12. Unlike the hierarchical linear regression analyses, the logistic regression analyses could not calculate whether or not the change in R^2 was significant from one step to the next. However, Nagelkerke's R^2 is examined to determine model significance and the Exponential Beta, shown in parentheses, represents the odds ratio for each variable. Significant models are reported at the bottom of each table (see Tables 8–12).

The Relationship between Social Categories and Type of Insurance Coverage

Table 8 illustrates the results of a hierarchical regression analysis that examined the relationship among the social categories and type of insurance coverage. In logistic regression, the Exponential Beta, shown in parentheses

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underneath the regression coefficient, represents the odds ratio for each variable. In Model 1, the main effects model, gender, poverty, and disability were significant predictors of type of insurance coverage. The results suggested, not surprisingly, that men were nearly twice as likely as women to be insured. Also, respondents without a disability were approximately 5 times more likely to be insured than those with a disability. Furthermore, respondents who were above the 100% poverty level were nearly 7 times more likely to be insured. The significant R^2 for model 2 ($R^2 = .34$) suggested that the model including the two-way interactions among the social categories was significant. However, the improvement in R^2 was only .01 from the main effects model to the two-way interaction model. In logistic regression, Nagelkerke's $R^2$is used to approximate the R^2 in hierarchical linear regression. Not only was each main effect significant in the two-way interaction model (Model 2), but there was also a significant disability-poverty interaction. Respondents below the poverty level with a disability were more likely to be uninsured than all other poverty-disability combinations. The costs associated with healthcare maintenance for persons with disabilities typically exceed the government-subsidized healthcare policies (e.g., Medicare or Medicaid). Respondents are then expected to find their own resources for additional costs.

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Table 8

Hierarchical Logistic Regression Analysis for Social Categories Predicting Type of Insurance Coverage (Exponential Beta in Parentheses)

Predictor variable	Model 1	Model 2	Model 3
Gender(1)	0.558*** (1.746)	0.529*** (1.697)	0.471** (1.602)
Disability(1)	1.663*** (5.274)	1.669*** (5.306)	1.713*** (5.544)
Poverty(1)	1.909*** (6.748)	1.825*** (6.205)	1.848*** (6.344)
Gender(1)/Disability(1)		0.341 (1.406)	0.527+ (1.693)
Gender(1)/Poverty(1)		-0.149 (0.862)	0.029 (1.030)
Disability(1)/Poverty(1)		0.330* (1.391)	0.120 (1.127)
Gender(1)/Disability(1)/Poverty(1)			-1.259* (0.284)
Constant	0.558	0.577	0.569
Nagelkerke's R^2	0.33***	0.34***	0.34***

Note. (1) refers to respondents who are men, without a disability, or above 100% poverty. Models 1, 2, and 3 are significant.
$*p < .05$; $**p < .01$; $***p < .001$; $+p < .10$

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Figure 4 illustrates the disability-poverty interaction on type of insurance coverage. Ninety-one percent of respondents with no disability who were above the poverty level were insured, compared to 56% with no disability who were below the poverty level. In contrast, 63% of respondents who were above the poverty level *with* disability were insured. However, the findings were dramatically different for respondents who were below the poverty level with a disability. Only 24% of these respondents were insured.

The Relationship between Social Categories and Type of Provider

Table 9 illustrates the results of a hierarchical logistic regression analysis that examined the relationship between the social categories and type of provider. In Model 1, the main effects model, the relationship was not significant. The addition of two- and three-way interactions (Models 2 and 3) added no unique variance contribution to the overall model. For each model, only poverty was a significant predictor of type of provider, suggesting that respondents above the poverty level were more likely to receive individualized care from a person than respondents below the poverty level.

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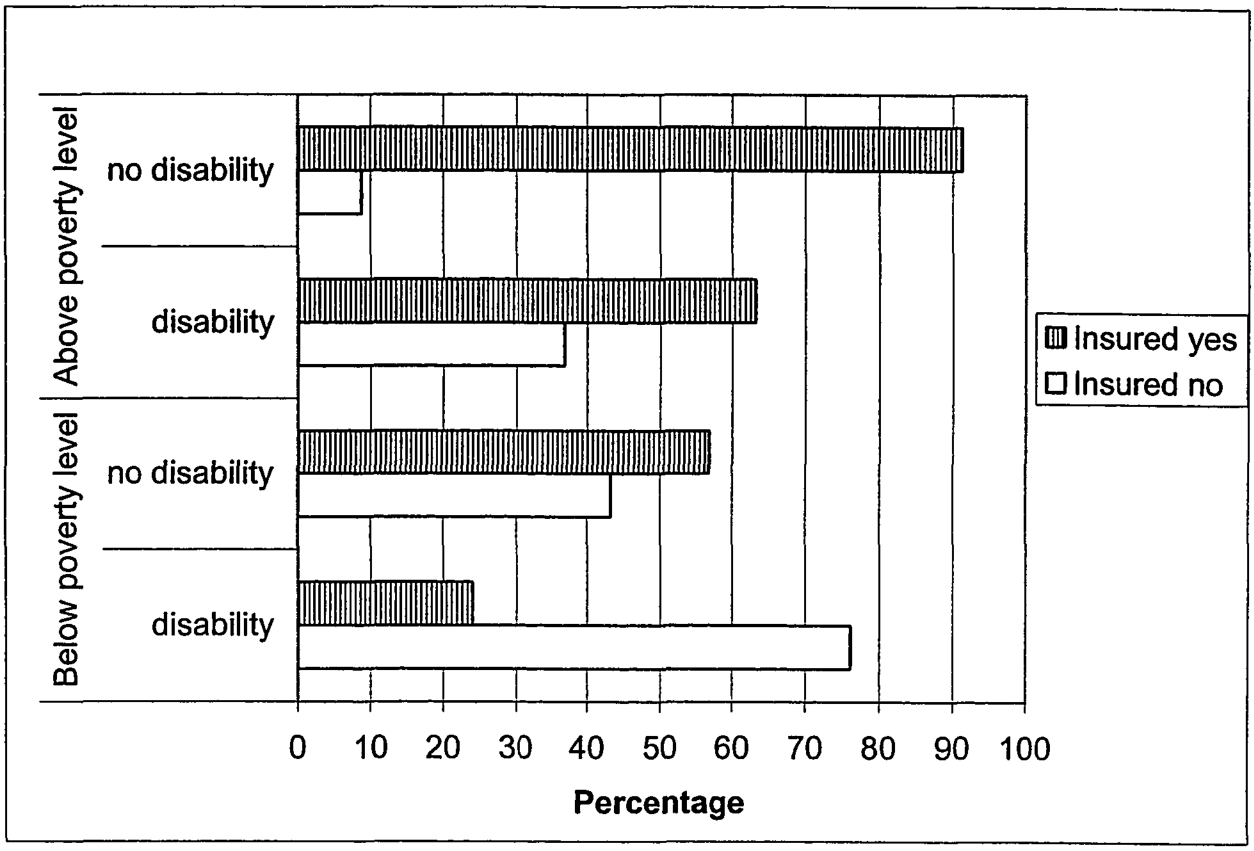

Figure 4. Poverty-disability interaction by type of insurance.

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Table 9

Hierarchical Logistic Regression Analysis for Social Categories Predicting Type of Provider (Exponential Beta in Parentheses)

Predictor variable	Model 1	Model 2	Model 3
Gender(1)	-0.047 (0.954)	-0.420 (0.958)	-0.029 (0.971)
Disability(1)	-0.158 (0.854)	-0.131 (0.877)	-0.077 (0.926)
Poverty(1)	0.287* (1.332)	0.305* (1.357)	0.319* (1.376)
Gender(1)/Disability(1)		-0.016 (0.984)	0.179 (1.196)
Gender(1)/Poverty(1)		0.004 (1.004)	0.100 (1.105)
Disability(1)/Poverty(1)		-0.147 (0.864)	-0.313 (0.731)
Three-way interaction			-0.844 (0.430)
Constant	-0.795	-0.791	-0.789
Nagelkerke's R^2	0.01	0.01	0.01

Note. (1) refers to respondents who are men, without a disability, or above 100% poverty.
$^{*}p < .05$

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The Relationship between Social Categories and Perceived Health Status

Table 10 illustrates the results of a hierarchical linear regression analysis that examines the relationship between the social categories and perceived health status. In Model 1, the main effects model, gender, poverty and disability were predictors of perceived health status, and the overall model was significant, as evidenced by the significant R^2. The results suggested that men, respondents above the poverty level, and respondents without a disability perceived themselves to have better health than their respective counterparts.

