Overt and Subtle Racial Discrimination and Mental Health: Preliminary Findings for Korean Immigrants

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The recent surge of interest in racial dispari-
ties in health has stimulated numerous empiri-
cal investigations of the contributions of rac-
ism to the creation of these disparities. Many
mainstream journals and monograph series, in
a variety of scientific and professional fields,
have published special editions dealing with
the topic. The literature identifies the potential
pathways through which racial discrimination
may contribute to observed racial disparities
in morbidity, mortality, and mental health.[1–9]
Further, a large body of epidemiological and
experimental research demonstrates the influ-
ence of racial discrimination on both physical
and emotional health among minority popula-
tions.[1,4,10–12] However, many authorities have
pointed to the need for further research in the
area that would enhance the validity of these
findings and extend them to more minority
groups. The main focus of the research thus
far has been on African Americans; studies
examining the experiences of Asians and im-
migrants who belong to other racial/ethnic
groups are scarce.[12–17] In addition, the litera-
ture is limited as to explaining how perceived
discrimination is linked to health status.[11,14,15]

Using data from a survey of Korean immi-
grants, we explored 3 key issues not yet ad-
dressed in empirical analyses. First, data are
consistent in showing that overt racial dis-
crimination has been replaced by more covert
and subtle forms of prejudicial attitudes to-
ward racial minorities and immigrants.[16–29] In
fact, subtle discrimination and prejudice have
been the focus of social and psychological re-
search for some decades; however, few epi-
demiological studies have examined how dif-
ferent forms of discrimination are related to
health. We examined the associations of overt
and subtle forms of discrimination with men-
tal health.

Second, although most health theories ac-
cept the conceptual definition of health as
consisting of both positive and negative af-
fects or domains,[30,31] research that reports the

Objectives. We examined differential effects of overt and subtle forms of racial discrimination on 2 dimensions of mental health—positive affect and depressive symptoms, and explored the mediating roles of emotional arousal and cognitive appraisal.

Methods. Cross-sectional survey data were collected through face-to-face interviews with a sample (N = 180) of adult Korean immigrants living in Toronto, Ontario. Maximum likelihood estimates of path coefficients were obtained using structural equation models.

Results. Perceived racial discrimination was associated with both the erosion of positive affect and depressive symptoms. Overt discrimination was associated with the erosion of positive affect, and subtle discrimination was associated with depressive symptoms. Effects of subtle discrimination on depressive symptoms were mediated through cognitive appraisal.

Conclusions. The results emphasize the salience of subtle discrimination for the mental health of Asian immigrants. Experiences of overt racial bias seemed to be of little importance for the levels of depressive symptoms among those in our sample, although the experience of blatant discrimination tended to reduce positive mood. (*Am J Public Health.* 2007;97:1269–1274. doi:10.2105/AJPH.2005.085316)

effects of discrimination rarely includes posi-
tive health outcomes and instead reports
solely on negative outcomes or distress. Per-
ceived discrimination as a determinant of
mental health can be assessed more fully by
incorporating both negative and positive
outcomes.[32] Our study employed models
that allowed the contrast of 2 forms of dis-
crimination as they related to 2 dimensions
of mental health—positive affect and depres-
sive symptoms.

Third, to make an advance in our under-
standing of how perceived discrimination is
related to mental health, we examined the
emotional and cognitive processes that may
mediate the connection between discrimina-
tion and mental health. We hypothesized that
when perceived unfairness is subtle, the un-
certainty of the situation might call for a more
active and difficult appraisal of the event or
situation, causing psychological distress; direct
blatant discriminations might involve less cog-
nitive demands to appraise the nature of the
situation as a threat because the message is
unambiguous. Yet, being treated unfairly in a
clear manner is still an unpleasant experience,

and repeated exposure to such unpleasant sit-
uations may wear down positive feelings
about oneself and life in general.

