Healthcare Mistreatment and Continuity of Cancer Screening among Latino and Anglo American Women in Southern California

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Abstract

The aim of this research was to examine the relation of perceptions of healthcare mistreatment and related emotions to continuity of cancer screening care among women who reported healthcare mistreatment. The structure of relations among cultural beliefs about healthcare professionals, perceptions of mistreatment, mistreatment-related emotions, and continuity of screening was investigated. Participants included 313 Anglo and Latino American women of varying demographic characteristics from Southern California who were recruited using multistage stratified sampling. Structural equation modeling confirmed the relation of perceptions of mistreatment to continuity of care for both Anglo and Latino American women, with ethnicity moderating this association. For Anglo Americans, greater perceptions of mistreatment were negatively related to continuity of screening. However, for Latinas the relation was indirect, through mistreatment-related anger. While greater perceptions of mistreatment were associated with higher levels of anger for both ethnic groups, anger was negatively related to continuity of care for Latino but not for Anglo women. Furthermore, cultural beliefs about professionals were indirectly related to continuity of screening through perceptions of mistreatment and/or mistreatment-related anger. These findings highlight the importance of the role of cultural and psychological factors in research and interventions aimed at improving patient-professional relations with culturally diverse women.

Keywords

perceived mistreatment; emotions; culture; cancer screening; health disparities

The United States Institute of Medicine report *Unequal Treatment* indicated that differences in quality of healthcare partially accounted for disparities in a variety of health behaviors and outcomes among racial, ethnic, and socioeconomic groups (Smedley, Stith, & Nelson, 2003). In fact, patients' perceptions regarding the quality of their healthcare have been found to influence breast and cervical cancer screening and continuity of care (Blanchard & Lurie, 2004; Facione & Facione, 2007). From a health disparities perspective, the finding that continuity of care was associated with improved cancer screening rates (Menec, Sirski, & Attawar, 2005) is particularly relevant because minority populations, such as Latin

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Americans in the U.S. (Latinos[1]), are less likely to have a usual source of care, even after controlling for insurance status (Zuvekas & Taliaferro, 2003).

Recent research has identified variations in perceived quality of physician care among various ethnic populations in the U.S. (Blendon et al., 2008). Some Latino populations in particular have reported significantly lower quality of care than mainstream, non-Latino White (Anglo[2]) Americans. For instance, Mexican American and Central/South American patients were significantly less likely than Anglo Americans to report that they received excellent or good quality of care, that their provider listened to them carefully, and that they felt comfortable asking their healthcare professional questions.

Perceiving that one has been treated poorly in the healthcare setting has implications for subsequent patient-physician encounters and future health behaviors. Because interpersonal continuity of care reflects the ongoing relationship between a patient and their healthcare professional and implies a sense of trust and responsibility (Saultz, 2003), the perception that quality of care is poor or that one has been mistreated may elicit negative emotional reactions which may in turn disrupt continuity of care. In fact, patients who reported that their physician did not listen to what they had to say were more likely to discontinue care with that healthcare professional (Federman et al., 2001). In regards to breast cancer screening, Latino American women have reported discourteous behavior on the part of health professionals as a barrier to repeat mammography screening (Moy, Park, Feibelmann, Chiang, & Weissman, 2006). Given the increasing disparities in breast cancer screening between Latino American and Anglo American women over the last decade (Ries, Melbert, Krapcho, et al., 2008), a better understanding of perceptions of mistreatment is necessary.

Ethnic Diversity, Cultural Beliefs about Health Professionals, and Perceptions of Mistreatment

Despite the increasing diversity of the U.S. population, our healthcare system is largely based on Anglo American cultural assumptions (Roosa, Dumka, Gonzales, & Knight, 2002). From the perspective of cultural psychology, the cultural divide between mainstream healthcare professionals and the diverse patients they serve is likely to influence the interactions between healthcare professionals and their patients. In regards to the healthcare professional, their own cultural beliefs and behavioral expectations regarding patients, in addition to a lack of understanding of their patients' culture, may influence how they treat and interact with diverse patients and the effectiveness of the care they provide. From the perspective of culturally diverse patients, their own cultural beliefs, values, norms, and expectations about healthcare professionals may influence not only their health behavior but also their perceptions of care and interactions with healthcare professionals.

The socially shared experience of lower quality of care and perceived mistreatment among members of non-dominant ethnic or socioeconomic status (SES) communities may result in socially shared beliefs about healthcare and healthcare professionals that can in turn influence the clinical encounter. According to theoretical considerations regarding the study of culture and behavior (Betancourt & Flynn, 2009), these socially shared beliefs become part of the group's culture and may subsequently negatively influence their perceptions, emotional reactions, and interactions with healthcare professionals. This may in turn disrupt

[1]The term *Latino* refers to the individuals or populations of the U.S. who came originally from Latin America or a region of the U.S. that was once part of Latin America.
[2]*Anglo American* refers to non-Latino White individuals or populations of the U.S. who came originally from the United Kingdom or other European backgrounds, who share the English language and Anglo American cultural heritage (see Betancourt and Fuentes, 2001).

continuity of care and contribute to perpetuating and potentially exasperating ethnic and SES health disparities, such as those concerning cancer screening and outcome.

A number of cultural beliefs relevant to health professionals have been identified among Latino American populations in the U.S. For instance, Latinas reported that health professionals who perform mammograms are 'harsh' or 'cold' (Moy et al., 2006). Other research has identified Latino cultural beliefs regarding the trustworthiness of healthcare professionals (Buki, Borrayo, Feigal, & Carrillo, 2004). Recent research employing the bottom-up methodological approach to the study of culture (Betancourt, Flynn, Riggs, & Garberoglio, 2010) identified and developed an instrument to assess cultural beliefs about health professionals. Latinas were significantly more likely than Anglo women to report socially shared unfavorable beliefs about health professionals performing breast and cervical cancer screening exams, including lack of concern, compassion, and trustworthiness. Findings from this research revealed that cultural beliefs directly influenced cancer screening behavior and in some cases, the influence was indirect through psychological factors. For instance, higher levels of negative cultural beliefs about health professionals were associated with higher levels of anxiety, fear, and worry. Moreover, ethnicity influenced these relations in that the role of emotions was stronger for Latinas.

