Psychometric Evaluation of the Perceived Prejudice in Health Care Scale–Modified (PPHC-M) Among Baccalaureate Student Nurses

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Abstract

Purpose: Discrepancy in quality of health care for patients with diverse backgrounds contributes to health outcome disparities. BSN students reveal surprise regarding the presence of health care disparities. Critical social theory guided this study. The psychometric properties of the Perception of Prejudice in Health Care Scale–Modified (PPHC-M) were evaluated, and the relationship between perceived discrimination in health care delivery and cultural sensitivity awareness was explored.

Design: A descriptive, cross-sectional survey of 146 Midwest BSN students was conducted using Cultural Competence Assessment (CCA), PPHC-M, and the Marlowe–Crowne Social Desirability Scale.

Results: PPHC-M demonstrated reliability (α = .781). Cronbach’s alphas for General Perception of Prejudice (GPP) and Personal Experience of Prejudice (PEP) were .759 and .756, respectively. Construct validity was supported by contrasted groups. The PPHC was not significantly correlated with the CCA scores.

Discussion/Conclusion: PPHC-M shows promise in measuring perceived prejudice in health care.

Keywords
perceived prejudice, critical social theory, cultural competence Perceived Prejudice in Health Care Scale, baccalaureate student nurses

The quality of the patient–provider relationship has been linked to health outcomes (Conboy et al., 2010; Lee, Hanrahan, Aiken, & Blank, 2006). Patient perception of racism in the health care system is a threat to this patient–provider relationship and has been associated with delays in seeking care (Benkert, Peters, Clark, & Keves-Foster, 2006; Burgess, Ding, Hargreaves, van Ryn, & Phelan, 2008, Facione, Miaskowski, Dodd, & Paul, 2002). Racism is a pervasive issue in health care, which may lead to health outcome disparities (Benkert et al., 2006; Dedier, Penson, Williams, & Lynch, 1999). Awareness of personal racism and prejudice is an essential first step to improve health outcomes (Dedier et al., 1999; Smedley, Stith, Wooten, Cox, & Salazar, 2002). The purpose of this article is to evaluate the psychometric properties of the Perceived Prejudice in Health Care Scale–Modified (PPHC-M), a tool that can shed light on this issue.

Disparities in health outcomes continue despite gradual overall improvement in mortality rates. Statistics for 2004 indicate that life expectancy at birth for a Black male, 69.5 years, continues to be lower than for a White male, 75.7 years. Similarly, Black female life expectancy, 76.3 years, remains lower than that of White females, 80.6 years (Centers for Disease Control and Prevention [CDC], 2006). The infant mortality rate demonstrates marked disparity, with the Black infant mortality rate at 13.79 (per 1,000 live births), compared with 5.66 for White infants (CDC, 2006). Death rates from heart disease, malignancies, stroke, chronic lower respiratory disease, influenza, nephritis, nephritic syndrome and nephrosis, sepsis, and diabetes have declined. However, age-adjusted death rates continue to demonstrate disparity, with the Black to White ratio of deaths higher for Blacks compared with Whites, in all those listed except chronic lower respiratory diseases (CDC, 2006).

Although the source of health outcome disparities is not clear, several possible factors have been identified. Low income, limited education, limited access to health care and insurance status are among factors associated with poor health outcomes (Freeman, 2004; Lantz et al., 2001; Newacheck, Stoddard, Hughes, & Pearl, 1998). In addition, according to the Institute of Medicine (IOM) report, Unequal Treatment: What Healthcare Providers Need to Know About Racial and Ethnic Disparities in Healthcare, variations in the quality of health care may contribute to health outcome disparities.
(Smedley et al., 2002). After extensive review of more than 100 studies that evaluated the quality of health care among various racial and ethnic minority groups, the IOM reports a consistency among findings: "even among the better-controlled studies, the vast majority indicated that minorities are less likely than whites to receive needed services, including clinically necessary procedures" (Smedley et al., 2002, p. 2).

