QUALITY OF CARE AND BLACK AMERICAN PATIENTS

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Even with major advancements in medical knowledge and significant improvements in health sciences technology, evidence still exists that blacks do not enjoy as full a measure of health as do other racial and ethnic groups. To attempt a better understanding of this situation, literature was reviewed to consider relationships between being black and issues related to quality of health care. It was determined that these relationships have not been studied to any great extent, either in quantity or quality. When such studies have been undertaken, they have been limited to mostly qualitative designs, and appropriate controls for confounding variables have been minimal. The psychiatric literature reports most of the studies with very few studies found in the literature of other specialties. A conceptual model is presented regarding race-related research. It is argued that a first step might be to study whether the quality of care differs when the physician and the patient are members of different racial groups compared with when the physician and patient are members of the same racial group. In all race-related research, it is necessary to carefully consider specific variables that may confound results, eg, diagnostic errors, age, sex, socioeconomic status, level of education, geographic locale, and method of payment for health-care services. (*J Natl Med Assoc.* 1992;84:569-575.)

Key words • black Americans • quality of care • race-related research

Compared with whites, black Americans experience nearly 50% greater mortality rates for cancer, heart disease and stroke, cirrhosis, diabetes, accidents and homicides, and infant mortality. This is despite recent unprecedented increases in knowledge about and capacity to diagnose, treat, and cure disease.[1] To seek a better understanding of this situation, we reviewed literature on blacks regarding issues of quality of care.

For a definition of quality of care, we used the 1986 statement of the American Medical Association's Council on Medical Services.[2] This definition included three basic variables:

- *structure*—related to environment of care,
- *process*—related to context of care, and
- *outcome*—related to results of care.

The latter variable, outcome, was considered by the Council as the most important of the three with the other two having merit as indicators of quality in terms of how consistently they were associated with favorable patient outcomes.

Literature was identified first by using a computerized approach search for the words "black" and "outcome(s)," and then by using ancestry and descendancy techniques.[3] A total of 124 articles from 52 different journals were selected as appropriate for review. Most of the literature was reported in psychiatric journals. This article summarizes the literature and offers suggestions for conducting race-related research, with an emphasis on the primary care setting.

PSYCHIATRIC LITERATURE

The psychiatric studies were primarily qualitative studies that used measures of a nominal or ordinal type. Most studies were descriptive with only a few being

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quasi-experimental in design. Methodologies included case studies, surveys, interviews, and psychiatric evaluations.

Diagnosis of Black Psychiatric Patients

In the 1960s and 1970s, a number of reports presented qualitative and quantitative data that suggested blacks were diagnosed differently than whites. This resulted in the perception that higher rates of and more serious mental disorders existed among blacks than among whites.

For example, Bahn et al studied differences and similarities in four distinctly different register areas—the states of Maryland and Hawaii and the communities of Monroe County, New York, and a tricounty area in North Carolina.[4] Controlling for central city versus other locales, age, sex, race, and class of existing psychiatric facilities or combination of classes, they found that hospitalization as an index of serious psychiatric disability was greater for blacks than whites with blacks having a 30% to 80% greater risk than whites of becoming seriously incapacitated as a result of their psychiatric disability. Register data indicated blacks exhibited higher rates for every major category of mental disorder with the exception of depressive reactions.

In another study that controlled for geographic area, sex, and race, Gross et al reported outpatient referrals and neurotic diagnoses occurred more frequently for white patients than for nonwhite patients and more often for females than males.[5] Behaviors that required hospitalization of female patients were more often perceived as neurotic when the females were white, but schizophrenic when the females were nonwhite. This study did not control for socioeconomic status, age, or level of education.

A third study by Steinberg et al[6] examined diagnoses and admission rates between white and black patients in a private general hospital. Compared with white patients, black patients were much more likely to be diagnosed as paranoid schizophrenic but were much less likely to be referred for hospitalization by private sources, were substantially younger, and had shorter hospitalizations.