The Present Study

The aim of the present research was to examine the relation of perceptions of healthcare mistreatment and related emotions to cancer screening continuity of care among women who reported healthcare mistreatment. These relations were examined among Anglo American and Latino American women who indicated they experienced mistreatment on the part of healthcare professionals during routine breast and cervical cancer screening exams. Because cultural beliefs are likely to influence behavior as well as psychological processes (see Figure 1), the direct as well as indirect relation of cultural beliefs about healthcare professionals to continuity of cancer screening was also tested through perceptions of healthcare mistreatment and related emotions.

The research was guided by Betancourt's theoretical model for the study of culture and behavior (Betancourt, Hardin, & Manzi, 1992; Betancourt & Lopez, 1993), adapted for health behavior (Betancourt & Flynn, 2009). Consistent with the conceptual model, for the purpose of this study, culture was defined in terms that are relevant to health behavior and are amenable to measurement, such as socially shared beliefs, values, norms, and practices (Betancourt & Lopez, 1993). The model specifies how culture relates to health behavior and mediating psychological factors as well as to population categories conceived as sources of cultural variation. Therefore, in addition to the associations among perceptions and emotional reactions to mistreatment and patients' continuity of cancer screening care, this study investigated the nature of relations among ethnicity, SES, age, cultural beliefs about healthcare professionals, perceptions of healthcare mistreatment, related emotions, and continuity of cancer screening care.

According to the model, perceptions of healthcare mistreatment and related emotions are considered psychological processes (C) that directly related to health behaviors, such as continuity of cancer screening care. Perceptions of mistreatment and related emotions (C) are also likely to be associated with aspects of culture (A). Such aspects of culture may be shared among members of a racial, ethnic, SES, gender, age or religious group. In fact, these cultural elements are likely to be not only related to psychological processes (e.g. perceptions of mistreatment and related emotions) but also to health behaviors, such as continuity of care. Therefore, the relation of culture to health behavior was expected to be direct and/or indirect, through its relation to psychological processes.

It was hypothesized that for both Anglo and Latino American women, perceptions of healthcare mistreatment would be negatively associated with continuity of cancer screening directly and/or indirectly through mistreatment-related emotions. Specifically, higher levels of perceived mistreatment were expected to be associated with higher levels of mistreatment-related anger and a lower probability of continuity of cancer screening care. It was also hypothesized that higher levels of negative cultural beliefs about healthcare professionals would be related to discontinuity of care, both directly and indirectly, through higher levels of mistreatment-related psychological processes. Finally, consistent with previous research (Betancourt, et al., 2010), it was hypothesized that ethnicity would moderate the relations among mistreatment-related anger and continuity of care. Specifically, it was expected that the relations among emotions and cancer screening would be stronger for Latinas.

Method

Participants and Procedures

As part of a larger research program investigating cultural and psychological processes relevant to cancer screening, multi-stage, stratified sampling was conducted to obtain nearly equal proportions of Latino and Anglo participants from varying demographic characteristics in Southern California. According to MacCallum, Browne, and Sugawara's (1996) methods for estimating minimum sample size for covariance structure modeling based on a test of close fit [α = .05, β = .80, Root Mean Square Error of Approximation (RMSEA) values of ϵ_0 = .05, ϵ_a = .08[3], df = 60], a sample of 187 participants was adequate to have sufficient statistical power to detect this level of significance.

Using U.S. Census tract data from the Federal Financial Institutions Examination Council, projections regarding ethnicity, SES, and age were anticipated for potential recruitment sites, including churches, markets, universities, free/low-cost health clinics, mobile home parks, and community settings. The 2007 American Cancer Society guidelines recommend breast cancer screening annually for women 40 years of age and older (Smith, 2006); therefore, specific sites such as community centers that offered older adult activities (e.g. water aerobics, jazzercise classes), were identified that would provide a larger proportion of women from this age group.

Once permission from key personnel at the selected sites was obtained, an English and/or Spanish recruitment flyer was posted at each setting describing the study, eligibility for participation, and the time and on-site location where interested participants could go to complete an instrument. As a result of this approach, a precise rate of eligibility could not be estimated as it was impossible to determine how many of the women who read the flyers were eligible to participate, yet chose not to participate in the study.

Institutional Review Board (IRB) approval for the study protocol was granted prior to data collection. When interested participants arrived at the noted settings, bilingual research assistants explained the purpose of the study and restated that women were only eligible to participate if they were Latino or Anglo American, at least 21 years of age, able to read English or Spanish, and had never been diagnosed with breast or cervical cancer. Participants' eligibility was later confirmed through the demographic information obtained from the data collection instrument.

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[3]The null hypothesis indicates the degree of fit based on the ϵ index, so that ϵ_0 is the value specified by the H_0 and ϵ_a represents the degree of lack of fit of the specified model in the population. The difference between ϵ_0 and ϵ_a reflects the effect size, conceptualized as the degree to which H_0 is incorrect.

After participants provided signed, written consent, women were randomly assigned either the breast or cervical instrument. At settings specifically identified to recruit women 40 years of age and older, participants were only administered the breast cancer version of the instrument. Participants completed the English or Spanish self-report sections of the instrument relevant to this study in approximately 30 to 45 minutes; however the entire instrument took approximately 60 to 75 minutes to complete. All participants were compensated $20 for their time. Once data were collected from a number of sites, the distributions of participants across demographic criteria were examined. Based on these analyses, additional settings were identified to fulfill the particular demographic need and flyers were posted advertising the relevant demographics.

As a result of recruitment efforts, 340 women reported to one of the noted settings. A total of 9 women chose not to participate in the study due to the length of the instrument, yielding a 97% participation rate. Approximately 5.4% of the 331 women who completed the instrument were not eligible after reviewing the demographic information. Seventeen participants indicated they were from an ethnic group that was not Latino or Anglo American, and one participant indicated that she was a breast cancer survivor. As a result, a total of 313 Latino American ($n = 166$) or Anglo American ($n = 147$) women participated and were eligible for this study.

Measures

All scales were translated into Spanish by a group of bilingual experts of different Latin-American nationalities through the double-back translation procedure in order to eliminate parochial wording and ensure comprehension (Brislin, Lonner, & Thorndike, 1973).

Ethnicity—Ethnicity was self-reported by participants and included as a moderating variable in the structural equation models.