Smedley et al. (2002) identified four factors that may contribute to health care disparities:

1. variations of physiologic response to treatment, such as medications;
2. variations in help-seeking behavior, including reluctance to access health care or to adhere to treatment recommendations;
3. barriers in the health care system, including language, insurance, and access; and
4. discriminatory practice, including "bias or prejudice against minorities, greater clinical uncertainty when interacting with minority patients, and beliefs (stereotypes) held by the provider about the behavior or health of minorities." (p. 3)

The IOM report suggests that "healthcare providers should be made aware of racial and ethnic disparities in healthcare, and the fact that these disparities exist, often despite providers’ best intentions” (Smedley et al., 2002, p. 5). Consistent with Leininger’s (1991) Cultural Care theory, nurses and other health care providers have been charged with enhancing cultural competence to offer care more congruent with patients’ values and beliefs (Eiser & Ellis, 2007; Giger et al., 2007; Smedley et al., 2002).

Although developing cultural competence is critical, there is a danger of avoiding key issues of social inequities when considering group diversity from a purely cultural perspective, as racial differences are often subsumed under the cultural umbrella (Boutain, 2005; Kirkham & Anderson, 2002). The terms culture, ethnicity, and race are frequently used interchangeably, and usually indicate “difference” (Kirkham & Anderson). Although culture may be defined as “a learned, patterned behavioral response acquired over time that includes explicit and implicit beliefs, attitudes, values, customs, norms, taboos, arts, habits and life ways accepted by a community of individuals” (Giger et al., 2007, p. 100), a sense of difference in power and social capital is typically not conveyed with the construct of culture. In contrast, the construct race suggests social implications of difference: “Originally carrying a meaning that referred to biological origin and physical appearance, race is now understood to be a social construct manipulated to define, structure, and organize relations between dominant and subordinate groups” (Kirkham & Anderson, p. 4). Race “limits or increases opportunities, depending on the setting” (Giger et al., 2007, p. 101). Ethnic is a term that appears to overlap with culture and race: “of or relating to large groups of people classed according to common racial, national, tribal, religious, linguistic, or cultural origin or background” (“ethnic,” 2009, Merriam-Webster Online Dictionary). Clearly, these terms are not interchangeable.

Too often, consideration of other cultures is framed through an ethnocentric perspective. “Addressing the oppressive nature of defining difference as inferiority is necessary to promote good nursing practice” (Boutain, 2005, p. 407). Boutain urges that we must develop understanding of how the diverse groups are conceptualized in America to better address issues of inequity in provision of health care. By increasing awareness of social injustice, we may help nursing students reflect on pervasive effects of discrimination and perhaps unconscious prejudice that may influence their interactions with patients of diverse backgrounds. Anecdotally, classroom discussions in the past have revealed surprise and/or denial of the presence of health care disparities and occasionally even denial of health outcome disparities in the face of statistics presented.

Assessment of students’ perception of prejudice and discrimination in the health care system will help determine gaps in understanding of underlying factors that contribute to health outcome disparities. Participation in such an assessment may, in itself, help to raise student awareness of the problem of disparate quality of health care provided to vulnerable populations. Kressin, Raymond, and Manze (2008) recommend development of instruments that assess perception of discrimination in health care that are relevant for several racial and ethnic groups. Facione and Facione (2007) present such an instrument, Perception of Prejudice in Health Care Scale (PPHC), developed to assess women’s experience of prejudice in health care. It offers an assessment of both a general perception of prejudice in health care (that may involve various ethnic, racial, and minority groups) as well as an individual’s personal experience of prejudice in the health care setting. In this study, the wording was modified to include perceptions of both females and males.

The purpose of this study was to assess psychometric properties of the PPHC-M as modified. The study also assessed the cultural competence of nursing students in a BSN program and explored a possible relationship between perceived discrimination in health care delivery and cultural competency. As a measure of construct validity, it was anticipated that there would be a positive correlation between scores of the Cultural Competence Assessment (CCA) and PPHC-M.