The common themes running through these types of studies were evidence of higher rates of mental disorders for blacks compared with whites and diagnoses of more serious mental disorders, such as schizophrenia, being applied more frequently to black rather than white patients. Conversely, diagnoses of less serious mental disorders, such as depression, were applied more frequently to white rather than black patients. In studies that controlled for sex, this was most often the case for black females.

As might be expected, studies were undertaken to determine if discrepancies existed in the diagnoses of blacks compared with whites and, if so, what caused the discrepancies.[7] The general question dealt with by researchers was, "Are discrepancies in diagnosis the result of characteristics within the black race, or does the problem lie within the diagnostic process itself?"

One example of such a study was reported by Simon et al.[8] Project research psychiatrists used a structured mental status interview to make independent diagnoses on 192 patients in nine New York State mental hospitals. Significant differences were found when their diagnoses were compared with those of hospital clinicians for the same patients. Race and diagnosis were strongly associated in the hospital diagnoses, with the diagnosis of schizophrenia rather than an affective diagnosis being given more frequently to blacks than to whites. Conversely, the project resarch psychiatrists' diagnoses showed race and diagnosis to be independent. Further examination of patterns of psychopathology exhibited by blacks and whites confirmed the absence of any gross differences in abnormal behavior. In another study, Raskin and colleagues reported insignificant findings when comparisons were made between black and white patients while controlling for race differences regarding age, social class status, and sex. They found that both black and white depressed patients present with remarkably similar symptoms.[9]

It appears that differences in diagnoses and differences in rates of diagnoses of blacks compared with whites may not be related to race at all but instead to some other factor, most likely one or more facets of the diagnostic process.[10-12] However, making such a statement with any certainty, based on existing literature, is difficult because of the limitations of available research findings. First, the studies are dated; the only study reported in the 1980s was conducted in 1985 and used a mailed questionnaire to collect data.[12] The other studies, for the most part, simply presented descriptive data. Second, considerable differences exist between the studies relative to researchers' efforts to control for confounding variables, eg, age, sex, social status, educational level, and geographic locale. Third, the studies did not make all possible comparisons, ie, a simultaneous examination of all four groups of interest—black and white physicians, and black and white patients. Therefore, the question might be asked, "Would the findings be different regarding discrepancies in diagnoses between black and white patients if the physicians were predominantly black?"

Failure to control for confounding variables can produce incorrect or confusing results. To apply the findings of a study in the form of recommendations and subsequent actions, cause and effect must be clearly and reliably established. Hence, when a study examines race as an independent variable but uses a research design that does not control for confounding variables, any reported significant differences must be viewed with skepticism. Follow-up studies that do control for confounding variables may negate any or all significant differences reported previously.

A series of studies that examined the effect of race on the scores derived from a psychological test, the Minnesota Multiphasic Personality Inventory (MMPI), illustrates these problems. In studies in which the MMPI did not control for selected confounding factors, significant differences were reported between blacks and whites; other studies that did control for such factors as age, educational level, and occupation, no significant differences were found between blacks and whites.[13-15]

The issue highlighted by these types of studies is that variables related to sociocultural factors seem to account for differences in MMPI scores between blacks and whites. For example, persons in lower socioeconomic groups tended to score differently in selected areas of the MMPI than did persons in higher socioeconomic groups. Because blacks are disproportionately overrepresented in lower socioeconomic groups, they tended to score differently on the MMPI than did whites. Unfortunately, while controlling for confounding variables provides a means to explain differences, the problem of how to correct for such differences still remains. While the cause of the differences is not race, the overrepresentation of blacks in lower socioeconomic groups places them, as a race, at a higher risk for misdiagnoses based on diagnostic instruments such as the MMPI.

Treatment of Black Psychiatric Patients

Not only do blacks seem more likely to be misdiagnosed than whites, but once they enter the health-care system, they experience significantly different treatment than do whites.[4-6] In general, blacks are more likely than whites to be treated in the emergency room versus being referred to other psychiatric services. Blacks are less likely than whites to be referred for hospitalization by private sources and, if hospitalized, to have shorter stays especially in private general hospitals. In addition, blacks spend more patient days per year than whites in public mental hospitals and institutions for the retarded. The following studies illustrate these points.