Sources of cultural variation: SES and age—Research testing Betancourt's model for the study of culture has indicated that SES is an important source of cultural variation (Betancourt et al., 2010). A measure used in previous research with diverse populations (e.g. Betancourt, et al., 2010; Flynn, 2005) was employed to assess SES. Participants indicated their annual household income based on five categories: $0-14,999; $15,000-$24,999; $25,000-$39,999; $40,000-59,999; and $60,000 and above. Women also indicated their number of years of education, which was coded into five categories (< high school, high school, 1-2 yrs college, 3-4 yrs college, > 4 yrs. College) to be consistent with the five income categories. Because age is also an important source of cultural variation (Powe, 2001), participants indicated their age in years. Both SES and age were included in the multivariate models as sources of cultural variation.

Cultural beliefs about healthcare professionals—Cultural beliefs were assessed using one of the five subscales from the Cultural Cancer Screening Scale (CCSS; Betancourt, et al., 2010). The CCSS includes 20 items designed to assess cultural beliefs, expectations, and norms relevant to breast and cervical cancer screening among Latino and Anglo women. The CCSS has demonstrated adequate reliability (Latino α = .84; Anglo α = .83), measurement equivalence (Tucker Phi = .98), and predictive validity with breast and cervical cancer screening behaviors (Betancourt, et al., 2010). Five items from the negative beliefs about health professionals' subscale were used in the present study. A sample item was "Health professionals that perform breast (cervical) cancer screening exams are not compassionate for what their patients are going through." All items were based on a 7-point Likert scale with higher scores indicating greater cultural beliefs. The reliability for this subscale was adequate (Latino α = .759; Anglo α = .742).

Perceptions of interpersonal healthcare mistreatment scale—This scale included 11 items which were developed and/or adapted based on a review of existing scales (see Tucker, 2008), such as the Princess Margaret Hospital Patient Satisfaction with Doctor Questionnaire (Loblaw et al., 2004), the 9-Item Visit Satisfaction Questionnaire adapted by the American Medical Group Association (see Barr, 2002), and the Survey of Race, Ethnicity, and Medical Care (Kaiser Family Foundation, 2002). The 11 items represented instances of healthcare mistreatment as reflected by a lack of respect, privacy concerns, and communication issues.

The instrument was operationalized based on Krieger's (1999) recommendations for measuring perceived discrimination. Two components were assessed: 1) 'exposure' to negative interpersonal experiences with a healthcare professional, and 2) 'intensity' of the negative interpersonal experience. For each item, participants were asked if they had experienced the negative incident with their health professional during routine breast (cervical) cancer screening exams. If affirmative, participants were asked the extent to which the incident was a problem for them based on a 7-point Likert scale (*not at all problematic* = 0 to *very problematic* = 6). Principal axis factor analyses of the scale resulted in one factor for both the Latino American and Anglo American samples, respectively, with items loading at or above .514. The reliability of the scale was strong for Latino American (α = .935) and Anglo American (α = .899) women.

Mistreatment-related anger—Participants indicated the extent to which they experienced anger towards their health professional as a result of their mistreatment experience(s). This item was placed on a 7-point Likert scale, with higher scores representing greater anger.

Continuity of cancer screening care—Participants were asked "as a result of this incident, how likely are you to use this healthcare professional again for your breast (cervical) cancer screening examination" and "how likely are you to use his healthcare facility again for your breast (cervical) cancer screening examination." Items were placed on a 7-point Likert scale with higher scores indicating greater continuity of care. The reliability of this scale was strong (Latino α = .916; Anglo α = .914).

Covariates—Based on existing items used in previous research (Betancourt et al., 2010), additional items were included to assess relevant covariates, such as participants' insurance, country of birth, generation status, survey language, usual place of healthcare, having a regular health professional, patient-professional ethnic concordance, number of health professional visits over the last two years, and professional recommendation of breast/cervical cancer screening.

Statistical Analyses

All hypotheses were tested using Bentler's structural equations program (EQS; Bentler, 2005) with the maximum likelihood method of estimation. To maintain a simplified model without using up model degrees of freedom (see Kammeyer-Mueller & Wanberg, 2003), the variance from covariates found to significantly influence the study variables were partitioned from the covariance matrix prior to structural equation modeling (SEM). Due to theoretical considerations, age, education, and income were included in the test of structural equation models as sources of cultural variation. Adequacy of fit was assessed using the nonsignificant χ^2 goodness-of-fit statistic, a ratio of less than 2.0 for the χ^2/df (Tabachnick & Fidell, 1996), a Comparative Fit Index (CFI) of .95 or greater (Bentler, 2005), and a RMSEA of less than .05 (Browne & Cudeck, 1993) including the 90% confidence interval typically used in EQS (Kline, 2005). Modifications of the hypothesized model were

performed based on results from the Lagrange Multiplier (LM) test and the Wald test in addition to theoretical considerations.

To test ethnicity-based differences in the magnitude of the relations among the study variables, multi-group structural equation modeling (e.g. a test of invariance) was also conducted. Separate models were tested for Latino and Anglo American women, and all structural paths were constrained to be equal. If the constrained structural model showed a decrement in fit based on a significant $\Delta \chi^2$ or Δ CFI of .01 or greater as compared to the reference model, the LM Test of equality constraints was assessed for evidence of noninvariance (Cheung & Rensvold, 2002). Equality constraints were considered noninvariant and released in a sequential manner if doing so dramatically improved the model fit (LM $\chi^2 \geq 5.0$ per df; Scott-Lennox & Lennox, 1995). Since it is necessary in cross-cultural research to establish that differences observed between groups are not due to measurement artifacts (van de Vijver & Leung, 1997), measurement equivalence was examined prior to invariance testing.

Results

Of the 313 participants, a total of 283 Latino ($n = 151$) and Anglo ($n = 132$) women reported at least one instance of healthcare mistreatment. The demographic characteristics of the 15 Latino and 15 Anglo women who did not experience mistreatment did not differ from the retained sample, with one exception. Latino participants who reported no instances of perceived mistreatment were more likely to have completed the English instrument, $\chi^2(1) = 6.06$, $p = .014$.

A missing variables analysis revealed no statistically reliable deviation from randomness based on Little's Missing Completely at Random (MCAR) test for either Latino ($p = .517$) or Anglo American ($p = .753$) women. Therefore, scores for 42 women with missing values were imputed using the expectation-maximization (EM) algorithm and scores for 20 women were deleted, as their information could not be reliably imputed. As a result, data from 263 (Latina = 140; Anglo = 123) women were available for analyses. Latino and Anglo American women were represented across all levels of income, education, and age, respectively. Still, within the corresponding strata Latinas were overall younger, of lower SES, more likely to be uninsured, more likely to receive their healthcare from an emergency room/county hospital, and less likely to have patient-professional ethnic concordance than their Anglo counterparts (Table I).