Theoretical Framework

The Schim, Doorenbos, Benkert, and Miller (2007) 3-D Model of Culturally Congruent Care consists of four provider-level components, which fit together in a jigsaw-like pattern. Cultural diversity refers to the variety of populations from various cultural and ethnic backgrounds, including subpopulations of women, gay/lesbian/bisexual/transgendered, and people of color (Schim et al., 2007). Cultural awareness
“is the knowledge of those areas in which major between-group differences often occur” (Schim et al., 2007, p. 106). Cultural sensitivity addresses a person’s openness to others; it reflects a willingness and interest in learning about others and “treating others as they would like to be treated” (Lester, 1998 as cited by Schim et al., 2007, p. 107). Cultural competence reflects blending of awareness, sensitivity, and diversity into practice. It is a behavioral skill that “enables us to embrace diversity” (Edge, 2002, as cited in Schim et al., 2007, p.107).

This study was also informed by critical social theory, which strives to illuminate forms of domination and oppression with the intent to “create a life free of all forms of unnecessary domination” (Kim & Holter, 1995, p. 207). “Dominant ideological practices and discourses shape our vision of reality” (Lemke, 1995, 1998 as cited by Kincheloe & McLaren, 2000, p. 283). For example, the assumption that predominates in the dominant (White) culture is that disparities in health outcomes among various ethnic groups are likely attributed to behaviors, socioeconomic factors, environmental stressors, genetics, or attitudes of the ethnic minority groups (Dovidio et al., 2008). Efforts to identify causes of health outcome disparities tend to focus on characteristics of the ethnic minority groups, rather than problems inherent in the health care system. From a critical social theory perspective, the contribution of the health care system itself must be examined. Awareness of inequities in the quality of health care itself has only recently begun to emerge (Smedley et al., 2002). Research guided by critical social theory attempts “to expose the forces that prevent individuals and groups from shaping the decisions that crucially affect their lives” (Kincheloe & McLaren, 2000, p. 282). Recognition of forces that may deter patients from accessing health care (dis crimination and prejudice in the health care system) is essential to the understanding of health outcome disparities (Burgess et al., 2008). Furthermore, poorer health outcomes have been linked with perceived discrimination within the health care system (Hausmann, Jeong, Bost, & Ibrahim, 2008). Only by raising awareness of the problem of prejudice in health care can steps be taken to eliminate the issue of quality of health care inequities.

**Method**

**Instruments**

The PPHC scale was developed by Facione and Giancarlo (1998, as cited in Facione & Facione, 2007) to measure perceived prejudice in health care among women. The initial instrument, as described by Facione and Facione (2007), was developed as a result of a focus group discussion of breast health behavior (Facione & Giancarlo, 1998), and the Personal Experience of Prejudice (PEP) subscale was later used to measure personal experience of prejudice in the health care system in a study that examined reasons for patient delay in accessing health care (Facione et al., 2002). The 10-item scale consists of two subscales: General Perceptions of Prejudice (GPP) subscale, (six items) and the PEP subscale (four items). The 4-point response options range from −2 (indicating no perception of prejudice) to +2, (affirming perception of prejudice in health care). Seven items were reverse-coded. Total scale scores reflect the relative amount of perceived prejudice in health care. This instrument has shown adequate internal consistency in prior studies, with the Cronbach’s α = .79 for the overall PPHC scale (Facione & Facione, 2007), and subscale reliability with Cronbach’s α of .75 and .73 for the GPP and PEP, respectively. Validity of the PEP scale is supported by a .78 correlation with a measure of perceived racism (Facione & Facione). In the present study, the wording of the items has been modified to assess perceptions of prejudice for all persons. For example, “All women can obtain quality health care regardless of their income” was altered to read “All people can obtain . . .” Modification of the instrument was done with the permission of Dr. Facione.