METHODS

Data for this study were drawn from the
Korean Mental Health Study (KMHS), a sur-
vey of 860 Korean immigrant families in
Toronto, Ontario.[14,15,32] Of the 860 KMHS
families, 243 families had at least 1 child
aged 3 to 18 years. In 1997, we surveyed
these children, who were then aged 10 to 25
years. We interviewed the children of 199 of
the 243 families in their homes. After the
completion of child interviews, interviewers
left a questionnaire for the parent to fill out
and then mail back to us. The primary pur-
pose of the parent questionnaire was to ob-
tain parental reports of their child's adjust-
ment. The questionnaire also included a scale
of perceived racial discrimination. Of the 187
parents (49% men, 51% women) who partici-
pated in the survey, 7 were excluded because
of missing data. Most of the parent partici-
pants were married (94.6%), currently

employed (82.8%), and had lived in Canada for longer than 2 decades, and 58% of men and 39.1% of women had completed postsecondary education. The median annual household income (Can $57 000) of participants was substantially higher than the average household income for Korean Canadians in the greater Toronto area (Can $36 000) as reported in the 1996 census.

Measurements

Perceived discrimination. On a Likert scale from 1 (never) to 5 (all the time), respondents indicated how often they had been discriminated against in the following ways: (1) hit or handled roughly, (2) insulted or called names, (3) treated rudely, (4) treated unfairly, (5) threatened, (6) refused services in a store or restaurant or had service delayed, (7) excluded or ignored, and (8) anyone in your family had ever been discriminated against in any way. They were given the following instructions when completing this scale: "When people insult other people, make fun of them, or treat them unfairly because they belong to a certain racial/ethnic group, this is called discrimination. This may happen to people who are not born in Canada, or who speak another language, or who look different. The next few questions are about this type of discrimination."

Emotional arousal and cognitive appraisal. We also included a scale of emotional reactions. All respondents who experienced at least 1 incident of discrimination were asked to indicate how such perceptions of discrimination made them feel. Three variables that measured forms of emotional arousal were sadness (sad), anger (angry, upset), and aggression (wanted to hit someone, wanted to get revenge). Four variables measured various forms of cognitive appraisal of discrimination, and they were exclusion (unwanted, rejected), powerlessness (helpless, weak, intimidated, puzzled), shame (stupid, foolish, ashamed), and discouragement (frustrated, discouraged, humiliated). Each item was coded on a 3-point scale: 0 (rarely or never); 1 (sometimes); 2 (most of the time). Based on an exploratory factor analysis (maximum likelihood extraction with oblique rotation), data were reduced to 7 variables by taking means of corresponding items.

As shown in earlier analyses,[13–15] the 7 variables of emotional arousal (emotion) and cognitive appraisal were conditionally relevant variables. That is, the emotion and cognitive appraisal variables were applicable only to those participants who reported at least 1 incident of discrimination; the variables were not applicable to those respondents who reported no experiences of discrimination. In the simplest form, these variables were used as an interaction between the dummy variable of being ever discriminated against (0 if reporting no discrimination) and deviation scores of each emotion–cognitive appraisal measure.

Positive affect and depressive symptoms. The Centre for Epidemiological Studies–Depression Scale (CES-D) was used to assess depressive symptoms and positive affect.[33] The CES-D consists of 16 items of psychological distress: depressive mood, social withdrawal, and somatic symptoms. It also includes 4 positive-affect items (happy, hopeful, high self-esteem, and joy in life). Previous research found that the responses to positive-affect items cannot be simply reverse coded for measuring distress in Asian Americans[34] or Asian Canadians.[35,36] A Korean version of the CES-D was standardized by the authors[35,36] and has been used in a number of studies.[14,15,32,37]

Statistical Analysis

The study involved analyses of measurement and structural models among discrimination, emotions, and mental health outcomes. For both measurement model and structural associations, structural equation models were used to examine the proposed theoretical model. Maximum likelihood estimates of the model coefficients were obtained with the covariance matrix as input into LISREL 8 (Scientific Software International, Chicago, Ill). Sample size limitations did not allow us to incorporate measurement models when estimating our theoretical models. Thus, we primarily constructed composite scales (e.g., overt and subtle discrimination) by summing up the scores of corresponding items. Similarly, we constructed positive-affect and depression scales with corresponding CES-D items. The theoretical models were evaluated with these composite scales as single indicators. These were inherent limitations of our study.

We used the χ^2 test, goodness-of-fit index, adjusted goodness-of-fit index, and root mean squared error of approximation (RMSEA) to evaluate model fit. Evidence for adequate model fit exists if the goodness-of-fit index and adjusted goodness-of-fit index are greater than 0.90 and the RMSEA is less than 0.05.[38] The χ^2 test divided by degrees of freedom can provide a guideline for overall fit, such that a value less than 3.0 is indicative of good model fit.[39] Descriptive statistics of variables are not shown (available from authors upon request).