The significant R^2 in Model 2 ($R^2 = .21$) suggested that two-way interactions among the variables made a significant contribution to the overall model, over and above the contribution of the main effects alone. In Model 2, in addition to the significant main effects of poverty and disability, there was a significant disability-poverty interaction. Figure 5 illustrates the poverty-disability interaction on perceived health status. The largest percentage of respondents who perceived their health to be excellent (27%) were those who were above the poverty level with no disability. Only 3% of these same respondents perceived their health to be poor. Conversely, the largest percentage of respondents who perceived their health to be poor (24%) were those respondents who were below the poverty level with a disability. Only 4% of these same respondents perceived their health to be excellent.

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Table 10

Summary of Hierarchical Linear Regression Analysis for Social Categories Predicting Perceived Health Status (Standardized Beta in Parentheses)

Predictor variable	Model 1	Model 2	Model 3
Gender(1)	0.089 * (0.039)	-0.015 (-0.007)	-0.178 (-0.077)
Disability(1)	1.043 *** (0.392)	1.241 *** (0.467)	1.161 *** (0.437)
Poverty(1)	0.431 *** (0.165)	0.561 *** (0.216)	0.473 *** (0.182)
Gender(1)/Disability(1)		-0.037 (-0.015)	0.213 (0.087)
Gender(1)/Poverty(1)		0.178 (0.073)	0.424 * (0.175)
Disability(1)/Poverty(1)		-0.276 ** (-0.119)	-0.152 (-0.066)
Three-way interaction			-0.358 (-0.138)
Constant	2.374	2.285	2.339
R^2	0.209***	0.211*	0.211

Note. (1) refers to respondents who are men, without a disability, or above 100% poverty. R^2 is significant in Model 1; Change in R^2 is significant for Model 2.
$*p < .05$; $**p < .01$; $***p < .001$

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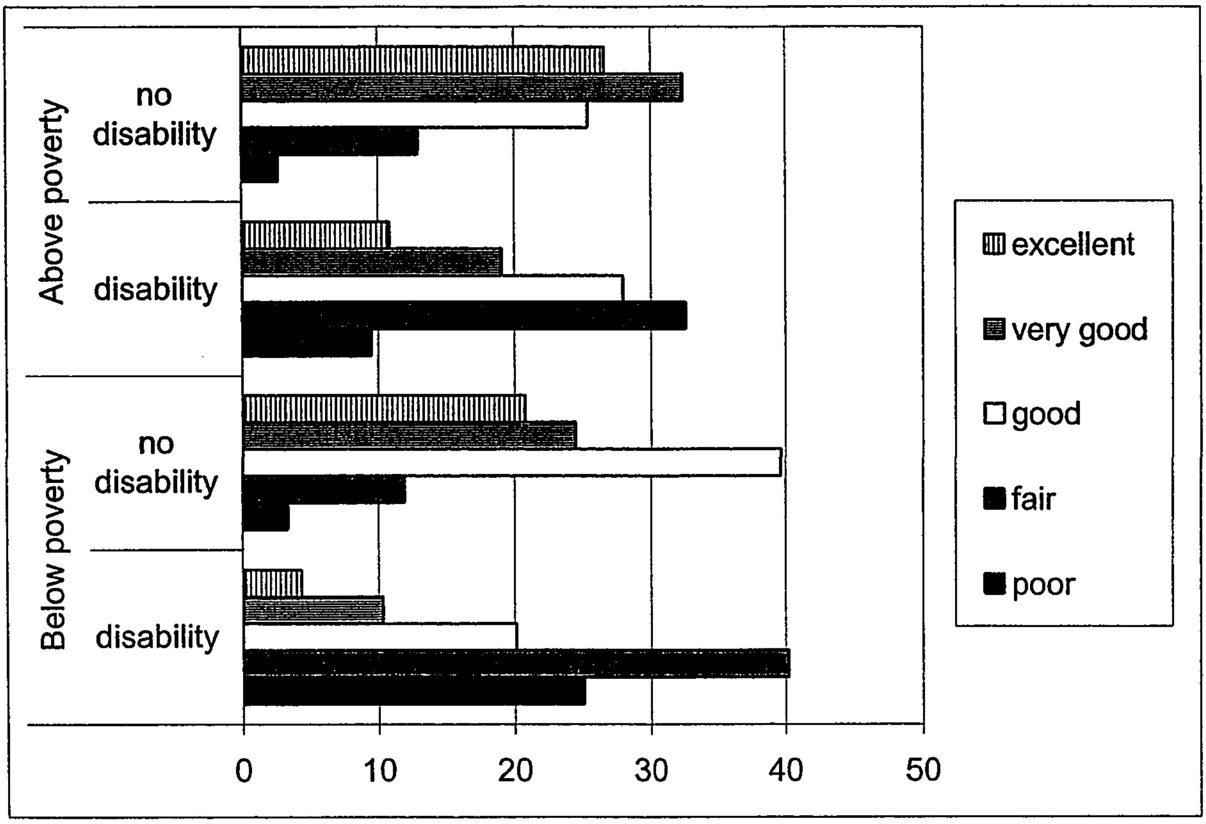

Figure 5. Poverty-disability interaction by perceived health status.

The Relationship between Social Categories and Usual Source of Care

Table 11 illustrates the results of a hierarchical linear regression analysis that examined the relationship between social categories and satisfaction with the USC. There were no significant predictors in any model.

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The Relationship between Social Categories and Comprehensiveness of Services

Table 12 illustrates the results of a hierarchical linear regression analysis that examined the relationship between the social categories and comprehensiveness of services provided by the USC. In Model 1, the main effects model, only gender was a significant predictor of comprehensiveness; however, the overall main effects model was not significant. The addition of two-way interactions, Model 2, was also not significant. The significant R^2 at model 3 ($R^2 = .01$) suggested that the addition of the three-way interaction to the overall model might contribute unique variance. However, the entire model only accounted for 1% of the variability in comprehensiveness of services provided. The only variable or interaction in Model 3 (addition of the three-way interaction) that approached significance was the three-way interaction.

Table 13 provides a summary of the hierarchical regression analyses and highlights the fact that on two variables in particular (i.e., type of insurance coverage and perceived health status), the two-way interaction model was significant in addition to the main effects model. However, on provider type, no model was significant. There were no significant models on satisfaction with the USC. And, on comprehensiveness of services, the three-way interaction model contributed unique variance over and above the main effects model and two-way interaction model, however, only accounting for less than 1% of the variability.

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Table 11

Summary of Hierarchical Linear Regression Analysis for Social Categories Predicting Satisfaction with Healthcare Provider (Standardized Beta in Parentheses)

Predictor variable	Model 1	Model 2	Model 3
Gender(1)	-0.210 (-0.045)	-0.214 (-0.046)	0.091 (0.020)
Disability(1)	-0.214 (-0.064)	-0.064 (-0.012)	0.087 (0.016)
Poverty(1)	0.232 (0.044)	0.130 (0.025)	0.296 (0.056)
Gender(1)/Disability(1)		0.065 (0.013)	-0.405 (-0.082)
Gender(1)/Poverty(1)		-0.062 (-0.013)	-0.526 (-0.108)
Disability(1)/Poverty(1)		0.177 (0.038)	-0.056 (-0.012)
Three-way interaction			0.672 (0.129)
Constant	15.312	15.394	15.292
R^2	0.004	0.004	0.005

Note. (1) refers to respondents who are men, without a disability, or above 100% poverty.

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Table 12

Summary of Hierarchical Linear Regression Analysis for Social Categories Predicting Comprehensiveness of Services (Standardized Beta in Parentheses)

Predictor variable	Model 1	Model 2	Model 3
Gender(1)	0.054 (0.057)*	-0..008 (-0.009)	0.096 (0.102)
Disability(1)	0.032 (0.030)	-0.017 (-0.016)	0.035 (0.032)
Poverty(1)	-0.022 (-0.021)	-0.014 (-0.013)	0.043 (0.040)
Gender(1)/Disability(1)		0.119 * (0.120)	-0.041 (-0.041)
Gender(1)/Poverty(1)		-0.038 (-0.038)	-0.196 (-0.199)
Disability(1)/Poverty(1)		0.007 (0.007)	-0.073 (-0.078)
Three-way interaction			0.229 (0.218) +
Constant	5.863	5.891	5.856
R^2	0.004+	0.004	0.010 *

Note. (1) refers to respondents who are men, without a disability, or above 100% poverty. Change in R^2 is significant at Step 3.
$^*p < .05$; $+p < .10$

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Low-Status Compared to High-Status Categories

The second research question investigated the role of status on healthcare outcomes by comparing the outcomes for high-status respondents to their low-status counterparts. To investigate the differences between all high-status categories (men, without a disability, who were above the poverty level) and all low-status categories (women, with a disability, who were below the poverty level) on healthcare outcomes, independent samples *t* tests were conducted for continuous variables, and chi-square was computed for dichotomous outcomes. Table 14 illustrates that on all healthcare outcomes, the low-status group performed more poorly than the high-status group. However, these differences were only significant for two outcomes: type of insurance, $\chi 2 = 303.15, p < .001$, and perceived health status, $t\ (671) = 15.813, p < .001$. The differences approached significance for comprehensiveness of services provided, $t\ (132) = 1.669, p < .10$.