The CCA, based on the cultural competence model that integrates the concepts of cultural diversity, awareness, sensitivity, and competence (Doorenbos, Schim, Benkert, & Borse, 2005; Schim, Doorenbos, Miller, & Benkert, 2003), offers a measure of cultural competence that does not emphasize knowledge about specific cultural groups. This tool was developed for use across a broad range of educational levels and for interdisciplinary staff. Reliability of the CCA has been supported with a Cronbach’s α of .89, tested with a sample of 504 health care providers, and test–retest stability of r = .85 over 4 months, as tested with 51 hospice workers (Doorenbos et al., 2005). CCA developers offer evidence of construct validity, as supported by factor analysis and contrasted group assessments (those with and without prior diversity training: Doorenbos et al., 2005). The Cronbach’s alpha of the CCA in the present study was strong at .88.

The Marlowe–Crowne Social Desirability Scale–Short Form C is included to assess the influence of social desirability on self-reported cultural competence and perceived prejudice in health care (Reynolds, 1982, p. 119). This 13-item form has demonstrated strong Kuder–Richardson reliability r = .76 and evidence of concurrent validity as compared with the Marlowe–Crowne standard version (r = .93) and the Edwards Social Desirability Scale (r = .41: Reynolds, 1982, p. 124). Responders marked dichotomous items, true or false, representing thoughts that are typically undesirable but probably true of most people (for e.g., “I sometimes feel resentful when I don’t get my way”), or culturally acceptable but probably untrue of most people (e.g., “I’m always willing to admit it when I make a mistake”). Higher scores indicate higher need for approval (Schim, 2006). The internal reliability indicator in this study, r = .65, was lower than the desired reliability indicator of .8, which would indicate adequate reliability in an established scale (Nunnally & Bernstein, 1994).
Design

A cross-sectional survey was conducted; students completed the following instruments during the first week of classes: CCA, PPHC-M, and the Marlowe–Crowne Social Desirability Scale–Short Form C. Correlations among cultural competence scores and the PPHC were calculated.

Procedure

Approval for the study was obtained by the university human subject protection committee. The only identifying data were dates of birth; this was requested to allow for paired statistical testing (to assess change on completion of the nursing program). Gender was not assessed, as determination of the identity of male students would have been possible. Completion and return of the survey indicated informed consent. Students completed the survey in the classroom setting and submitted it to the investigator (RO) prior to leaving the classroom for a 15-minute break. RO was the instructor of the classes in Level I, II, and III when data were collected. With the classroom instructor’s permission, RO visited the class of Level IV students. In all levels, students were assured that their participation was voluntary. A total of 154 students were invited to participate; 146 students completed the survey. The investigators were not aware of who chose to participate in the study.

Data were entered into the SPSS statistical analysis package and then the survey was reread for accuracy in the SPSS file by both investigators.

Participants

In total, 146 baccalaureate students enrolled at a private Midwestern university school of nursing participated in the study. Forty-two students Level I (first semester juniors), 36 Level II (second semester juniors), 40 Level III (first semester seniors), and 28 Level IV (second semester seniors) participated in the study. Mean age of the participants was 26.9 years (range 21 to 56 years); 85% were White, 4% Black, 5.7% Hispanic, 3% Native American, and 3% Asian. In all, 54% report no previous diversity training. A total of 54% students were invited to participate; 146 students completed the survey. The investigators were not aware of who chose to participate in the study.

Data Analysis

Data analysis was completed using the SPSS 16.0. The data were cleaned to eliminate responses out of range. Respondents with occasional missing data were included in calculations; subscale scores for GPP and PEP were calculated by multiplying the mean subscale score by the number of items in the subscale, as long as at least five of six responses were submitted for the GPP and three of four responses were submitted for the PEP. The total PPHC for each participant was calculated if 9 of 10 items had a response.