RESULTS

Measurement Models

Perceived discrimination. Following our earlier findings,[40] we estimated a measurement model that included 2 latent factors: subtle and overt discrimination. As shown in Figure 1, the items that reflected subtle or indirect forms of discrimination captured 1 dimension, and the items that reflected direct and overt discrimination captured another. The factor loadings ranged from 0.54 to 0.90 and were statistically significant ($P<.05$). The fit indices indicated a good fit of the 2-factor model with the data (goodness-of-fit index=0.97; RMSEA=0.031). Crossfactor loadings were not statistically significant, and thus, fixed to zero in the final model shown in Figure 1; relaxing the constraints did not improve the fit of the measurement model. Measurement errors of the "treated rudely" and "treated unfairly" items were correlated. It is plausible that the responses to rude and unfair treatments may have represented variations in common or similar experiences in different forms, where the former represented experiences of more explicit situations and the latter represented exposures to situations less clear in implications.

The correlation between the 2 latent factors (0.87) was quite high, indicating that a single-factor model might fit the data. To test whether these dimensions were unique, we constrained the factor correlation to 1.00 and examined the reduction in model fit. The χ^2 change (with 1 degree of freedom) for this test showed that the correlation between the 2 factors was significantly different from 1.00; thus, the 2 sets of items were
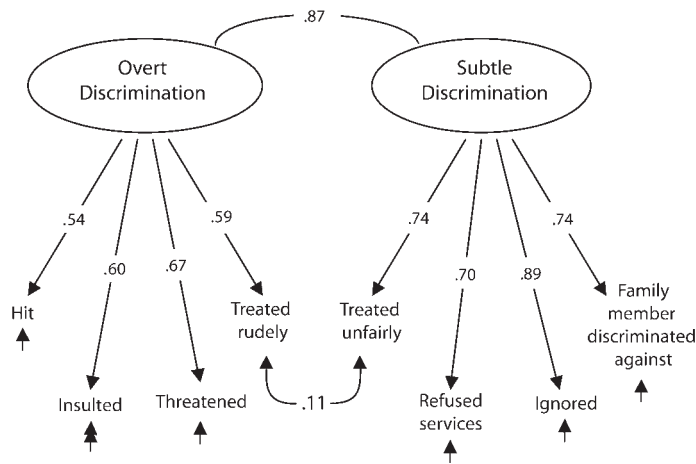
Note. Down arrows indicate causation; curved lines indicate correlations. Up arrows indicate measurement error. $\chi^2 = 19.16$ ($P = .32$); root mean squared error of approximation = 0.031; goodness-of-fit index = .97.

FIGURE 1—Measurement model of perceived discrimination: adult Korean immigrants in Toronto, Ontario, 1997.
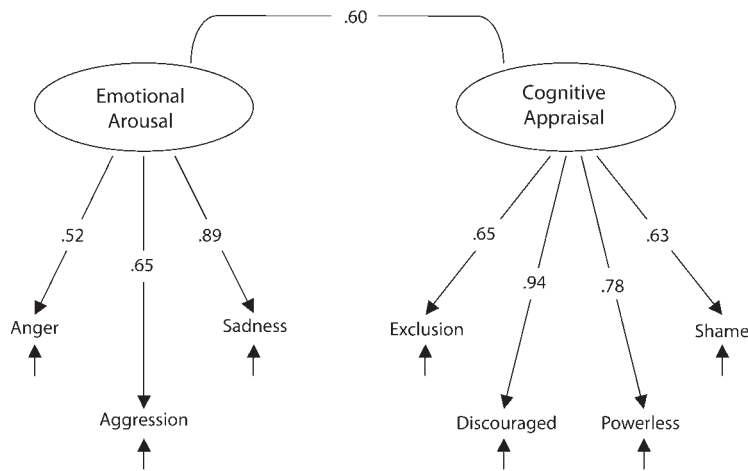
Note. Down arrows indicate causation; curved lines between factors and variables indicate correlations. Up arrows indicate measurement error. $\chi^2 = 11.21$ ($P = .43$); root mean squared error of approximation = 0.00; adjusted goodness-of-fit index = .96.