Moderational Effects of Social Categories On Healthcare Outcomes

The third research question investigated the buffering capabilities of certain social categories. To this end, Chi-Square Automatic Interaction Detection (CHAID) was utilized. CHAID is an exploratory method used to study the relationship between a dependent variable and a series of predictor variables. CHAID modeling selects a set of predictors and their interactions that optimally predict the dependent measure. The developed model is a classification tree (or data partitioning tree) that shows how major types formed from the independent

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(predictor or splitter) variables differentially predict a criterion or dependent variable. When the outcome variable is continuous, the program produces the *F* statistic.

It was hypothesized that poverty would be the primary moderational variable by buffering the relationship between gender and healthcare outcomes and between disability and healthcare outcomes. In fact, social category moderation was illustrated in two of the outcome variables: perceived health status and type of insurance.

Contrary to the hypothesis, disability moderated the relationship between poverty and perceived health. Figure 6 illustrates that the relationship between poverty and perceived health status changed at the various levels of disability. Perceived health status improves progressively as one move along the continuum from respondents with disability who are below the poverty level ($M = 2.29$) to respondents without a disability who are above the poverty level ($M = 3.88$). Thus, disability moderated the relationship between poverty and perceived health: $F(1,1951) = 408.80, p < .001$. In accordance with hypothesis, Figure 7 illustrates that the relationship between type of insurance and gender changed at the various levels of poverty and disability, such that the highest group of uninsured respondents is women below the poverty level without a disability (52%). The next largest uninsured percentage is for women who are above the poverty level with a disability (42%). The smallest group of uninsured respondents is men who are above the poverty level with no disability (7%).

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Table 13

Summary of Hierarchical Regression Analyses Results

	R^2				
Predictor variables	Type of insurance	Type of provider	Perceived health	Satisfaction	Comprehensiveness
Main effects model	.333***	.010	.209***	.004	.004+
2-way interaction model	.334***	.010	.211*	.004	.004
3-way interaction model	.334***	.010	.211	.005	.010*

*$p < .05$; **$p < .01$; ***$p < .001$; +$p < .10$

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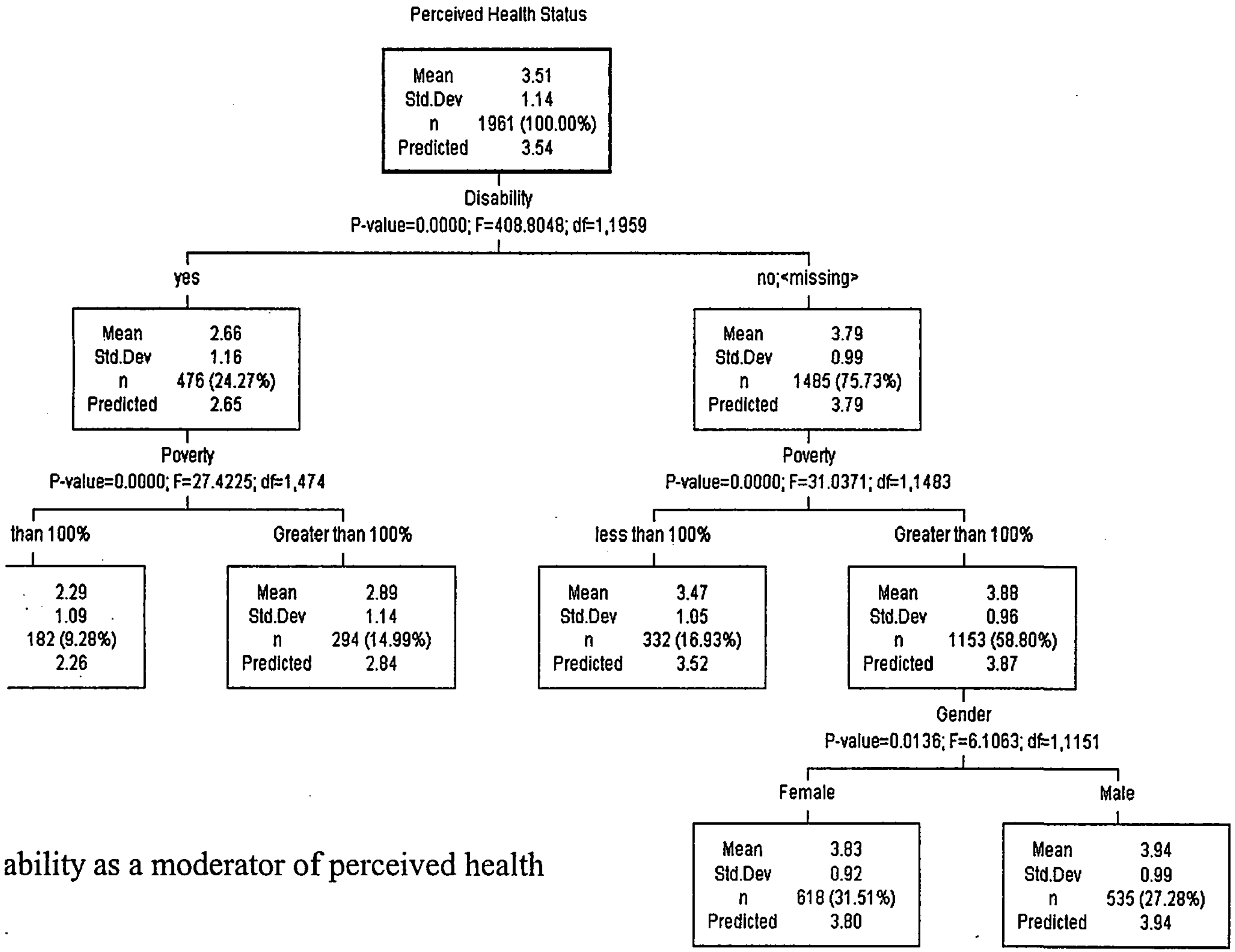
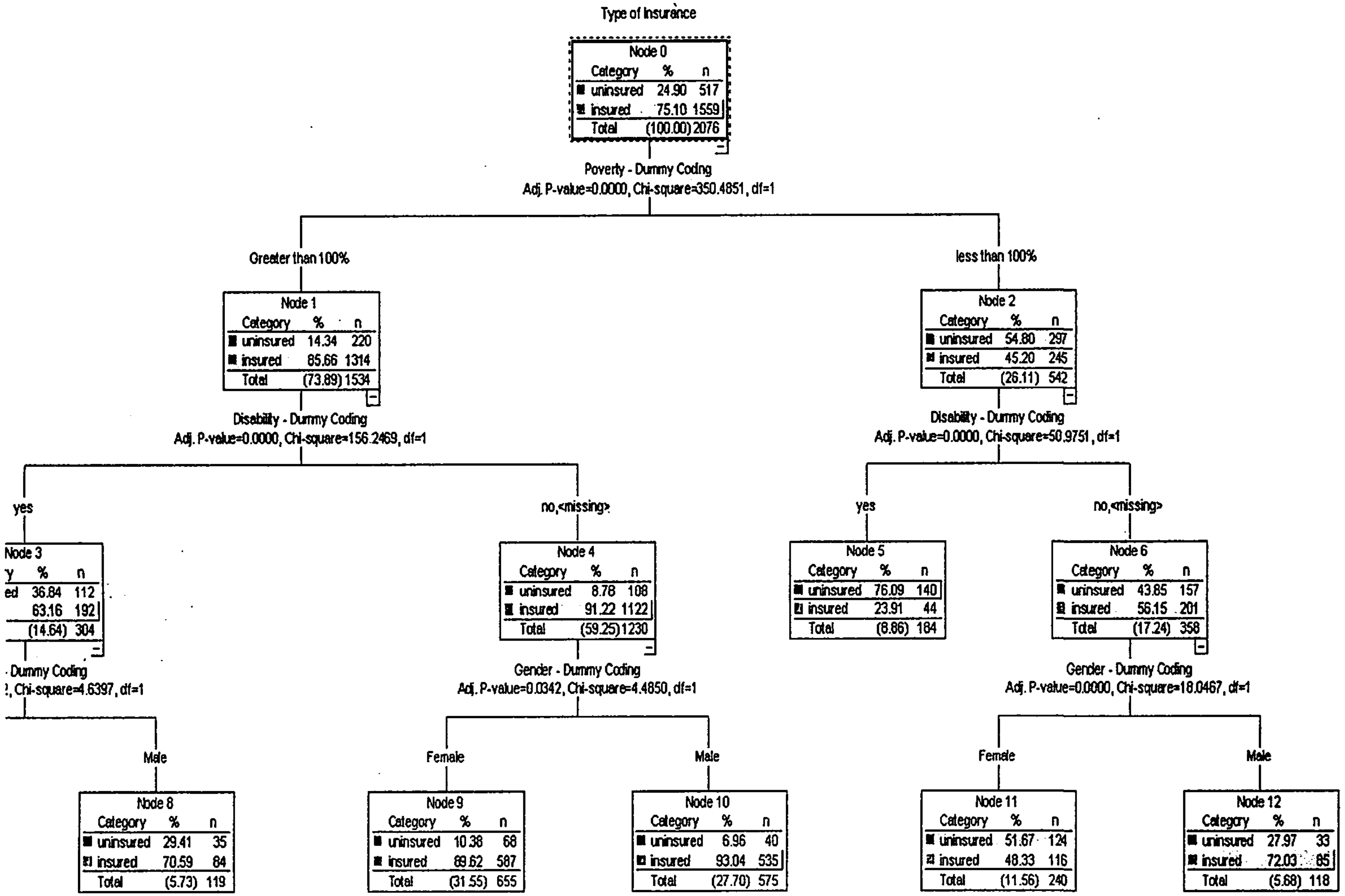