Item characteristics were determined using frequency distributions and descriptive statistics, producing range, variance, and standard deviation, and measures of skewness and kurtosis. Assessment of normalcy of data included analysis of individual histograms for each item.

Results

Instrument Item Characteristics

The distributions of item responses were generally normal. Several were somewhat skewed either positively or negatively; the skewness statistic ranged from −1.613, people on welfare have to deal with prejudicial attitudes in health care, signifying that the majority of the participants perceived prejudicial attitudes of health care providers when working with people on welfare, to +1.331, sometimes I’ve been ignored by a provider, suggesting that the bulk of responses indicated no sense of being ignored by a provider based on diversity issues.

Dimensionality

There was strong interitem correlation, with the Bartlett test of sphericity significant at $p < .001$, approximate $\chi^2 = 458.162$, $45df$; and the Kaiser–Meyer–Olkin (KMO) index was 0.704, indicating moderate shared variance.

The dimensionality of the 10 items was analyzed with the principal components extraction method; varimax and oblimin rotations were done. The varimax rotation yielded the most interpretable solution. Three criteria were used to determine the number of factors: the scree test, optimal factor loadings of the solutions, and the a priori hypothesis that the instrument is bidimensional (Facione & Facione, 2007). Two factors were extracted; 34.64% of the variance is associated with Factor 1; 17.7% of the variance is associated with Factor 2. There are no cross-loadings in the solution (see Table 1). Factor 1, the GPP, has six items, with factor loadings ranging from .543 to .796. Factor 2, personal perception of prejudice in health care (PEP), consists of four items, with factor loadings ranging from .503 to .870. These items were consistent with those identified by Facione and Facione (2007) who report factor loadings of .45 to .78 for the GPP subscale and factor loadings of .67 to .79 for the PEP (p. 178).

Reliability

Cronbach’s alpha for the total scale was .782. Internal consistency for subscales of GPP and PEP were .760 and .756, respectively. These values meet the reliability criteria of .7 for a new scale (Nunnally & Bernstein, 1994, p. 265) and compare favorably with the values obtained by Facione and
Table 1. Principal Component Analysis With Varimax Rotation: Perceived Prejudice in Health Care Scale—Modified (N = 146)

<table>
<thead>
<tr>
<th>Items</th>
<th>Factors</th>
<th>General</th>
<th>Personal</th>
</tr>
</thead>
<tbody>
<tr>
<td>General perception of prejudice</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>All people can obtain quality health care regardless of their income</td>
<td>.710</td>
<td>.156</td>
<td></td>
</tr>
<tr>
<td>People on welfare have to deal with prejudicial attitudes in health care</td>
<td>.660</td>
<td>-.099</td>
<td></td>
</tr>
<tr>
<td>Lesbians/gays have to deal with prejudicial attitudes from health care providers</td>
<td>.543</td>
<td>.102</td>
<td></td>
</tr>
<tr>
<td>All people can obtain quality health care regardless of their race or ethnic group</td>
<td>.796</td>
<td>.118</td>
<td></td>
</tr>
<tr>
<td>Immigrants often receive poorer quality health care delivery</td>
<td>.586</td>
<td>.224</td>
<td></td>
</tr>
<tr>
<td>African Americans/Blacks and Latinos/Hispanics have fewer options for health care than White people</td>
<td>.648</td>
<td>.237</td>
<td></td>
</tr>
<tr>
<td>Personal perception of prejudice</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sometimes I’ve been ignored by a provider just because of my gender or because I am poor or lesbian/gay or a member of a minority racial/ethnic group</td>
<td>.267</td>
<td>.796</td>
<td></td>
</tr>
<tr>
<td>I haven’t always been treated respectfully by doctors and nurses</td>
<td>.143</td>
<td>.503</td>
<td></td>
</tr>
<tr>
<td>I have experienced discrimination in a health care provider’s office</td>
<td>.142</td>
<td>.825</td>
<td></td>
</tr>
<tr>
<td>My own health care has never been affected by discrimination</td>
<td>-.051</td>
<td>.870</td>
<td></td>
</tr>
</tbody>
</table>

Facione (2007) as shown in Table 2. The item analyses of the total scale and the two subscales did not result in deletion of any items. The correlation between the GPP and the total scale PPHC was .861; the correlation between the PEP and GPP was .321, and between the PEP and PPHC was .758. All interscale correlations were statistically significant at the .01 level.