FIGURE 2—Measurement model of emotional arousal and cognitive appraisal: adult Korean immigrants in Toronto, Ontario, 1997.

sufficiently unique to form separate factors or domains.

Emotional arousal and cognitive appraisal. Factor loading of emotional arousal ranged from 0.52 to 0.89 (Figure 2). The loading of the cognitive appraisal indicators ranged from 0.63 to 0.94. Although there was a moderate correlation between emotional arousal and cognitive appraisal, allowing

crossfactor loadings made little change in the overall fit of the model. The model showed strong fit with the data (e.g., goodness-of-fit index = 0.96; RMSEA = 0.00).

Mental health. The results from a confirmatory measurement model of the 20-item CES-D scale provided evidence for the existence of 2 underlying dimensions for mental health. The items that reflected positive

feelings captured 1 dimension (happy, hopeful, high self-esteem, and joy in life), whereas items that reflected depressive feelings captured the other. Factor loadings ranged from 0.40 to 0.94, and all were statistically significant ($P < .05$). Fit indices indicated that this measurement model fit the data (e.g., goodness-of-fit index = 0.90; RMSEA = 0.038). Loadings for all items across factors were not significant and fixed to zero, and when these parameters were freed, model fit did not improve. The correlation between the 2 factors (−0.29) indicated that positive affect and depressive symptoms were separate factors.

Structural Equation Models

Maximum likelihood estimates of structural equations were estimated to address the research question about the associations of overt and subtle forms of discrimination with mental health. As explained earlier, because of the limited sample size, we could not incorporate measurement models when estimating the fit of our theoretical models. Instead, we used composite scale scores as single indicators of overt and subtle discrimination, and positive affect and depressive symptoms.

As shown in Figure 3, overt discrimination was significantly related to positive affect in the hypothesized direction (B=−0.34; t=−3.70); however, the structural equation coefficient between overt discrimination and depressive symptoms was not significant (B=0.04; t=0.50). Subtle discrimination was related to depressive symptoms in the hypothesized direction (B=0.35; t=3.92). However, subtle discrimination was not related to positive affect (B=0.07; t=0.61). There was also a correlation between the 2 forms of perceived discrimination (r=0.62) and the 2 dimensions of mental health, positive affect and depressive symptoms (r=−0.20).

Next, the model was extended to examine our question of whether emotional arousal and cognitive appraisal mediated the linkage between discrimination and mental health. In the Structural Equation Model, we defined a latent construct of emotional arousal with 3 computed variables (anger, aggression, and sadness) and another latent construct of cognitive appraisal with 4 variables (exclusion, frustration, powerlessness, and shame). The results show that all factor loadings for the
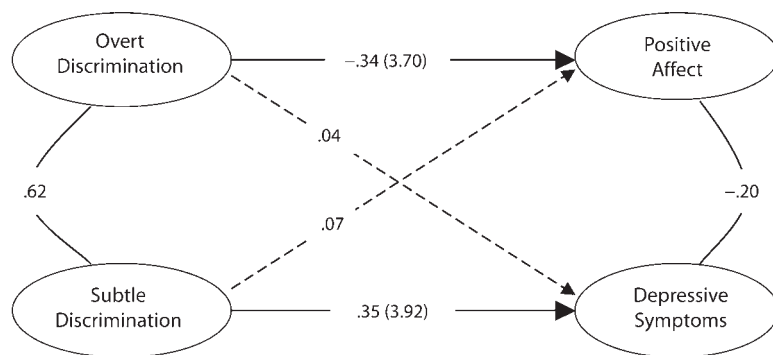
Note. Straight lines indicate significant associations; curved lines indicate significant correlations; dotted lines indicate no significant associations. $\chi^2 = 48.73$ ($P = .02$); root mean squared error of approximation = 0.05; goodness-of-fit index (GFI) = .95; adjusted GFI = .91.

FIGURE 3—Maximum likelihood estimates of standardized coefficients of factor loadings and structural associations among perceived discrimination and mental health: adult Korean immigrants in Toronto, Ontario, 1997.

emotion and cognition constructs were statistically significant and substantial, ranging from 0.52 to 0.92 (Figure 4).