ability as a moderator of perceived health



y as a moderator type of insurance.

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Analyzing the Set of Predictor Variables And the Set of Dependent Variables

The final research question sought to address the total impact of the set of social categories and the set of healthcare outcomes. This analysis was conducted with a technique called canonical correlations. Canonical correlation is a member of the multiple general linear hypothesis family. It is a form of correlation relating two sets of variables. There may be more than one significant dimension, each representing an orthogonally separate pattern of relationships between the two latent variables. The first canonical correlation is always the one that explains most of the relationship. The canonical correlations are interpreted the same as Pearson's *r*: Their square is the percent of variance in one set of variables explained by the other set along the dimension represented by the given canonical correlation. In Table 15, Wilks's lambda = .66, $p < .001$, indicating that the set of variables was significantly associated by canonical correlation. The canonical variable in the first canonical correlation was positively related to disability, poverty, type of insurance, and perceived health. For the second canonical correlation, the canonical variable was negatively related to disability, poverty, type of insurance, type of provider, and perceived health status. Furthermore, after removing the nonsignificant dependent variables, the two canonical variables accounted for 68% of the variance in the group of dependent variables (see Table 15).

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Table 14

Independent Samples t-Tests and Chi-Square Analyses Comparing High-Status to Low-Status Categories on Healthcare Outcomes

Healthcare outcome	Status	*n*	χ2	Mean	*t*	*p*
Type of insurance			303.15			p < .001
	All high status	548				
	All low status	126				
Provider type			0.99			ns
	All high status	354				
	All low status	116				
Perceived health status					15.813	*p* < .001
	All high status	547		3.93		
	All low status	126		2.36		
Satisfaction with USC					0.417	ns
	All high status	305		15.44		
	All low status	85		15.32		
Comprehensiveness of services					1.669	*p* < .10
	All high status	350		5.95		
	All low status	115		5.56		

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Table 15

Summary of Multivariate Analyses Results: Canonical Correlation

	Correlations							
	Predictor variables			Outcome variables				
	Gender+	Disability	Poverty	Insurance Coverage	Provider	Perceived health	Satisfaction+	Comp+
Canonical variable 1*	.07	.78	.75	.66	.05	.86	.08	.04
Canonical variable 2	-.09	-.62	-.66	-.72	-.33	-.50	-.05	.08

+not significant

**Wilks's lambda = .66, p < .001*

Note. The two canonical variables account for 41% of the variability in the entire group of outcome variables and 68% of variability in the outcome variables (when the two nonsignificant outcome variables are removed).

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Summary of Results

Correlational analyses indicated that as an individual predictor, gender was significantly correlated with three healthcare outcomes: (a) type of insurance, (b) perceived health status and (c) comprehensiveness of services such that men are more likely to be insured, have better perceived health and receive more comprehensive services. Disability was significantly correlated with two healthcare outcomes. There was a correlation between disability and type of insurance, such that respondents with no disability were more likely to be insured. And, there was a moderate correlation between disability and perceived health status, such that respondents with no disability perceived their health to be better. Poverty was significantly correlated with three healthcare outcomes, moderately with type of insurance and perceived health status, such that respondents above the poverty level were more likely to have private insurance and perceived their health to be better. There was a small correlation between poverty and type of provider, such that respondents above the poverty level were more likely to receive individualized, private care from a private practitioner.

Hierarchical regression analyses indicated that the model that included two-way interactions was significant, along with the main effects model, for two outcomes: (a) type of insurance and (b) perceived health status. Specifically, there was a disability-poverty interaction on type of insurance and on perceived health

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status. The model that included the three-way interaction was significant for type of insurance and approached significance for comprehensiveness of services. Furthermore, disability significantly moderated the relationship between poverty and perceived health status. Respondents with a disability who were below the poverty level had the poorest health and those without a disability who were above the poverty level had the best health. Further, respondents who were above the poverty level but had a disability also had poorer health than those who did not have a disability, but were below the poverty level. Additionally, poverty and disability moderated the relationship between type of insurance and gender. The largest uninsured gender group is that of women who are below the poverty level who do not have a disability. Conversely the smallest uninsured gender group is that of men who are above the poverty level who do not have a disability.

An analysis of status differences indicated that low-status respondents had poorer healthcare outcomes than high-status respondents, significantly so for two healthcare outcomes: (a) type of insurance, and (b) perceived health status. Furthermore, the group of social category predictors accounted for a large percentage (68%) of the variability in the group of significant healthcare outcomes (i.e., type of insurance, type of provider, and perceived health status).

Chapter 5 provides a discussion of these results, as well as implications for future research and practice.

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Chapter 5

Discussion

This study sought to explore the intersection of specific social categories, gender, poverty level, and disability, as determinants of various healthcare outcomes. Social categories interact and are therefore inherently intersectional. Intersectionality can be described as a process in which multiple social categories interact to influence outcomes. Understanding several components of social categorization theory facilitates an understanding of intersectionality. First, levels within social categories are often positioned within status hierarchies in society (Tajfel, 1978). Certain levels within categories are positioned at the low end of societal hierarchies, such as women, persons who belong to an ethnic minority group, and persons who are economically disadvantaged. This low-end positioning in the societal hierarchy often results in individuals' facing more risk of systematic social disadvantages (Banaji & Dasgupta, 1998; Jones, 1972/1997; Landrine et al., 1995). Second, the way in which individuals interpret their experiences and the way in which researchers organize data to represent individuals' experiences are markedly different. Personal, self-reflective accounts of how multiple social category intersections influence outcomes do not agree with the research's treatment of each social category as an insular entity (Anderson & Hill-Collins, 1998). Individual identities are the results of combinations of social categories.

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Acknowledging intersections within persons is critical to understanding the relationship between individuals and systems (Zack et al., 1998).

Extant research on healthcare outcomes has illustrated disparities based on a single category, such as gender differences, and on a single outcome, such as the prescription of psychotropic medications. Analyses rarely have included an individual's multiple social categories. Additionally, few studies have included multiple outcomes within one analysis. Therefore, this study examined the impact of multiple social categories on multiple healthcare outcomes.