For the total scale (PPHC), the corrected item-to-total correlations ranged from .326 (people on welfare . . .) to .594 (sometimes I’ve been ignored . . .). All items met the alpha-if-deleted criterion of .01. The mean score of the PPHC was .296 (SD = 7.03), reflecting a fairly neutral perception of prejudice in health care. More positive scores affirm perception of prejudice.

The GPP corrected item-to-total correlations ranged from .439 to .662. All items met the alpha-if-deleted criterion of .01. The mean score of the GPP was 2.88 (SD of 4.82), affirming a general perception of prejudice in health care.

The PEP corrected item-to-total correlations ranged from .333 to .684. The Cronbach’s alpha-if-deleted revealed that the item, “I haven’t always been treated respectfully by doctors and nurses” exceeds the .01 criteria (.832). However, because the item performed well in the PPHC, and because four items are desirable to measure a construct, the decision was made to retain the item in the subscale. In future use of this instrument, wording of the item may be, “I have always been treated respectfully by doctors and nurses.” It is possible that the negative conjunction, haven’t, led to confusion in interpretation by the respondent. The mean score for the PEP was −2.58 (SD = 3.79). Since a more positive score indicates perception of prejudice, this score would suggest that on average, the subjects did not perceive personal prejudice when receiving health care.

Table 2. Means, Standard Deviations, and Reliabilities of Scales (N = 146)

<table>
<thead>
<tr>
<th>Scale</th>
<th>Mean</th>
<th>SD</th>
<th>n</th>
<th>α</th>
<th>αα</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perception of Prejudice in Health Care Scale (10 items)</td>
<td>0.296</td>
<td>7.03</td>
<td>135</td>
<td>.78</td>
<td>.79</td>
</tr>
<tr>
<td>General Perception of Prejudice (6 items)</td>
<td>2.88</td>
<td>4.82</td>
<td>137</td>
<td>.76</td>
<td>.75</td>
</tr>
<tr>
<td>Personal Experience of Prejudice (4 items)</td>
<td>−2.58</td>
<td>3.79</td>
<td>139</td>
<td>.756</td>
<td>.73</td>
</tr>
</tbody>
</table>


Validity

Content validity. Content validity was supported by expert review of the items. The revised instrument was reviewed by four nurse educators for phrasing and appropriateness of content. Changes in wording were made based on their suggestions.

Construct validity. A t test compared the scores of Whites (n = 117) with non-Whites (n = 20) for both subscales and the total scale scores. As predicted, non-Whites perceived more prejudice overall as indicated by the total scale scores, PPHC: x = 5.1, SD = 6.81 compared with White scores x = −.906, SD = 6.54; t(135) = 3.776, p < .001. Similarly, non-Whites perceived greater prejudice in health care generally.
than Whites as reflected by scores on the GPP, $x = 5.27$, $SD = 4.55$ compared with White scores, $x = 2.2$, $SD = 4.73$; $t(137) = 2.81$, $p = .006$. As may be expected, White scores on the PEP reflected significantly less perception of personal experience of prejudice compared with non-White scores, $x = -3.141$, $SD = 3.33$ compared with non-White scores, $x = -.25$, $SD = 4.6$; $t(22.476) = 2.682$, $p = .013$, equal variances not assumed. It should be noted that both group means are less than zero on the PEP; positive scores affirm perception of prejudice.