Overt discrimination significantly was related to positive affect (B=−0.26; t=−3.42) but was not related to emotional arousal (B=0.14; t=1.52) or cognitive processes (B=−0.04; t=−0.50). Emotional arousal and cognitive appraisal were not related to positive affect (B=−0.13; t=−1.07 and B=0.00; t=0.03, respectively). Subtle discrimination was related to cognitive appraisal (B=0.49; t=5.25), which in turn was associated with depressive symptoms (B=0.50; t=4.00). The direct influence of subtle discrimination on depressive symptoms (Figure 3) was reduced to 0.14, not statistically significant (t=1.54). Subtle discrimination predicted emotional arousal (B=0.42; t=4.33); however, emotional arousal was not related to depressive symptoms or positive affect. Coefficient estimates and overall fit of the tested model were strong; χ^2 (divided by degrees of freedom) was 1.33, and the other tests of the model showed a good fit of the model (RMSEA=0.04; goodness-of-fit index=0.95; adjusted goodness-of-fit index=0.92).

DISCUSSION

Consistent with our proposed model, both overt and subtle discrimination seemed to influence mental health through different intraindividual processes. The experience of overt discrimination seemed to be directly related to an erosion of positive affect, and this association appeared to be independent of emotional or cognitive mediators. Experiences of subtle bias resulted in greater complexity of emotional and cognitive appraisal of the experiences that produce distress symptoms. Minority immigrants may question whether they are fully accepted members of society and its social networks, or whether they are unfairly treated at individual and structural levels. For example, it is highly plausible that subtle and ambiguous behaviors are more often observed in interactions with close members of social networks (e.g., coworkers, supervisors, neighbors), rather than strangers, which may also contribute to the stressfulness of the event. In addition, these behaviors may often be experienced within clearly defined social systems (such as recruitment and promotion policies). Moreover, it is more difficult to determine objectively whether others are acting according to objective social conscience or they are exercising unfairness based on personal bias. Thus, subtle racial bias may provoke significant stress by creating ambiguities in terms of social identity.

Indeed, we found that the link between subtle discrimination and depressive symptoms was almost entirely mediated by cognitive appraisal of the experiences: frustrating

and intimidating, and powerless and helpless. Attributional ambiguity[41,42] in the appraisal process may help to explain this finding. Uncertainty may exist about whether unfair treatment was experienced because of a personal characteristic (internal attribution), and is therefore a threat to personal identity, or because of a prejudice of the perpetrator toward the ethnic group (external attribution), and is therefore discrimination. Although we did not measure attributions in this study, it is possible that attributing others' behavior to discrimination may serve as a protective factor.

Our study advances the literature of perceived racial discrimination and its salience for minority health in 4 important ways. First, previous research has focused primarily on the case of African Americans,[1,4,10] and information regarding other minorities is scarce.[12] Our study provides information about the experiences of Asian immigrants in Canada. Second, our study contributes to the development of social–psychological explanations of how racial/ethnic interactions may affect health. Third, our study is the first to examine the functions of 2 forms of perceived discrimination (overt and subtle) and, at the same time, to consider both mental health and 2 domains of emotion. Separating the major constructs (discrimination, emotion, and mental health) into meaningful domains has helped us to explore some critical, albeit unaddressed, issues. Fourth, our study provides the rationale for investigating the individual experiences of racial relations in such pluralistic societies as Canada.