Furthermore, racial/ethnic disparities in healthcare for African Americans have been extensively documented (Jones, 1972/1997). A study sponsored by the United States Department of Health and Human Services illustrated the pervasiveness of race/ethnicity-based healthcare disparities (Fiscella, Franks, Gold, & Clancy, 2000). The report argued that racial and ethnic groups tend to get second-rate healthcare, in terms of overall service, including treatments and medications. Specifically, the study reported a disparity in the quality of healthcare African Americans receive, even when the variables that may otherwise exert an influence, such as insurance status, income, age, and severity of condition, are comparable to their counterparts identified as White. Yet, there has been no documented effort to understand how social categories within African Americans contribute to healthcare disparities. Therefore, this study explored the relationships among multiple social categories and various healthcare outcomes as they related to African American, noninstitutionalized adults across the United

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States who participated in the Agency for Health Research Quality's Medical Expenditure Survey.

This chapter will discuss the findings of the study as they relate to the research questions and predictions as well as to current research. The usefulness of a multivariate research methodology will be discussed in light of these results. Healthcare research and healthcare policy implications, along with future research directions, will also be discussed.

Four research questions were posed in this study. The first research question examined the relationship between and among social categories and healthcare outcomes. The prediction was that with each addition of more complex interactions, the amount of variance accounted for would substantially increase. The findings indicate an interaction between disability and gender on whether or not individuals are insured and on their perceived health. The only significant interactions between gender, poverty, and disability were on type of insurance and comprehensiveness of services. The small amount of variance that this interaction explains in comprehensiveness of services might suggest that the practical relevance of the interaction is trivial. However, it is common for variance explained by interactions in field research to be small, and several researchers have argued that incremental variance explained often gives misleading estimates of practical effects (Champoux & Peters, 1980; McClelland & Judd, 1993).

The second research question examined the relationship between low-status categories and healthcare outcomes by comparing all high-status levels within

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categories to all low-status levels within categories. The findings indicate that respondents who belong to all low-status levels within social categories have poorer healthcare outcomes than their high-status counterparts.

The third research question examined whether or not being above the poverty level served as a buffer for individuals with a disability or for women. The findings indicate that not having a disability serves as more of a buffer for individuals below the poverty level.

The final research question examined an overall relationship between all of the social categories and all of the healthcare outcomes. Results indicate that the three social categories account for 68% of the variability in type of insurance, type of provider, and perceived health status.

The Influence of Individual Social Categories on Healthcare Outcomes

Research has indicated that disparities exist for various educational, occupational, social, and healthcare outcomes due to differentiations within an individual's social category, such as dark-skinned, female, economically disadvantaged, or disabled (e.g., Benokratis, 1997; Bowe, 1984; Fine & Asch, 1988; Fujiura et al., 1998; Jones, 1972/1997). Typically, researchers have focused on the role of a specific social category and the corresponding levels within the social category on the outcome. Generally, race and/or gender have been analyzed separately as predictors. Researchers rarely have investigated the intersectional role of multiple social categories.

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The Most Powerful Determinant of Healthcare Outcomes: Poverty

Thirty million Americans fall under the poverty threshold, according to the U.S. Department of Labor, which has defined the poverty threshold as a family of four with a yearly income of $12,000 (Garner, Short, Shipp, Paulin, & Nelson, 1998). Typically, race/ethnicity and poverty level are so closely intertwined that it has been difficult for researchers to isolate racial/ethnic disparities in healthcare from socioeconomic disparities. Within this sample of African Americans, poverty—as an individual social category—played the most significant role in explaining the results in this study. Indeed, poverty level appeared to be the most powerful determinant of the healthcare outcomes. Poverty resulted in poorer housing and nutrition, lower educational attainment, less economic opportunity, and often-greater environmental risks. These factors contributed to poorer healthcare outcomes. In fact, respondents in this study who were below the poverty level were less likely to receive the individualized care of a private physician, tended to perceive themselves to be in poorer health, and were 7 times more likely to be uninsured than respondents who were above the poverty level.

Additionally, across the full sample, there is a larger percentage of uninsured women. Uninsured percentages follow a hierarchical continuum such that women blow the poverty level—two low levels within categories— have the highest percentage of uninsured, followed by men below the poverty level and women above the poverty level, each representing one low status level and one high status level. Men above the poverty level—two high status levels—

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have the smallest uninsured percentage. These findings support prior research that has illustrated the integral role of poverty on facilitating positive outcomes (e.g., Massey & Denton, 1993; Oliver & Shapiro, 1997).

In addition to supporting prior research, this research also highlights the need for African American men to have adequate knowledge about healthcare and access to healthcare. The focus in healthcare is typically on women because of the reproductive complications that can arise in childbirth. Also, children who live in single-family homes are more likely to live with the mother. Women may receive more healthcare services than men, but the services they receive are poorer quality (M2 PressWire, 1999). According to the findings of this research, men perceive their health to be better than women and they tend to receive more comprehensive services.

Prior theories postulated that understanding poverty presented analytical challenges that are not presented by analyses of race, gender, or disability. Lynch and O'Neill (1994) hypothesized that poverty may lose its defining marginalizing features in certain situations where a person's poverty level changes as a result of structural change. In such situations, other social categories such as race and gender have little to no influence on the outcome. For example, educational attainment generally results in higher income and ultimately the potential to move out of poverty, regardless of race. This is generally true in the larger population when the phenomenon is examined across multiple racial/ethnic categories. In this study, results show that the effect of poverty on healthcare is profound. However,

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the influence of poverty on healthcare does not preclude a coexisting influence of gender and/or disability. This was illustrated by the interaction between poverty and disability on perceived health status and on whether or not a respondent had insurance.

The psychological impact of poverty. Typically, though not always, higher incomes are associated with better healthcare. If only the poorest people had poor healthcare, the explanation of poor healthcare could be issues such as poor living conditions. However, because poor healthcare can be found across the socioeconomic spectrum, there must be other important indicators. Considerable research has indicated that the degree of control people feel they have over their life, especially stressful situations, and their discretion to act health-consciously are the key influences. Prior research has suggested that in addition to providing more wealth to finance healthcare needs, a higher income is also important because it gives people more control and discretion in healthcare choices (Kass-Bartelmes, Altman, & Taylor, 2001).

Gender as an Individual Predictor of Healthcare

The 1999 World Conference on Women brought to light many of the challenges to the improved economic and health status of women (M2 PressWire, 1999). The majority of persons in poverty are women. For several reasons, women often have a tenuous link with employment. First, they have fewer opportunities for vocational training. Second, women are often the ones to stay home and take

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care of the kids. Additionally, women more often occupy low-paying positions. Because of the tenuous links that women have with employment, they bear the burden of adjustment in times of economic crises. Furthermore, although women live longer lives, they tend to have more health-related problems than men. Additionally, women have health needs that differ from those of men. Nearly 600,000 women die each year from reproductive causes, and they are more vulnerable to communicable diseases such as tuberculosis, malaria, and HIV/AIDS (M2 PressWire). In support of these findings, the African American women in this study perceived their health to be worse than their male counterparts; they tended to receive less comprehensive services, and they were twice as likely as men to be uninsured.

Disability as an Individual Predictor of Healthcare

Westbrook et al.'s (1993) research study of 665 health practitioners from Chinese, Italian, German, Greek, Arabic, and English Australian communities support this assertion. Health practitioners were administered a social distance scale to rate the attitudes of people in their communities toward 20 different disability groups. In all communities, persons with the more stigmatized and visible disabilities, such as AIDS, mental retardation, psychiatric illness, and cerebral palsy, were judged to be the least accepted. People with asthma, diabetes, heart disease, and arthritis were judged to be the most accepted.

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In this secondary analysis, disability was categorized as physical, emotional, or mental disability. Due to the small number of respondents who answered each of the individual items, a dichotomous disability variable was created to represent whether or not a respondent had a disability. This necessary recoding of the variable did not allow for the illustration of any specific differences on healthcare outcomes based on a specific type of disability. The results of the current research unfortunately still support the findings of Westbrook et al.'s (1993) 10-year old social distance study. Respondents with a disability perceive their health to be worse and are 5 times as likely to be uninsured than their counterparts without a disability.

Disability is often a marker or proxy for other types of discrimination, such as gender group or ethnically biased actions. When examining the intersection of disability with other social categories, researchers must consider which or how many gender-related functions, such as reproductive or prostate functions, are affected. Intersectionality analyses that include disability must also consider whether the impairment is predictable and static, varies day to day, or is progressive in its manifestations. Finally, research efforts must consider whether the disability is readily apparent or invisible.

The Influence of Multiple Social Categories on Healthcare

This study addressed the intersection of gender, poverty, and disability within African Americans. Overall, the findings support the need for research that

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more clearly illustrates the potentially discriminatory outcomes that occur because an individual belong to multiple low-status groups. These findings also highlight the need to understand how multiple oppression can occur on the individual, institutional or cultural level.