Known group comparisons were also conducted between those who have had diversity training ($n = 66$) and those who have not ($n = 74$), with the expectation that those who have had diversity training would be more aware of prejudice in the health care system. This expectation was supported by the $t$ test comparing group scores of the PPHC, $t(116.87) = -3.082$, $p = .003$, equal variances not assumed. Mean scores of those with diversity training affirmed a perception of prejudice in health care ($x = 2.06$, $SD = 7.9$) compared with those without ($x = -1.57$, $SD = 5.7$). The difference in score for the GPP was not statistically significant, $t(140) = -1.811$, $p = .072$, although both group means were positive, affirming perception of prejudice (training $x = 3.54$, $SD = 5.27$; no training $x = 2.07$, $SD = 4.35$). Although neither group mean of the PEP was positive (training $x = -1.48$, $SD = 4.17$; no training $x = -3.62$, $SD = 3.1$), the difference in scores was statistically significant, $t(118.9) = -3.415$, $p = .001$, equal variances not assumed. In this case, those with diversity training tended to rate items more positively than those without training, indicating a trend toward perception of prejudice.

It was predicted that there would be a positive correlation between cultural competence and perception of prejudice in health care. This was not supported as the correlation between the total scale PPHC and the CCA was $r = .165$, $p = .058$. Similarly, the GPP and the PEP were not significantly correlated with the CCA, with correlation coefficients of .132 and .136, respectively.

**Social Desirability and Perception of Prejudice in Health Care**

The PPHC and GPP were negatively correlated with the Marlowe–Crowne (MC) Social Desirability scale ($r = -.181$, $p = .032$; $r = -.174$, $p = .038$), although the degree of association was quite modest. The correlation of PEP and the MC scale was not significant ($r = -.129$, $p = .128$). In contrast, the relationship between the social desirability scale (MC) and CCA was positive: $r = .248$, $p = .003$.

**Discussion**

The PPHC-M shows promise as a measure of perception of prejudice in health care. The reliability indicators in this study are consistent with those reported by Facione and Facione (2007). These values suggest adequate internal consistency of the total scale as well as the subscales.

Careful consideration of the descriptive statistics of the subscales, however, indicates caution must be used when using the total scale score versus the subscales. For example, the overall mean score of the PEP in this study was $-2.58$, indicating no tendency to perceive discrimination in one’s personal experience in the health care system. However, the overall mean of the GPP affirmed perception of prejudice, at 2.88. In combination, the scores of the two scales seem to offset one another, leaving a relatively neutral overall perception of prejudice in the health care system (PPHC), with the mean slightly above zero, at .296. This neutral result is based on an overwhelmingly White sample (117 Whites compared with 22 non-White students). When the scores of the non-Whites in this study are considered, this offsetting effect disappears, PPHC $M = 5.1$, indicating a strongly positive affirmation of perceived prejudice in health care; GPP $M = 5.27$ and the mean score for the PEP $= -2.5$.

The more positive affirmation of prejudice in health care demonstrated by non-Whites compared with Whites in this sample is inconsistent with the findings of Facione and Facione (2007), who reported that mean scores of the GPP of Whites ($M = 4.83$, $SD = 3.15$) were higher than those of either Blacks ($M = 4.13$, $SD = 3.00$) or Hispanics ($M = 3.08$, $SD = 3.43$). However, on further examination, Facione and Facione demonstrated that the lower scores of the Hispanic group were explained by educational level. In the present study, there was a small, positive correlation between education level and higher GPP scores ($r = .184$, $p = .029$). By definition, all the subjects in the present study have had at least 2 years of college, which may result in higher perception of prejudice in health care, as they may have been exposed to coursework that considers social injustice. Additionally, the number of non-White participants in this study was small, and combining subjects from the various ethnic groups into a “non-White” category was necessary to make comparisons with the White participants. This is not an ideal way to assess the attitudes of members of various cultures/ethnic groups, and future testing of this instrument should oversample Black, Native American, and Hispanic groups to promote comparison of those groups separately. The findings of the current study were consistent with Hausmann et al. (2008), who reported higher levels of perceived discrimination by Blacks compared with Whites.