Of these, 125 women responded to items related to breast cancer screening, and 138 responded to the same items worded in relation to cervical cancer screening. The demographic background of these two samples was not significantly different except for age (t (261) = −3.32, $p = .001$). Women who completed the breast cancer ($M = 46.59$, $SD = 13.65$) as compared to the cervical cancer instrument ($M = 40.64$, $SD = 15.30$) were significantly older. This was expected based on efforts to recruit a larger number of women over 40 years of age to complete the breast cancer section. Furthermore, no significant differences were observed between the two samples in terms of mean scores on any of the study variables, including continuity of care. Based on these results, it was deemed appropriate to combine the groups to form a sample of 263.

Perceptions of Interpersonal Healthcare Mistreatment

The percentage of women who reported having experienced a negative interpersonal incident and the percentage who perceived the incident as mistreatment were, for the most part, similar for the two ethnic groups with the exception of two incidents (Table 2). Latinas were significantly more likely to report having experienced 'the professional not being

honest' and 'the professional not returning their calls.' Latinas were also more likely to perceive these two instances as mistreatment. On the other hand, more ethnic differences in the 'intensity' of mistreatment were observed. In fact, 7 of the 11 negative interpersonal healthcare incidents were, on average, reported to be more problematic for Latino American than Anglo American women.

Correlations and Analysis of Covariates

The correlations of a number of covariates not central to the study hypotheses were examined (Table 3). For Latinas, greater intensity of perceived mistreatment was associated with having a county hospital/public hospital/emergency room as a usual place of healthcare, not normally seeing the same healthcare professional, seeing a healthcare provider from the *same* ethnic background as themselves, and completing the English survey. Latinas reported greater continuity of cancer screening care with the healthcare professional if they always saw the same healthcare professional. In addition, Latinas reported greater continuity of cancer screening care with the healthcare facility if they completed the Spanish survey.

For Anglo women, greater intensity of perceived mistreatment was significantly associated with having a county hospital/public hospital/emergency room as a usual place of healthcare, and not normally seeing the same healthcare professional. Also, greater cumulative experience of perceived mistreatment was significantly associated with less frequent health professional visits over the last two years. Furthermore, Anglo participants reported significantly greater continuity of cancer screening care with the health professional if they normally saw the same healthcare professional and if the patient and professional had ethnic concordance.

The variance explained by these covariates was partitioned from the indicators of the noted outcomes prior to structural equation modeling analyses. Fischer's r-to-z test of difference revealed a number of significantly different bivariate correlations based on ethnicity, confirming the necessity for conducting a test of invariance (Table 4).

Structural Equation Modeling

Test of the hypothesized model—Prior to conducting a test of the model for the Latino American and Anglo American samples independently, the data were screened and results revealed a normal distribution and no multivariate outliers. The model fit the data well and was considered optimal in representing data for each ethnic group [for Latino Americans: CFI = .99, χ^2 (29, $n = 140$) = 33.64, $p = .253$, $\chi^2/df = 1.16$, RMSEA = .034; for Anglo Americans: CFI = 1.00, χ^2 (29, $n = 123$) = 21.99, $p = .854$, $\chi^2/df = 0.758$, RMSEA = .000] (Figure 2). The factor structure, including the direction and significance of factor loadings was similar for both groups. However, some differences were observed in magnitude and significance of the associations between factors. These differences were examined in subsequent multiple group analyses.

Test of configural invariance (Table 5, Model 1)—Testing for measurement equivalence began with the least restrictive model in which only the factor structure of the baseline model, namely the number of factors and the factor-loading pattern, was checked for equality across ethnic groups. The requirement for configural invariance suggested that the same items must be indicators of the same factor for Latino Americans and Anglo Americans, yet differences in factor loadings are permitted across groups (Byrne, 2006). The fit indices revealed an excellent fit CFI = 1.00; χ^2 = 58.43 (60, $N = 263$), $p = .533$; $\chi^2/df = .97$; RMSEA < .001.

Test of measurement invariance (See Table 5, Model 2)—In the second level of measurement equivalence, the factor loadings of the baseline model were constrained to be equal across ethnic groups, making these coefficients invariant between Latino Americans and Anglo Americans. The fit of the constrained measurement model was also excellent [CFI = 1.00, χ^2 (65, n = 263) = 59.13, p = .682, χ^2/df = 0.91, RMSEA = .00]. Because the difference between the fit of the constrained measurement model and the configural model was not significant, measurement equivalence was supported. Because, the measurement model operated similarly for both Latino Americans and Anglo Americans, any group variations observed in the multi-group structural model could be interpreted as cross-cultural differences (see Chen, 2008).

Test of structural invariance (See Table 5, Model 3)—To test for differences in the magnitude of the paths among the study variables across ethnicity, constraints were imposed on all of the structural paths. Specifically, invariance tests for path coefficients (structural regression paths) were used to test whether the relations between factors varied as a function of ethnic group. In comparison with the measurement model (Model 2), the constrained structural model showed a decrement in fit [$\Delta\chi^2$ (7) = 22.45, p = .002], due to the noninvariance of two structural paths. A review of the LM Test of equality constraints statistics revealed significant between-group differences in the path from Perception of Mistreatment to Continuity of Care (for Latinas: β = .17, p = .202; for Anglos: β = −.56, p = .024) as well as the path from Anger to Continuity of Care (for Latinas: β = −.34, p < .001; for Anglos: β = .04, p = .709).

Test of partial structural invariance (See Table 5, Models 4 and 5)—The largest improvement in model fit was obtained by releasing the path constraint from Perception of Mistreatment to Continuity of Care, LM $\chi^2(1)$ =8.42, p = .004 (Model 4). However, a difference in model fit was still observed with the measurement model [$\Delta\chi^2$ (6) = 13.83, p = .032]. Based on the Lagrange multiplier test (LM $\chi^2(1)$ = 5.01, p = .025), the second constraint from the path between Anger and Continuity of Care was released resulting in an excellent fit [CFI = 1.00, χ^2 (70, n = 263) = 67.49, p = .563, χ^2/df = .96, RMSEA = .000]. This model (Model 5) was comparable to the measurement model indicating that no additional paths should be released.