Krebs examined the effects of white therapists on black and white psychiatric outpatients in terms of diagnoses, assignments to treatment, and attendance records in treatment.[16] No significant differences were reported between the numbers of black females, white females, black males, or white males in each of four diagnostic categories (psychotic, neurotic, situational disturbances, and others). However, black females were assigned to crisis intervention therapy at a significantly higher rate and were less often seen in individual or group treatment compared with white females.

Yamamoto guided a series of studies examining the effects of therapists' ethnocentricity on their treatment of patients of different minority groups.[17-19] In an initial study of 594 patients in an outpatient clinic of the Los Angeles County General Hospital, it was observed that the proportion of patients seen six or more times in individual psychotherapy was greatest for white females followed by white males, Hispanic males, Hispanic females, black females, and black males. The percentage of patients seen for more than 10 visits were: 11.4% of the white patients, 11.3% of the Hispanic patients, and 2.7% of the black patients. Attrition rates 9 months after admission to testing were the greatest for minority patients. This was particularly true for minority males in that all had discontinued by that point.[17]

To account for observed differences in treatment, the researchers assessed ethnocentricity of the therapists as a possible factor in patient dropout.[18] Fourteen white therapists were given the Bogardus Social Distance Scale (SDS) as a measure of their degree of ethnocentricity (lower SDS scores represent lower ethnocentricity). The six lower-scoring therapists were compared to the eight higher-scoring therapists relative to patients seen six or more times. The lower-scoring therapists saw their black patients in roughly the same proportions as their white patients. In contrast, the higher-scoring therapists saw significantly lower proportions of their black patients compared with their white patients.

These two studies prompted the design of a quasi-experimental study in which a group of eight psychiatric residents underwent an orientation toward Hispanic and black subcultures.[19] They were interviewed and completed the SDS before and after orientation; a significant decrease in ethnocentricity of the eight residents was found following the orientation. Furthermore, a comparison by race of patients seen six or more times revealed no significant differences for the oriented residents. Compared with nonoriented residents, there were significant differences. The nonoriented residents saw their black and Hispanic patients significantly less than their white patients, and when compared with the oriented residents, the nonoriented residents saw significantly fewer Hispanic and black patients.

Yamamoto's latter study is important in its illustration of the kind of studies that should follow descriptive and correlational studies. If solutions are to be found to correct differences because of race, socioeconomic status, sex, etc, then follow-up, at least quasi-experimental but preferably experimental, studies need to be done. Still, problems remain even in Yamamoto's studies. There was a failure to control for confounding variables and a limitation in examining only white therapists in relation to white and nonwhite patients. This is true of other studies examined and brings us back to the earlier question, "What would have been the findings had the therapists been black, or even in this case Hispanic?" In that many researchers reported the unavailability of minority therapists to study, this highlights the additional problem of the literature base in that it is relatively dated. The number of minority physicians has increased over the past 10 to 20 years[20]; therefore, studies including minority physicians are now more feasible.

Winston et al compared 40 hospitalized black and white patients matched for age, sex, marital status, and diagnosis. Although not matched for socioeconomic status, all 40 patients were in the low or lower-middle class.[21] They found that the black patients tended to have shorter stays and to have significantly better improvement compared with the white patients as a result of the hospitalization. A 1-year follow-up examination, although limited because only about half of each group could be located, found the trend to be in the direction of greater improvement in the black group. The problem with this study is its failure to measure important process and structure variables. That is, it has been discussed previously that black patients tend to be misdiagnosed or are diagnosed as having more serious conditions than their white counterparts.[7] Therefore, if these conditions existed in this particular study, it would not be surprising that black patients would be judged to have improved more in the hospital or to have shorter stays than would the white patients. By the same token, various medications were involved in the treatment, but the researchers failed to address the possibility of differences of drug response by race, be it on a physiologic or cultural basis.