The overall PPHC scores in this study ($X = 0.296$, $SD = 7.03$) reflected a neutral perception of prejudice in health care, compared with the PPHC scores reported in the Facione and Facione study ($X = 4.02$, $SD = 4.84$), which demonstrate an overall perception of prejudice. There was a positive correlation of age with the PPHC ($r = .397$, $p < .001$); in the present study, the mean age of the respondents was 26.9 years ($SD = 6.55$). The older the participant, the more positive affirmation of prejudice in the health care system. The mean
age of sample in the study by Facione and Facione (2007) was 46.02 years, $SD = 15.04$. It is possible that the younger age of the present sample resulted in a more neutral perception of prejudice in the health care system. This would certainly be consistent with the more optimistic, less cynical perspective of many youth. Furthermore, the basic difference in sample occupations, nursing students versus patients of diverse ethnic backgrounds, likely contributed to the marked difference in total PPHC scores between the two studies.

The small, negative correlation of the MC social desirability scale with the GPP ($r = -.174, p = .038$) is consistent with the findings of Facione and Facione (2007), who reported an $r = -.293, p < .001$. The correlation of the MC social desirability scale with the PEP was not significant in the present study in contrast to the findings of Facione and Facione who reported an $r = -.259, p < .001$. Their interpretation was to suggest that the social desirability bias reflected by the MC social desirability scale may indicate a tendency to “underreport women’s actual perception of prejudice for each subscale” (Facione & Facione, p. 181). This explanation may certainly apply to the present study as well. Perhaps not recognizing prejudice in health care is perceived as socially desirable?

An important limitation in this study was that the primary investigator was the teacher in three of the four levels. Although anonymity was maintained and voluntary participation was emphasized, students may have felt subtle pressure to complete the study and responses may have reflected socially desirability. In addition, because a break followed completion of the survey, their responses may have been rushed and not as thoughtful. It was our intention that the use of the MC social desirability scale controlled for the social desirability concern.

There was support for construct validity of the PPHC-M. The contrasted group scores of the PPHC and PEP revealed greater perception of prejudice in health care by those who have had diversity training compared with those who have not. Although not statistically significant, the GPP scores were trending in the same direction. Similarly, as may be expected, non-Whites’ perception of prejudice in the health care system was greater than Whites, as measured by the total scale and both subscale scores.

The correlations of the PPHC, GPP, and PEP with the CCA were not statistically significant. This would seem to indicate that cultural awareness and the perception of prejudice are not related concepts. As suggested by Giger et al. (2007), discussions of culture may not tap into the issues of prejudice and discrimination. Thus assessment of attitudes that consider social injustice may be complementary to measures that assess cultural competency.

**Conclusion**

The PPHC-M demonstrates promise as a measure of perception of prejudice in the health care system. Further refinement of the scale is indicated, particularly the wording of the item, “I haven’t always been treated respectfully by doctors and nurses.” Future testing of the scale should include assessment of staff nurses and other health care providers. The process of assessment of health care providers may help raise awareness of the prejudice and discrimination that exists within the health care system. In accordance with critical social theory, to make a change in the dominant worldview, it is essential to raise awareness of the need for change.

Awareness of patients’ perception of prejudice in health care could be expanded by assessing patients of diverse ethnicities, races, sexual orientations, and genders. The original data for this scale were collected from the woman’s perspective (Facione et al., 2002; Facione & Facione, 2007). The change of wording of the PPHC-M to include both genders will allow exploration of broader patient perspectives. The PPHC-M also offers unique ways of exploring health care providers’ perceptions of prejudice within the health care system. Although more work is needed and further refinement of the PPHC-M is clearly indicated, this study represents a critical next step in our capacity to examine some of the ways in which provider perceptions of prejudice influence health disparities and health outcomes in diverse communities of service.

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