Test of research hypotheses (Table 6)—As indicated in the test of invariance, ethnicity moderated two of the paths included in the hypothesized model, resulting in different combinations of significant direct and indirect relations for the Latino and Anglo American samples. Specifically, ethnicity moderated the relations relevant to the first hypothesis concerning the direct and/or indirect associations between Perceptions of Healthcare Mistreatment and Continuity of Cancer Screening Care. For Anglo women, higher levels of Perceived Mistreatment were negatively related to Continuity of Cancer Screening Care (β = −.56, p = .024). However, no significant direct relation was observed for Latinas. In contrast, for Latinas the association of Perceptions of Mistreatment with Continuity of Care was indirect through Mistreatment Related Anger ($\beta_{indirect}$ = −.12, p = .010), which was not the case for Anglo women. Although Perceptions of Mistreatment were related to higher levels of Anger for both Latino (β = .41, p < .001) and Anglo women (β = .55, p < .001), Anger was negatively associated with Continuity of Care for Latino American (β = −.34, p < .001), but not for Anglo American women. These findings were consistent with the third hypothesis, which predicted that ethnicity would moderate the relations between Anger and Continuity of Care.

The second hypothesis was partially confirmed. Cultural Beliefs about Healthcare Professionals were not directly associated with Continuity of Cancer Screening Care for either Latino or Anglo American women. However, Cultural Beliefs were related to

Continuity of Care indirectly through mistreatment-related psychological processes. Specifically, higher levels of cultural beliefs were related to higher levels of perceived mistreatment for both Latino ($\beta = .51$, $p < .001$) and Anglo Americans ($\beta = .73$, $p < .001$). For Anglo women, Cultural Beliefs were negatively, indirectly related to Continuity of Care through Perceptions of Mistreatment ($\beta_{indirect} = -.39$, $p = .025$), while this association was through both Perceptions of Mistreatment and Mistreatment-Related Anger for Latinas ($\beta_{indirect} = -.07$, $p < .001$).

In addition to findings concerning the moderating role of ethnicity, the test of the hypothesized model confirmed the role of SES and age as sources of cultural variation. Specifically, results showed that lower SES was related to higher levels of Negative Cultural Beliefs about Healthcare Professionals (Latinas: $\beta = -.30$, $p = .005$; Anglos: $\beta = -.20$, $p = .057$). Furthermore, younger age was associated with higher levels of Negative Cultural Beliefs among Anglo American women ($\beta = -.33$, $p < .001$) and to a lesser extent for Latinas ($\beta = -.10$, $p = .13$).

Discussion

Overall, this research revealed that patients' mistreatment-related psychological processes were associated with continuity of cancer screening care for both Latino American and Anglo American women. Consistent with the conceptual model guiding the research, results also showed that cultural beliefs regarding healthcare professionals were strongly related to patients' perceptions of healthcare mistreatment. These in turn were found to relate directly to continuity of care for Anglos, and for Latinas indirectly through mistreatment-related emotions. In addition to providing evidence for the hypothesized structure of associations among cultural and psychological variables in relation to continuity of cancer screening care, the results shed light on the role of SES and age as sources of variation in cultural beliefs associated with the experience of healthcare mistreatment. These findings have important implications for patient-professional relations and the effectiveness of healthcare systems, interventions, and policies.

The moderating role of ethnicity on some of the relations, particularly in the case of psychological processes and continuity of care, is interesting from both a conceptual and a practical perspective. Results revealed that even though mistreatment-related psychological processes were negatively related to continuity of care for both Latino and Anglo women, the nature of that relation was different for participants of the two ethnic groups. In the case of Anglo women, perceptions of mistreatment were directly and negatively associated with continuity of care. Although those perceptions also elicited negative emotions for Anglo women, for them these emotions did not play a significant role in terms of continuity of cancer screening care. For Latinas, the negative emotional reaction elicited by the perception of mistreatment was more important in influencing continuity of screening care than the perception of mistreatment itself. These results echo previous findings concerning the relation of screening-related anxiety emotions to compliance with clinical breast exams and Pap tests, which were found to be more important for Latino American than for Anglo American women (Betancourt, et al., 2010).

Consistent with the model for the study of culture, cultural beliefs about healthcare professionals were strongly related to perceptions of mistreatment for both Latino and Anglo women. Although beliefs about health professionals did not show a significant direct relation to continuity of screening, they had an indirect negative relation through mistreatment-related psychological processes. This suggests that research investigating only the role of cultural factors on health behavior, without considering psychological processes that are related to those cultural factors, may lead to the erroneous conclusion that culture

does not play a role in health behavior. Because according to theory, those psychological processes are more direct determinants of behavior, considering cultural variables along with the corresponding psychological factors is expected to lead to more effective culture-based interventions (Betancourt, et al., 2010).

A number of preliminary analyses not related to the study hypotheses are also worthy of discussion. For instance, research regarding patient-professional relations often highlights the importance of racial/ethnic concordance of the patient and the professional (Chen, Fryer, Phillips, Wilson, & Pathman, 2005). However, results from the present research indicate that Latinas who saw a Latino healthcare professional were more likely to perceive healthcare mistreatment than those who saw a non-Latino professional. These findings raise interesting empirical questions. For instance, future research could examine whether culturally based social-class issues or differences in level of acculturation may in part account for this observation and potentially contribute to the cultural divide between minority health professionals and their ethnically-concordant patients. From this perspective, patient-professional differences in education, income, and region or country of origin may contribute to a cultural divide that, along with discrepancies in expectations, can exacerbate patients' perceptions of mistreatment. Because the Institute of Medicine (Smedley et al., 2003) recommended increasing the minority health force as a remedy to health disparities, more attention should be given to the nature of the patient-professional clinical encounter among members of various ethnic and SES groups.

Despite the significance of the study findings, some limitations of the research must be considered. First, one limitation was the moderately large amount of missing data, which may have been due to the length of the survey instrument. Second, although findings from the test of structural invariance revealed two statistically significant noninvariant structural paths, the relatively small sample size may have resulted in the inability to detect additional significant paths while adequately controlling for covariates. Furthermore, while the theoretical model on which the hypothesized relations were based provided meaningful support for the SEM findings, the cross-sectional design of this study did not allow for the assessment of temporal relations of variables and thus causal relationships.