Social categories are dynamic, meaning that an individual can often change the categories with which he or she identifies. Analyses of intersectionality might be expanded to include nationality, sexuality, language, regions, other races/ethnicities, and many other social categories to further represent the dynamics within a social category. Intersectionality is an important and necessary framework for understanding the complexity of social relations and their effects on healthcare outcomes. These social categories are also merely abstract representations of individuals. An individual does not fit into any one social category, but rather each person represents many categories simultaneously. Thus, research becomes very complicated when examining a single social category, such as all women or all men. An individual belonging in one of those groups may not always be represented by the group's characteristics.

In this study, the model that included the two-category interactions (Model 2) was significant for type of insurance and perceived health status, over and above the model that included the individual social categories. Also, the model that included the three-category interactions (Model 3) was significant for type of insurance and comprehensiveness of services, over and above the model that included the two-category interactions. There was no interaction between gender

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and disability or between gender and poverty in any of the significant two-category models. One observation is that both interactions involve gender. One possible explanation is that the within-group gender differences for African Americans may not be as profound as gender differences when comparing racial/ethnic groups.

The Intersection of Disability and Poverty

A central prediction made in this study was that interactions would have predictive ability on healthcare outcomes, over and above the effects of individual social categories. This prediction was tested by examining the intersections between and among social categories for each healthcare outcome. Interaction effects are generally difficult to find in field research (McClelland & Judd, 1993). Nevertheless, the results indicated an interaction between disability and poverty for two of the five outcomes. One noteworthy finding is that the percentage of uninsured respondents increases from the highest status combinations to the lowest. For example, 91% of respondents above the poverty level without a disability were insured. Approximately 37% of respondents above the poverty level with a disability were insured. The percentage of uninsured respondents increased to approximately 45% for those who were below the poverty level without a disability. Additionally, three quarters, or 76%, of all respondents who were below the poverty level were uninsured. This finding may be a result of the fact that persons with a disability are often relegated to a lower poverty category because of the expenses associated with maintenance of the disability. Public

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insurance programs such as Medicare and Medicaid only pay for a limited number of prescriptions and will cover routine services up to a specific dollar amount. After a certain dollar-amount threshold, respondents with a disability often must find their own resources for additional medical expenses. The data available for this study did not include expenditure information that would allow for the development of hypotheses about relationship between medical expenses, insurance status, and disability.

Additionally, the findings show an interaction between poverty and disability on the healthcare outcome of perceived health status. The perception of poorer health increases for respondents with a disability. For example, 17% of respondents above the poverty level without a disability perceived themselves to have fair or poor health. Approximately 42% of respondents above the poverty level with a disability perceived themselves to have fair or poor health. Similarly, approximately 17% of respondents below the poverty level without a disability perceived themselves to have fair or poor health. However, nearly 65% of respondents who were below the poverty level with a disability perceived themselves to have fair or poor health. Respondents without a disability, regardless of poverty level, were very similar in their perception of their health, with nearly 85% perceiving themselves to have good health or better. It is difficult with these data to ascertain whether or not the perception of poor health status is because the respondents had a disability or because of the quality of the publicly insured healthcare that the majority of insured respondents with a disability

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received. Only 35% of respondents below the poverty level with a disability perceived their health to be good or better, compared to approximately 60% for respondents above the poverty level with a disability. This may provide further support of the mitigating role of poverty in explaining healthcare outcomes.

The Intersection of Poverty and Gender

It was predicted that women who were below the poverty level would fare worse than their male counterparts on healthcare outcomes. While there were no significant interactions between poverty and gender on any of the healthcare outcomes in this study, there was a significant interaction involving gender, poverty, and disability. Studies conducted by the Agency for Healthcare Research and Quality have indicated that gaps in healthcare outcomes based on gender-poverty interactions do exist across all racial/ethnic categories (Kass-Bartelmes et al., 2001). For example, although the majority of women in America had public or private insurance in 1996, over three fourths of White women had private insurance, compared to about half of Black or Hispanic women. Furthermore, White women were the least likely of all racial/ethnic groups to have public insurance (Kass-Bartelmes et al.). Not only were White women more likely to have a private provider, but also women with higher incomes were more likely to receive various preventive services (Kass-Bartelmes et al.). The lack of similar findings in this study may suggest that race/ethnicity may be the social category with primary importance when considering differences in the type of provider or

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services that female respondents receive. The findings may also suggest that racial status may not be the same for the two gender groups. Race or ethnicity may be the most important predictor on certain healthcare outcomes. When race or ethnicity is held constant, there may be no within-group differences by gender or any gender-by-poverty interactions.

The Intersection of Gender and Disability

In 1995 it was estimated that nearly 54 million citizens in the United States had disabilities: 10% of the population age 21 and under, slightly less than 20% of all working-age people, and over half of all people age 65 and over (Asch, Perkins, Fine, & Rousso, 2001). Further, of the 134 million women and girls in the United States, over one fifth (21.3%) have disabilities that affect their daily lives (Asch et al.). Researchers have uncovered that whether or not a person has a disability is important in understanding outcomes, as is evidenced by the current study. Although it is not appropriate to presume that disabilities affect all people in the same way, it is also inappropriate to study disability from only one vantage point, because that narrow view distorts the evidence.

In the current study, only 25% of the sample had any type of disability. The interaction among gender, disability, and poverty was significant on one variable: type of insurance. Fifty-four percent of uninsured men, compared to 49% of uninsured women, had a disability. Conversely, only 14% of insured men, compared to 17% of insured women, had a disability. However, these differences

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may not have been disparate enough to uncover significant differences on healthcare outcomes. This is a noteworthy finding because the percentage of women with disabilities (27%) was significantly larger than the percentage of men with disabilities (21%). Most of the documented gender-disability differences found in previous research have been across racial/ethnic categories. It may be that within African Americans, previous research has not examined those healthcare outcomes on which the gender-disability relationship would be most significant.

Societal Status Hierarchies Influences in Predicting Healthcare Outcomes

Intangible traits are difficult to assess. However, the inherently status-laden nature of levels within social categories facilitates the operationalization of status. Traditionally, levels within social categories have been associated with societal hierarchies (Landrine et al., 1995). Thus, researchers have tended not to focus on status but to highlight the role that a level of a social category has on a specific outcome. Societal hierarchies facilitate systematic advantage or disadvantage. Landrine et al. sought to illustrate that in societies where people belong to many categories, each level (e.g., men or women) within a social category (gender) has a given status. The combination of many levels creates a unique intersection that represents various status characteristics. The Landrine et al. study was fraught with many methodological challenges. The methodological model presented no conceptual framework, but rather was based on a particular type of data analytic technique. Therefore, there was no effort to examine whether high-status levels

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could provide a buffer for low-status levels on healthcare outcomes. Additionally, the authors focused on arbitrarily contrived situations, such as impersonal written descriptions of individuals. Nevertheless, their approach did manage to illustrate how little attention had been paid in the primary psychology journals to social category intersections.

The Ubiquitous Role of Status

In the current study, the highest status was defined as a social category consisting of three traits: being male, having no disability, and being above the poverty level. The lowest status had the parallel definition: being a woman, having a disability, and being below the poverty level. These status groupings illustrate a somewhat simplistic view of the world, given that not all men are economically advantaged, for example. However, the groupings were intended to illustrate the compounded effects of status as traditionally conceptualized. In fact, some of the differences between low status and high status may not have been as dramatic in this sample because the sample consisted of only African American respondents; the differences may be less profound within a racial/ethnic group. Also, traditional conceptualizations of status may be different within a racial/ethnic groups. For example, prior research has suggested an alternative conceptualization of status. African American women may have higher status than African American men on certain outcomes. Black female professional, technical, and managerial workers claimed a much larger share of occupational growth in government than would be expected, given their size in the labor force. For example, they claimed 13% in the

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1970s and 19% in the 1980s. By the early 1990s, they surpassed Black males in the share of new jobs they claimed across all sectors (Burbridge, 1994). Burbridge's findings provide further support for the direction of this study in examining diversity within a social category.

In this study, the traditional conceptualization of differential outcomes on the basis of gender holds true. African American women fare worse than African American men on all healthcare outcomes. Both traditional and alternative conceptualizations of the role of status within a particular group can be substantiated. This suggests the importance of avoiding the tendency to generalize. Perhaps there exist within-group differences on certain outcomes that defy the traditional notions of status. For example, women may have more positive outcomes than men. However, the findings of this study actually support the traditional conceptualization of how status functions. Furthermore, across all healthcare variables, high-status respondents had better outcomes than their low-status counterparts. High-status respondents were more likely to be insured and have private insurance, to have better health statuses, and to receive more comprehensive services than their low-status counterparts.