Finally, there were several studies that dealt with the phenomena of transference and countertransference as occurring in intra-racial analysis. These studies were case reports of various combinations of race between the therapists and patients—white therapist and black patient,[22-24] black therapist and white patient,[25-27] or some other variation.[28-29] Some researchers reported differences in race used to an advantage,[28,30] while others reported differences creating hindrances to psychoanalysis.[22-25,27] Although the latter predominated, it must be considered that an investigator's bias could play a role in the general thrust of each case report. If these case reports were followed by quasi-experimental or experimental studies, much more could be learned.[31]

NONPSYCHIATRIC LITERATURE

The nonpsychiatric studies were more likely to use more quantitative measures, along with qualitative measures, than the psychiatric studies. Many of the studies were descriptive in nature reporting survey results or comparing demographics. Although some studies dealt with differences in outcome relative to race of patient, results in relation to physician and patient racial differences were not reported.[32,33]

A few studies examined the disposition of black patients compared with white patients in relation to method of payment. Penchansky and Fox found that black patients were referred significantly less than whites, even when method of payment was taken into account.[34] Perkoff and Anderson reported that black patients were more likely to be assigned to ward classification while white patients were more likely to be assigned to private status following treatment in the emergency room, despite similarities in insurance coverage.[35] Egbert and Rothman found that black patients were 2.2 to 4.3 times more likely than white patients to be under the care of surgeons in training than white patients.[36] Differences persisted when the method of payment was either self-payment or private insurance; these differences disappeared when Medicaid patients were considered.

Regarding differences in treatment of black and white patients, Mayer and McWhorten found that black patients were more likely than white patients to go untreated following diagnosis of bladder cancer, after adjustment for age- and stage-at-diagnosis, sex, and tumor histology.[37] Whereas socioeconomic status can be a major confounding factor in health care, this was not a controlled variable in the study. Gemson et al reported significant differences in physicians' preventive practice patterns for respective patient populations that were predominantly white versus nonwhite.[38] For example, physicians with predominantly black or Hispanic patient populations were significantly less likely to recommend influenza vaccinations when compared to physicians with predominantly white patient populations. Physicians' training and education, patients' socioeconomic status, and time spent with patients by physicians appeared to be contributing factors to the differences. Studying mortality due to 12 disease classifications, Schwartz et al[39] found that mortality rates among blacks were 4.5 times greater than those of whites in the United States. The investigators believed the data suggested discordance between health-care needs and health-care services with excess mortality rates experienced by blacks not fully explained by increased incidence in disease but rather were reflective of racial inequities in access and quality of health-care services.[39]

FUTURE RESEARCH

Much of the research that has a bearing on the issue of being black and quality of health care received was done in the 1960s and 1970s. Very little has been done since. It is unfortunate that findings of earlier studies have not been used to generate additional studies, especially in light of new technologies and statistical methodologies. As a result, we are left with dated information that limits our ability to understand differences in the health status of minority populations compared with nonminority populations, particularly between blacks and whites.

For example, in the research reviewed none of the studies established, or for that matter made any real attempt at establishing, a cause-and-effect relationship between differences in physician and patient race and quality of care, as measured by patient outcome.[40] Thus, a first step might be to determine if a cause-and-effect relationship exists. In the process of seeking a cause-and-effect relationship, possible confounding variables must be considered, eg, diagnostic errors, age, sex, socioeconomic status, educational level, and geographic locale. Then, if differences in race between physicians and patients are determined to contribute to negative patient outcome, further studies are needed to determine if the relationship is an artifact; ie, whether it results from some further inherent factor that is racially or culturally based. Racial factors are illustrated by those studies that have examined differential reactions to medications and found physiological differences between races related to differences in patient outcomes.[41-44] Cultural factors include communication differences (verbal and nonverbal), differences in belief systems, and differences in priorities and values.[45-47]