Another limitation of the study was the nature of the sample and data collection. For instance, some degree of social acceptability bias may have occurred due to the use of self-report instruments. In addition, the possibility of selection and participation biases may have affected the generalizability of the findings. For instance, although the Latina population of this study reflected the demographic reality of Southern California, the sample was predominantly from a Mexican cultural background. Therefore, it is unclear whether the hypothesized model will function similarly with Latinos from other national origins, regions in the U.S., acculturation levels or educational levels. Furthermore, because the purpose of this study was to examine the relation of perceptions of mistreatment and related emotions to continuity of screening, only women who reported healthcare mistreatment were included in the analyses. Therefore, due to the nature of the sample it was not possible to investigate factors that may contribute to the lack of perceived mistreatment more generally. This represents a noteworthy area of future research.

Although a number of professional level characteristics were considered as covariates in the models tested, future research should also explore additional characteristics such as gender, medical specialty, and Spanish fluency which may be particularly relevant to patients' perceptions of mistreatment and continuity of cancer screening care. Consistent with research regarding the role of patient language and satisfaction with care (Schutt, Cruz, & Woodford, 2008), this research revealed that Latinos who completed the survey in English reported greater intensity of mistreatment. Such findings warrant a better understanding of

the role of language on perceptions of mistreatment. Other aspects relevant to perceptions of mistreatment, such as the amount of time that has passed since the mistreatment incident occurred and its influence on continuity of care also represent interesting questions for future research.

The results, which emerged from the test of theory-based hypotheses, have important implications for interventions with both health professionals and their diverse patients. These findings should be used to educate and raise health professionals' level of awareness regarding the importance of effective patient-professional relations and their influence on continuity of care. Such education efforts may in turn help to reduce disparities in continuity of care as well as breast and cervical cancer screening among Latino and Anglo American women in the U.S.

Results concerning the moderating role of ethnicity, suggest that efforts designed to improve relations among healthcare professionals and their Anglo as compared to Latino patients, may want to emphasize different aspects. For instance, in working with Anglo patients, healthcare professionals may be more effective at improving continuity of cancer screening care by recognizing their patients' perceptions of the clinical interactions. In fact, a greater understanding of patients' causal attributions for the negative interpersonal incident could greatly improve intervention efforts and patient-physician relations. When working with Latino patients, healthcare professionals may want to pay attention to not only their patients' perceptions of the clinical encounter but also to their emotional reactions to these interactions. Furthermore, because cultural beliefs are relevant to health behavior, interventions should address the cultural constructs (Borrayo, Thomas, & Lawsin, 2004) relevant to improving continuity of care.

Acknowledgments

References

Bentler, PM. EQS 6 structural equations manual. Multivariate Software; Encino, CA: 2005.

Betancourt, H.; Flynn, P. The psychology of health: Physical health and the role of culture in behavior. In: Azmitia, M.; Cabrera, N.; Carlo, G.; Chahin, J.; Contreras-Grau, J.; Villarruel, F., editors. Handbook of US Latino Psychology. Sage Publications; 2009.

Betancourt, H.; Flynn, PM.; Riggs, M.; Garberoglio, C. A cultural research approach to instrument development: The case of breast and cervical cancer screening among Latino and Anglo Women. in presshttp://her.oxfordjournals.org/content/early/2010/09/23/her.cyq052.full.pdf

Betancourt, H.; Fuentes, JL. Culture and Latino issues in health psychology. In: Kazarian, S.; Evans, D., editors. Handbook of cultural health psychology. Academic Press; San Diego, CA: 2001. p. 305-321.

Betancourt H, Hardin C, Manzi J. Beliefs, value orientation, and culture in attribution processes and helping behavior. Cross-Cult Psychol. 1992; 23:179–195.

Betancourt H, Lopez SR. The study of culture, ethnicity, and race in American psychology. Am Psychol. 1993; 48:629–637.

Blanchard J, Lurie N. R-E-S-P-E-C-T: Patient reports of disrespect in the health care setting and its impact on care. Fam Practice. 2004; 53:721–730.

Blendon RJ, Buhr T, Cassidy EF, Perez DJ, Sussman T, et al. Disparities in physician care: Experiences of a multi-ethnic America. Health Affair. 2008; 27:507–517.

Borrayo E, Thomas J, Lawsin C. Cervical cancer screening among Latinas: The importance of referral and participation in parallel cancer screening behaviors. Women Health. 2004; 39(2):13–29. [PubMed: 15130859]

Brislin, RW.; Looner, WJ.; Thorndike, RM. Cross-Cultural Methods. John Wiley; New York: 1973.

Browne, M.; Cudeck, R. Alternative ways of assessing model fit. In: Bollen, KA.; Long, JS., editors. Testing structural equation models. Sage Publications; Thousand Oaks, CA: 1993.

Buki LP, Borrayo EA, Feigal BM, Carrillo IY. Are all Latinas the same? Breast cancer screening barriers and facilitative conditions. Psychol Women Quart. 2004; 28:400–411.

Byrne, BM. Basic Concepts, Applications, and Programming. 2nd ed. Lawrence Erlbaum Associates, Inc.; Mahwah, NJ: 2006. Structural Equation Modeling with EQS.

Chen FF. What happens if we compare chopsticks with forks? The impact of making inappropriate comparisons in cross-cultural research. J Pers Soc Psychol. 2008; 95:1005–1018. [PubMed: 18954190]

Chen FM, Fryer GE, Phillips RL, Wilson E. Patients' beliefs about racism, preferences for physician race, and satisfaction with care. Ann Fam Med. 2005; 3:138–143. [PubMed: 15798040]

Cheung GW, Rensvold RB. Evaluating goodness-of-fit indexes for testing measurement invariance. Struc Equ Modeling. 2002; 9:233–255.

Facione NC, Facione PA. Perceived prejudice in healthcare and women's health protective behavior. Nurs Res. 2007; 56:175–184. [PubMed: 17495573]

Federman AD, Cook EF, Phillips RS, Puopolo AL, Haas JS, Brennan TA, et al. Intention to discontinue care among primary care patients: Influence of physician behavior and process of care. J Gen Intern Med. 2001; 16:668–674. [PubMed: 11679034]

Krieger N. Embodying inequality: A review of concepts, measures, and methods for studying health consequences of discrimination. Int J Health Serv. 1999; 29:295–352. [PubMed: 10379455]

Loblaw DA, Bezjak A, Singh PM, Gotoweic A, Joubert D, Mah K, et al. Psychometric refinement of visit-specific satisfaction with doctor questionnaire. Psyc Oncol. 2004; 13:223–234.