The combined effects of status groupings across multiple social categories can be insidious and inhibiting. They also represent complex, multiple, intersectional relationships. Therefore, status associated with advantageous or disadvantageous societal outcomes has to be assessed based on the specific social categories to which an individual belongs because individuals can belong to

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various combinations of low status and high status groups. In describing one of the defining features of "multiple oppression" (i.e., cross-cutting relationships), Le Anne Bell (of Adams, Bell, & Griffin 1997) explains:

> An upper-class professional man who is African American (still a very small percentage of African Americans overall) may enjoy economic opportunities not available to most women, yet at the same time face limitations not endured by white co-workers, male or female. Despite his economic and professional status and success, he may be threatened by police, unable to hail a taxi, and endure hateful epithets as he walks down the street. (p.5)

The Psychological Impact of Status on Healthcare Outcomes

Recent research has suggested that the psychological impact of belonging to a low-status level within a category is one of the primary reasons that populations with lower incomes tend to have higher mortality rates and other poor healthcare outcomes (Kawaski, 1999; Williams, 1999). Furthermore, when income differences are greater, violence tends to be more common, individuals are less likely to trust each other, and social relations are less cohesive (Wilkinson, 1999). Social cohesion may not relate directly to health effects; it may function more as a stabilizer of systematic disparities. When social cohesion is not effective, it may serve as a marker for the underlying psychological stress associated with having low social status. Low social status interacts with other powerful health variables

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such as healthcare accessibility, satisfaction, and quality to influence the ultimate healthcare outcomes of physical and mental health status.

Limitations

Limitations Related to Variables in the Database

A second limitation is that a select group of social categories were measured in the study. One can conclude that a number of the interactions are significant, and can develop a model to explain the role of other social categories. Some of the categories that should be studied were mentioned earlier in the paper. They include nationality, sexuality, religion, and any category that could be the subject of institutional-level discrimination. The identification of interactions among gender, poverty, and disability is an important first step in understanding how these social categories affect healthcare outcomes for African Americans. The identification and measurement of these categories within other racial/ethnic groups will be one of the next logical steps.

A third limitation is that two of the three scale measures of healthcare outcomes, that is, satisfaction with the USC and comprehensiveness of services, were created from individual items in the database. These variables were created to present a comprehensive view of healthcare outcomes. Multiple outcomes are of great interest to healthcare researchers because they may reflect an overview of healthcare performance.

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Incongruity between Conceptualization and Operationalization

There was incongruity between the conceptual definitions in the secondary study and the operational definitions in the original study. To address this issue, items within the original data set were combined to use as composite indicators that fit with the conceptual definition in this secondary analysis. Additionally, the focus of the MEPS database is to assess and to track health and healthcare outcomes over time; there is no specified theoretical framework related to social categories in the original study. The challenge was, therefore, to use a framework that fit with the concepts of interest and the instruments. Through this process, this study advances theory development by placing the original work into a theoretical context. Other researchers can build on this context. A related limitation is that the status variables that represented position or standing (e.g., type of insurance coverage and type of provider) were limited in the database. Other key components should include expenditure, usage characteristics, and barriers to access.

Limitations Related to Instrumentation

Most of the relevant instruments in MEPS are self-report measures. Self-reports of healthcare outcomes, which represent an individual's perception, are valuable in providing a subjective perspective of healthcare. However, this subjective perspective may differ from observational/interactional data, which could yield an alternative and possibly more objective perspective. A data set that

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includes both perspectives has the potential to generate richer data on the varied dimensions of healthcare. Additionally, many of the relevant variables in MEPS relied on a single item to represent complex healthcare outcomes, such as perceived health status. The single item may not reflect the universe of items representing a complex healthcare concept.

This study used multiple healthcare outcomes and combined items to tap into a concept to deal with this problem. The psychometric soundness was assessed by checking the reliability and validity of the new composite variables. Finally, MEPS contains all quantitative data. Qualitative data focus on personal accounts of the role of social categories on healthcare outcomes. The inclusion of open-ended comments would allow for the creation of a coding schema. The coded comments could then be compared with the quantitative data. This union of quantitative and qualitative data could increase the validity of research; the quantitative data could support respondents' perceptions about the relationship between social categories and healthcare outcomes.

Future Research

Social categorization theory, the larger social-psychological concept on which this study was based, is inadequate to explain the behaviors that underlie the creation of social categories. It is only possible in this section to share briefly the possible directions for future research based on understanding the component parts of social categorization theory. Finally, propelling the understanding of

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intersectionality into an avant-garde realm of theory and research will inevitably involve the deconstruction of traditional theories of social categorization.

Toward a New Theoretical Paradigm

Researchers should seek to understand the components of social categorization theory for a more profound understanding of intersectionality. Researchers have uncovered information that is pertinent to reconstructing understanding about the role of social categorization in differential outcomes. Individuals categorize others based on perception to facilitate an innate system of information processing. Individuals categorize others into groups into which others may not necessarily categorize themselves. Also, individuals often change their previous categorization of others after interaction with or gaining knowledge about those individuals.

The hard-wired process in which individuals are assigned to categories based upon perception creates categories that may be described as *superficial identities*. They are termed superficial because they do not require any interaction with the person being categorized. Superficial identities may include those characteristics about a person that do not require verification, such as gender, race, and (visible) disability. Additional knowledge acquisition is not part of the creation of these superficial identities. The process by which a person changes the initial categorization of another based on personal interaction or additional knowledge acquisition creates *constructed identities*.

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Constructed identities may include those characteristics about a person that can be further constructed or changed after interaction with the person or obtaining information about the person, such as poverty level, ethnicity, and (invisible) disability. This type of intersection is more complicated to understand because people are often categorized into groups into which they do not categorize themselves. For example, people with slight learning disabilities may not classify themselves as having a disability but a healthcare provider reading their file may label them as such. Similarly, the nonscientific definition of "living in poverty" may differ, depending upon the observer. Thus, a poverty-(invisible) disability intersection would be considered a constructed intersection in that it depends upon information only gained through interaction or knowledge acquisition.

Systems of gender, class, and disability converge in healthcare outcomes. Therefore, a third type of intersection inevitably occurs: a *hybrid identity*. A hybrid identity is created when an individual has certain perceptions about another person, but different perceptions about the social categories to which the other person belongs. In this hybrid identity, both initial information-processing data and additional information through interaction or knowledge acquisition contribute to the outcomes. These hybrid identities probably occur most often in social interactions. Hybrid identities raise a number of questions about level of analysis. Future research must consider how perceptions of an individual differ from perceptions of the social categories to which an individual belongs.

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The classification of identities into an intersectional framework warrants an understanding of level of analysis that is typically not taken into consideration within the context of one analysis. Rita Hardiman and Bailey Jackson (Adams, Bell, & Griffin, 1997) explain this dilemma. Their social oppression matrix explains that discrimination can occur on three levels, individual, institutional, and societal. Furthermore, discrimination can be manifested through attitudes or behaviors. And finally, behavior can be either conscious or unconscious.

At the individual level, behavior or attitudes may exacerbate discrimination in that institutions may have an effect on and be affected by institutions, which in turn, can punish or reward individuals for maintaining a discriminatory structure. On the institutional level, individuals or groups, who either agree with or adhere to a regime or structure that supports discrimination, perpetuate discrimination. Finally, on the highest level, both individuals and therefore, the institutions over which they direct or guide policies, are socialized with cultural norms, many aspects of which have traditionally been discriminatory.

Implications of a New Theoretical Paradigm

Research to date has focused on targeting disparities without specifying how the underlying identities, the psychosocial processes (i.e., conscious versus unconscious), or the level of analyses are integrated to influence the role of multiple social categories on disparate outcomes. It may be important to understand all of these elements to obtain a comprehensive understanding of the

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role of social categories on healthcare outcomes. Research has illustrated that social categorization plays a fundamental role in how people define their social selves and identify others. How people see and understand the world is a function of the categories they use to interpret it. These categories depend, in part, on the categories imposed by society. On the one hand, social categorization is an adaptive and functional mechanism that is used to organize and to simplify the essentially overwhelming complexity of the environment. On the other hand, it is a mechanism that facilitates the creation of stereotypes, which foster discriminatory practices (Tajfel & Turner, 1979). Understanding the conceptual bases of the underlying components of social categorization will help provide a fundamental understanding of the behavioral mechanisms through which systematic discriminatory practices occur. More specifically, people have hard-wired information-processing strategies to create systematic processes. If researchers can isolate specific, systemic identity-creation strategies, they may unveil a potentially key structural element to institutional discrimination that will lend itself to an explanatory rather than descriptive interpretation of disparate outcomes.