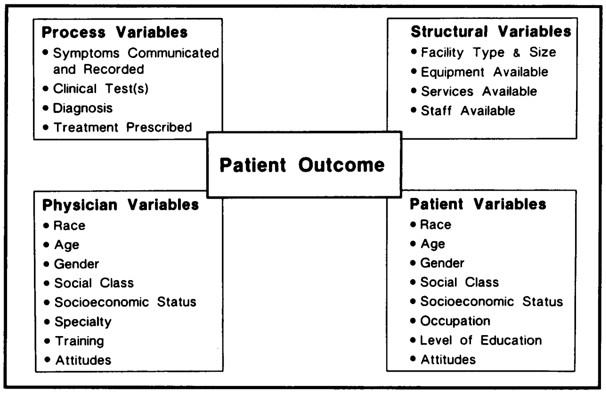

Figure. Conceptual model of essential factors in considering race-related research.

The Figure presents a conceptual model of essential factors to consider in race-related research regarding a particular disease, condition, or ailment. It is important to note that investigators should, at the very least, include cross-matching of both physicians and patients so representativeness and completeness of all races can be assured, eg, black and white physicians and black and white patients.

Initial studies might be retrospective, descriptive, or correlational in nature. Hospital and clinic records could serve as early sources of data, although not all of the critical variables identified in the Figure would be available from such sources. Nevertheless, a basis for further investigation could be established. Quasi-experimental and experimental studies would allow for the manipulation of possible causal factors in order to better understand potential cause-and-effect relationships by reducing or eliminating confounding variables. The series of studies reported by Yamamoto et al can serve as a model for this approach regarding their study of effects of ethnocentricity of therapists on length of treatment of different minorities.[17-19]

Qualitative data will be important, eg, patients' behavioral patterns such as how the presenting complaint is described and physicians' reactions such as how the presenting complaint is recorded. Of course, it is essential that quantitative measures be included. The basis for qualitative studies could be clinical tests that reflect patient progress (blood sugar concentration or blood pressure) or could be physical measures that reflect patient function (treadmill measures or how far the patient can bend over or move a limb). In most cases, both qualitative and quantitative assessments are highly desirable. The disease or condition selected for study should have a definitive nature, applicable clinical tests, and means to monitor progress. Examples are diabetes and hypertension.

It is important to keep in mind that failure to establish cause-and-effect relationships initially does not mean they do not exist. It may mean that the variables chosen for study were inappropriate or that some confounding variable(s) masked the results. Re-examination of the research design and variables selected for study would be important. An example of such a study was discussed earlier.[21] The researchers controlled for many important confounding variables but failed to check for possible errors in diagnosis.

SUMMARY

In the past 25 years, the relationship of race, particularly blacks, and the quality of health care received has not been studied to any great extent. When such studies have been undertaken, they have been limited to mostly qualitative designs, and appropriate controls for confounding variables have been minimal. The psychiatric literature reports most of such studies with little found in the literature of other specialties.

Evidence exists of discrepancies in diagnosis, disposition, and treatment between black and white patients. However, the evidence is based mostly on measures of process and structure variables and, only occasionally, on measures of outcome variables. Problems with research design and a lack of follow-up or more recent studies leave us with inconclusive results and large gaps in the knowledge base. The rarity of studies that reported specifically on the effect of differences between physicians and patients is one of the greatest barriers to gaining insight into the question of interest.

Research on process and structure without research on outcome is of limited value. Such research does not allow for the definitive identification of factors that affect quality of care nor does it allow for manipulation of confounding variables to reduce or eliminate bias. Additional research needs to be undertaken in the psychiatric community, and innovative research is needed in other medical specialties regarding race and quality of care. Appropriate confounding variables along with process, structure, and outcome variables should be included in the research design. An emphasis should be placed on quantitative measures, but appropriate qualitative measures also should be included. It is essential to examine nonwhite and white physicians as well as nonwhite and white patients in such studies. If an effect is reported, then follow-up studies need to be performed to identify the responsible causal factor(s). Experimental or quasi-experimental studies should be developed to confirm or negate the existence of cause-and-effect relationships and to determine ways of reducing or eliminating negative patient outcomes.

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