Menec VH, Sirski M, Attawar D. Does continuity of care matter in a universally insured population? Health Serv Res. 2005; 40:389–400. [PubMed: 15762898]

Moy B, Park ER, Feibelmann S, Chiang S, Weissman JS. Barriers to repeat mammography: Cultural perspectives of African-American, Asian, and Hispanic women. Psych Oncol. 2006; 15:623–634.

Ries, L.; Melbert, D.; Krapcho, M., et al. SEER Cancer Statistics Review, 1975-2005. NCI; Bethesda MD: 2008.

Roosa, MW.; Dumka, LE.; Gonzales, NA.; Knight, GP. Cultural/Ethnic issues and the prevention scientist in the 21st century. Prevention and Treatment. 2002. Retrieved from http://journals.apa.org/prevention/volume5/pre0050005a.html

Saultz JW. Defining and measuring continuity of care. Ann Fam Med. 2003; 1:134–143. [PubMed: 15043374]

Schutt, Cruz, Woodford. Client satisfaction in a breast and cervical cancer detection program: The influence of ethnicity and language, health, resources, and barriers. Women Health. 2008; 48(3): 283–302. [PubMed: 19064463]

Smedley, BD.; Stith, AY.; Nelson, AR. Unequal treatment: Confronting racial and ethnic disparities in health care. National Academy Press; 2003.

Tabachnick, BG.; Fidell, LS. Using multivariate statistics. Harper Collins; New York: 1996.

van de Vijver, FJR.; Leung, K. Methods and data analysis for cross-cultural research. Sage Publications, Inc.; Thousand Oaks, CA US: 1997.

Zuvekas SH, Taliaferro GS. Pathways to access: Health insurance, the health care delivery system, and racial/ethnic disparities, 1996-1999. Health Affair. 2003; 22:139–153.

Figure 1.
Betancourt's model of culture and behavior adapted for the study of health behavior
(Betancourt & Flynn, 2009)

Figure 2.
Final model with estimated path coefficients and factor loadings for Latino and Anglo subgroups.
*p < .05; **p < .01; ***p < .001.
Note. Paths for Anglo Americans are represented in parentheses. Variance from a number of covariates (see Table 3) were controlled for prior to SEM.

Table 1

Demographic Characteristics of Study Participants by Ethnicity

	Latino (*n* = 140)	Anglo (*n* = 123)
	n (%)	*n* (%)
Annual Household Income*		
< $14,999	35 (25.00)	23 (18.70)
$15-24,999	22 (15.71)	14 (11.38)
$25-39,999	29 (20.71)	20 (16.26)
$40-59,999	22 (15.71)	20 (16.26)
< $60,000	32 (22.86)	46 (37.40)
Education*		
Less than high school	40 (28.57)	8 (6.50)
High school	29 (20.71)	26 (21.14)
1-2 yrs college	39 (27.86)	38 (30.89)
3-4 yrs college	16 (11.43)	15 (12.20)
< 4 yrs college	16 (11.43)	36 (29.27)
Marital Status		
Single	34 (24.29)	20 (16.26)
Married	76 (54.29)	70 (56.91)
Divorced	23 (16.43)	22 (17.89)
Widowed	6 (4.29)	11 (8.94)
Not specified	1 (0.71)	0 (0.00)
Health insurance*	106 (75.14)	115 (93.50)
Usual place of health care*		
Emergency room/county or community hospital	41 (29.29)	12 (9.76)
Private doctor/private or university hospital	99 (70.71)	111 (90.24)
Normally see same doctor	103 (73.57)	98 (79.68)
Patient-professional ethnic concordance*	20 (14.29)	46 (37.40)
Place of birth*		
Mexico	47 (33.57)	0 (0.00)
Central America/Caribbean	8 (5.71)	0 (0.00)
South America	2 (1.43)	0 (0.00)
Canada	0 (0.00)	2 (1.63)
Europe	0 (0.00)	3 (2.44)
Not specified	1 (0.71)	0 (0.00)
United States	82 (58.57)	118 (95.93)
Spanish survey*	41 (29.29)	0 (0.00)
	Mean (SD)	*Mean* (SD)

	Latino (*n* = 140)	Anglo (*n* = 123)
	n (%)	*n* (%)
Age in years[*]	39.74 (13.08)	47.72 (15.56)
Number of doctor visits past 2 years	6.10 (11.04)	6.30 (6.00)

[*] *p* < .05 for differences between the Latinas and Anglos

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Table 2

Perceptions of Interpersonal Healthcare Mistreatment

	Ever Experienced n(%)		Perceived as Mistreatment n(%)		Intensity M(SD)	
	Latino	Anglo	Latino	Anglo	Latino	Anglo
Did not listen to me or give me a chance to say all of the things I wanted to say	130 (92.86)	112 (91.06)	70 (50.00)	62 (50.40)	3.46(1.84)	2.94(1.77)
Did not explain things to me or provide me with enough information	133 (95.00)	120 (97.56)	71 (50.70)	60 (48.80)	**3.53(1.91)**	**2.75(1.57)**
Used words that I did not understand	137 (97.86)	118 (95.94)	73 (52.10)	53 (43.10)	**3.53(1.92)**	**2.65(1.47)**
Did not act friendly towards me	135 (96.43)	120 (97.56)	65 (46.40)	54 (43.9)	3.25(1.92)	2.70(1.52)
Did not pay attention to my need for privacy	136 (97.14)	118 (95.94)	60 (42.90)	43 (35.00)	**3.23(1.98)**	**2.37(1.64)**
Treated me like an object	136 (97.14)	116 (94.31)	51 (36.40)	49 (39.80)	**3.18(1.87)**	**2.19(1.28)**
Kept me waiting terribly long	135 (96.43)	122 (99.19)	99 (70.70)	82 (66.70)	3.64(1.94)	3.28(1.67)
Rushed or hurried when he/she treated me	136 (97.14)	120 (97.56)	83 (59.20)	65 (52.80)	3.27(1.88)	2.86(1.67)
Did not return my calls	**131 (93.57)**	**104 (84.55)**	**59 (42.10)**	**37 (30.10)**	**3.74(1.96)**	**2.57(1.73)**
Did not treat me with respect	136 (97.14)	119 (96.75)	54 (38.60)	37 (30.10)	**3.26(2.03)**	**2.27(1.39)**
Was not totally honest with me about my condition	135 (96.43)	115 (93.50)	**58 (41.40)**	**28 (22.80)**	**3.48(1.97)**	**2.21(1.40)**
Mean (SD) for all negative interpersonal incidents	10.61 (1.70)	10.42 (1.68)	5.31 (4.21)	4.63 (4.02)	**3.27 (1.60)**	**2.67 (1.31)**

Note. Intensity rating ranges from 1 to 6. Boldface indicates that groups differ significantly at *p* < .05.