Furthermore, researchers studying disparities in healthcare outcomes have tended to focus on single outcome. Such outcomes have included expenditure or the likelihood of receiving a particular service (Goff et al., 1997; Kasiske et al., 1998). However, a single outcome may not be an adequate representation of true behavior. The current study illustrates the importance of considering multiple outcomes as individual outcomes and as a set of outcomes. This study illustrates

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that there is no uniformity to the specific interactions across the five healthcare outcomes. For example, as individual predictors, gender, disability, and poverty are predictors of type of insurance and perceived health status. However, only the interaction between disability and poverty is a significant predictor of whether or not a respondent is insured and perceived health status. These findings underscore the importance of examining multiple outcomes.

Other Areas of Research Inquiry

Future research should attempt to consider as many social categories as possible. This study has chosen the specific social categories of race/ethnicity, gender, and social class. Prior research has documented the differential outcomes for the levels within these social categories. However, all social categories may not include status-laden levels. For example, region may be considered a social category. The levels within region may be rural versus urban. These levels may not be inherently status laden. Therefore, the task will be to assess differences in healthcare outcomes based on whether or not a social category is status laden. Additionally, future research should investigate how status-laden social categories intersect with social categories that have no connection or a less obvious connection with status.

Furthermore, this research makes a significant contribution to existing research by looking quantitatively within a group of African Americans who traditionally been the target of discrimination. Therefore, analyses of intersections

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should examine within-group outcomes for other racial/ethnic groups. The database that was used for the analyses presented here might illustrate different outcomes if the group being analyzed were Latinos, for example. More comparisons of this type should be conducted before generalizations are drawn about how social categories interact to influence healthcare outcomes.

Moreover, primary data collection should not only include multiple social categories, but also multiple outcomes of a single phenomenon. The use of multiple outcomes of a single phenomenon helps to provide a more comprehensive perspective on the role of social categories on the phenomenon. Multiple outcomes should also be conceptualized as a combination of subjective ratings, such as self-report measures, status variables that represent position or standing, and observation—when applicable. The current study illustrates that there is no consistent pattern of relationships between social categories, status variables, and self-report measures.

The results of this study further develop the understanding of how social categories interact to influence healthcare outcomes. Not all intersections between and among social categories have equal influence on healthcare outcomes. By supporting the methodological theory that social categories should not be individually analyzed, but rather included in one comprehensive analysis, this study provides a good basis for a comprehensive understanding of the role of multiple social categories on healthcare. With this framework and a consideration of the data and methodological limitations, future research can address additional

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issues of multiple social categories and the multiple dimensions of healthcare outcomes, such as (a) how the impact of intersections on health care outcomes may change across racial/ethnic groups, (b) the potentially dynamic role of status within racial/ethnic groups, (c) the role of individual information processing in understanding institutional outcomes, (d) understanding which outcomes (i.e., access, utilization, quality, etc.) are more meaningful based on social category intersections in the assessment of healthcare, (e) assessing how the misalignment of identities (i.e., categorizing people into groups into which they do not categorize themselves) impact our understanding of disparities in healthcare outcomes, and (f) delineating the systematic elements of individual behavior in institutional outcomes. Multiple social categories and multiple healthcare outcomes provide the foundation for an alternative methodological model. This alternative methodological model differs primarily from the traditional models by analyzing intersecting social categories as predictors and multiple aspects of healthcare as outcomes. The components of social categorization theory provide the foundation for an alternative conceptual model. This alternative conceptual model differs from the traditional conceptualizations by acknowledging the individual's role in systematic outcomes.

Implications for Healthcare Research and Policy

Some researchers have argued that most healthcare performance measures do not properly address intersections that may occur to explain variance in

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healthcare outcomes. Disparities have been documented, but the information is rarely included in healthcare quality improvement plans. The notion of healthcare quality is based on an implicit expectation that resources are allocated according to medical need, risk, and benefit. However, even HMOs stray from this notion, with their ability to allocate more resources to those at the lowest risk while allocating fewer resources to those at the highest risk. The catch is that such HMOs are still able to receive favorable ratings from the Health Plan Employer Data and Information Set and thereby mask any intraplan variation because measures do not capture critical disparities in quality (Fiscella et al., 2000).

Additionally, current studies have not accounted for the influence of poverty and race on a health plan's performance. For example, according to Fiscella et al. (2000),

> Under the current National Committee for Quality Assurance (NCQA) reporting requirements, childhood immunizations or low-birth-weight rates from HMOs with affluent members may be compared with those from a plan predominated by working-poor members. Recent studies suggest that a lower socioeconomic position adversely affects performance ratings. Unmonitored, this bias in performance reporting could create an incentive for healthcare organizations to boost ratings through selective enrollment of low-risk members. (p. 53)

Healthcare plans are not rigorously held to standards of consistency in usage.

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The findings of this study suggest that a decrease in disparate healthcare outcomes requires that researchers help policymakers understand the inherently interconnected nature of social categories. It is also important to acknowledge the potential effects of combinations of levels within social categories on performance ratings and health plan usage consistency. It is well known, widely accepted, and further documented by this research that gender, disability, and poverty are powerful predictors of healthcare outcomes. However, little attention has been paid to the importance of understanding the interplay among these variables, particularly within one racial/ethnic group. For example, in this study the majority of respondents on public insurance were women or were respondents with a disability and in poverty. This key finding stresses the importance of public insurance coverage as a means for many women and economically disadvantaged respondents and those with a disability to acquire health insurance. Healthcare policies periodically change the criteria for an individual to receive insurance without any consideration of the role of social categories on whether or not an individual is insured. Policy decisions that do not acknowledge the possibility of differential outcomes based on social category intersections threaten the continuity of coverage for those who may need it most.

Conclusion

This study found several positive outcomes. First, there was a significant interaction between disability and poverty on type of insurance and perceived

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health status. The interaction among gender, disability, and poverty was significant for type of insurance and comprehensiveness of services. It is often difficult to find significant interaction effects in psychological research, and even the small interaction on comprehensiveness of services was not dismissed without further consideration (Lykken, 1991; McClelland & Judd, 1993). Furthermore, the impact of gender, class, and disability on various disparate outcomes has been well documented (Aman & England, 1997; Asch et al., 2001; Jones, 1972/1997). Therefore, the social categories analyzed here are the practical social categories for evaluating the significance of status in healthcare outcomes and advancing the current research. Additionally, across all outcomes, low-status respondents (i.e., women, in poverty, with a disability) had poorer healthcare outcomes than high-status respondents (i.e., men, not in poverty, without a disability). This supports prior research and adds weights to the importance of findings.

This study supports previous research indicating that no one category is the sole barrier to quality healthcare. Gender, socioeconomic status, and disability play crucial roles in healthcare outcomes. Although healthcare institutions should ensure systematically equal treatment, research in healthcare outcomes has indicated that people are often discriminated against based on their status levels within social categories. The social categories to which individuals belong are inherently interconnected and are positioned within status hierarchies in society, with some levels within categories (e.g., woman, dark-skinned, economically disadvantaged) positioned at the low end of particular hierarchies, and other levels

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within categories (e.g., man, white-skinned, economically advantaged) positioned on the high end of particular hierarchies. Categories on the low end of the hierarchy have traditionally been the targets of various types of discrimination (e.g., Benokraitis, 1997; Bowe, 1984; Fine & Asch, 1988; Jones, 1972/1979; Fujiura et al., 1998). This research sought to contribute to research on social categorization by focusing not only on the influence of individual categories, but also, more importantly, on the intersection of the categories on healthcare outcomes.

This sample was chosen because it presented an opportunity to address intersectionality in a way that is more generalizable with a reasonably complex and comprehensive sample of African Americans. More specifically, this research attempted to move beyond the peculiarities—such as representativeness—of a set of samples identified in qualitative research. It is important to point out that qualitative research has made a compelling case of intersection possibilities on various disparate outcomes. However, the data here suggest that with certain outcomes (e.g., whether or not the respondent goes to a facility or a private-practice physician), the system may perform adequately, whereas with other outcomes (e.g., whether or not a respondent is insured), the system shows gross disparities. In addition to being a valuable monitoring device for replication, this research adds insight into and contributes to the understanding of healthcare outcomes, specifically for African Americans, a group that has traditionally been the target of discrimination.

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