These findings must be considered with caution. The study sample provided limited power to handle the statistical methods required to address the research questions. We therefore made several adjustments to both measurement and structural models. Even so, caution is particularly required in the interpretation of negative findings (e.g., reporting no significant associations). For example, we reported that overt discrimination was not significantly related to depressive symptoms and subtle discrimination was not related to positive affect. In principle, these observations may have been caused by the lack of statistical power, and thus, a Type II error. However, the estimated effects of the
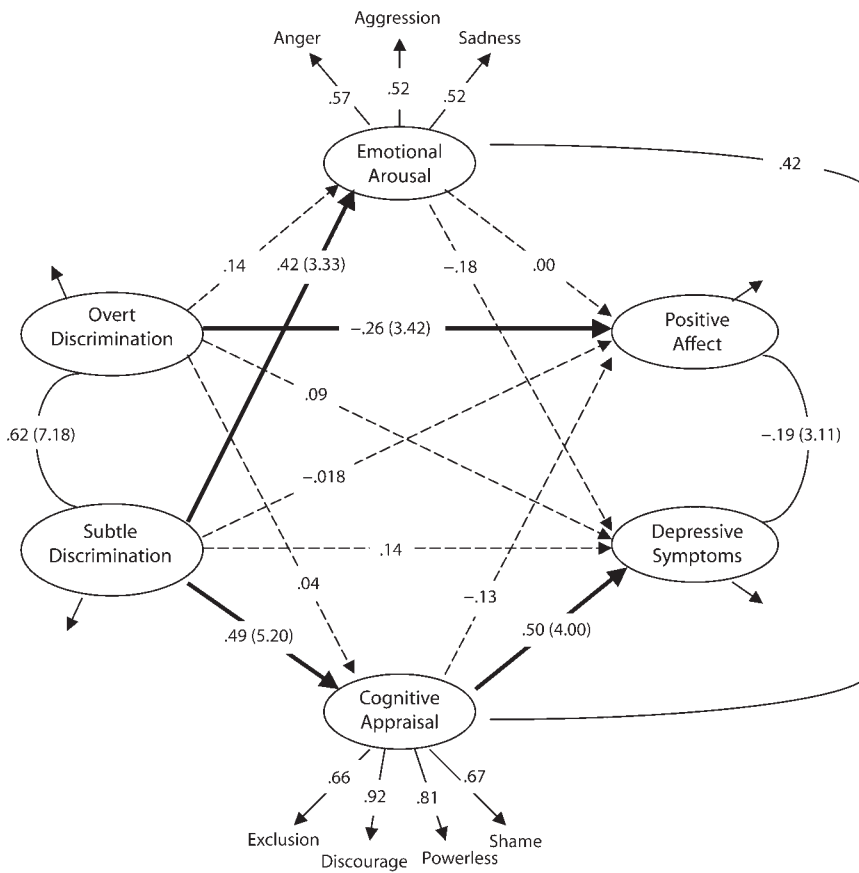
Note. Thin arrows indicate factor loadings; curved lines indicate significant correlations; thick lines show significant structural associations; dotted lines show nonsignifcant structural associations. *T*-test values are in parentheses. $\chi^2 = 43.09$ ($P = .09$); root mean squared error of approximation = .04; goodness-of-fit index (GFI) = .95; adjusted GFI = 0.92.

FIGURE 4—Maximum likelihood estimates of standardized coefficients of factor loadings and structural associations among perceived discrimination, emotion, cognitive appraisal, and mental health: adult Korean immigrants in Toronto, Ontario, 1997.

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Contributors

The authors contributed equally to all aspects of the research and preparation related to this article, including conceptions of the research questions and hypotheses, data analysis and interpretations of results, and writing.

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negative findings, which are less likely to be affected by sample size, were very small. For example, the B coefficient estimates for discrimination–depressive symptom and subtle discrimination–positive affect were 0.04 and 0.07, respectively. Further, we examined models of positive affect and depressive symptoms with ordinary least squares regression, control for the effects of a few confounders (age, gender, marital status, and years of residence in Canada). Results were almost identical to those shown in Figure 4, providing some confidence in our findings.

Other limitations of the study were the use of cross-sectional data and the measurement of positive affect. Some findings and implications should be verified with longitudinal analyses. Finally, the study used a single health outcome measure. The most central issue is the extent to which future investigations should consider diverse measures of health including positive affect, physical and mental health, and addiction.

In light of the study's findings and limitations, there is an urgent need to develop better ways of assessing racism and discrimination, as well as emotions and coping as they relate to racial discrimination. As suggested elsewhere,[13–15] future research should not only employ better measures[10] but should also be based on theories that take into account racial, ethnic, cultural, and social contexts. ∎

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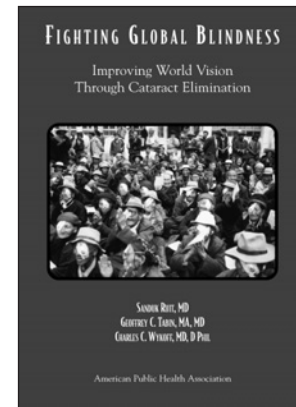39. McIver JP, Carmines EG. *Unidimensional Scaling.* Beverly Hills, Calif: Sage Publications; 1981.

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