*
p < .05,

**
p < .01,

***
p < .001.

Table 3

Correlation Coefficients for Covariates

	Intensity of Mistreatment	Cumulative Mistreatment Experience	Continuity of Care: Professional	Continuity of Care: Facility
Latino				
Usual place of healthcare	−.182[*]	-	-	-
Have a regular HCP	−.256[**]	-	.201[*]	-
Patient- HCP ethnic concordance	.174[*]	-	-	-
Survey language	.203[*]	-	-	−.168[*]
Anglo	-	-	-	-
Usual place of healthcare	−.188[*]	-	-	-
Have a regular HCP	−.232[**]	-	.226[*]	-
Patient- HCP ethnic concordance	-	-	.217[*]	-
Number of HCP visits in 2 years	-	−.235[**]	-	-

Note. A dash indicates the correlation was not significant. HCP = healthcare professional

[*]
$p < .05$,

[**]
$p < .01$,

[***]
$p < .001$.

Table 4

Intercorrelations, Means, and Standard Deviations as a Function of Ethnicity

	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.
1. SES	--													
2. Education	.786 ***	--												
3. Income	.817 ***	.642 ***	--											
4. Age	.150	.118	.122	--										
5. Cultural beliefs about healthcare professionals	-.322 ***	.253 **	-.263 **	-.149	--									
6. Parcel 1	-.261 **	-.205 *	-.213 *	-.120	.809 ***	--								
7. Parcel 2	-.270 **	-.212 *	-.220 **	-.124	.837 ***	.677 ***	--							
8. Perceptions of healthcare mistreatment	-.165	-.130	-.135	-.076	.513 ***	.415 ***	.429 ***	--						
9. Mistreatment intensity	-.122	-.096	-.100	-.056	.378 ***	.306 ***	.317 ***	.737 ***	--					
10. Cumulative mistreatment experience	-.139	-.110	-.114	-.064	.432 ***	.350 ***	.362 ***	.843 ***	.621 ***	--				
11. Anger toward professional	-.068	-.054	-.056	-.032	.212 *	.172 *	.178 *	.414 ***	.305 ***	.348 ***	--			
12. Continuity of care	-.034	-.027	-.028	-.016	.105	.085	.088	.075	.056	.063	-.248 **	--		
13. Healthcare professional	-.031	-.024	-.025	-.014	.095	.077	.080	.068	.050	.058	-.225 **	.907 ***	--	
14. Healthcare facility	-.031	-.024	-.025	-.014	.097	.078	.081	.069	.051	.059	-.229 **	.922 ***	.836 ***	--
M	2.76	2.56	2.95	39.74	2.63	2.74	2.52	0.52	3.69	0.51	2.76	4.52	4.39	4.51
	(3.39)	(3.37)	(3.42)	(47.72)	(2.19)	(2.30)	(2.07)	(0.48)	(3.03)	(0.46)	(2.71)	(4.93)	(4.47)	(4.94)
SD	1.28	1.32	1.49	13.08	1.49	1.52	1.75	0.37	1.98	0.39	2.16	2.13	2.18	2.13
	(1.27)	(1.28)	(1.54)	(15.56)	(1.11)	(1.22)	(1.22)	(0.33)	(1.95)	(0.37)	(1.94)	(2.13)	(2.08)	(2.19)

Note. Intercorrelations for Latinos ($n = 140$) are in upper portion of cell, values in parentheses represent Anglos ($n = 123$). Boldface indicates that groups differ significantly at $p < .05$. Parcel 1 includes 3 items and Parcel 2 includes 2 items from the CCSS.

*
$p < .05$,

**
$p < .01$,

***
$p < .001$.

Table 5

Model summary for tests of configural, measurement, and structural invariance across ethnicity

Model	χ^2	df	CFI*	RMSEA*	(90% CI)	Model Comparison	$\Delta \chi^2$	Δdf	Δ CFI*
Model 1 Configural No constraints	58.43	60	1.00	<.001	(.000, .036)	—	—	—	—
Model 2 Measurement Model (factor loadings constrained across ethnicity)	59.13	65	1.00	.000	(.000, .030)	2 vs. 1	0.70	5	.000
Model 3 Structural Model (constrained factor loadings and 7 structural paths)	81.58	72	1.00	.023	(.000, .044)	3 vs. 2	22.45**	7	.000
Model 4 Structural Model (constrained factor loadings and 6 structural paths, released Mistreatment*→Continuity*)	72.96	71	1.00	.010	(.000, .038)	4 vs. 2	13.83*	6	.000
Model 5 Structural Model (constrained factor loadings and 5 structural paths, released Mistreatment*→Continuity* and Anger→Continuity*)	67.49	70	1.00	<.001	(.000, .033)	5 vs. 2	8.36	5	.000

Note. CFI = Comparative Fit Index; RMSEA = Root Mean Square Error of Approximation; Mistreatment = Perceived Healthcare Mistreatment; Continuity = Continuity of Cancer Screening Care

**p = .002;

*p = .032.

Table 6

Standardized Path Coefficients for Tests of Hypotheses

	Latino	Anglo	Path Moderated
Hypothesis 1			
Direct paths:			
Mistreatment→Continuity of Care	.17	−.56[*]	Yes
Mistreatment→Anger	.41[***]	.55[***]	No
Indirect paths:			
Mistreatment→Anger→Continuity of Care	−.12[**]	.02	—
Hypothesis 2			
Direct paths:			
Cultural Beliefs→Continuity of Care	.09	.19	No
Cultural Beliefs→ Mistreatment	.51[***]	.73[***]	No
Indirect paths:			
Cultural Beliefs→Mistreatment→Continuity of Care	.00	−.39[*]	—
Cultural Beliefs→Mistreatment→Anger→Continuity of Care	−.07[***]	.02	—
Hypothesis 3			
Anger→Continuity of Care	−.34[***]	.04	Yes

Note. Mistreatment = Perceived healthcare mistreatment; Cultural Beliefs = Cultural beliefs about healthcare professionals

[*] $p < .05$,

[**] $p < .01$,

[***] $p< .001$.