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## **Multicultural Discrimination Module**

**CHIS 2007 and 2009**

**High-Level Summary**

**October 2014**

### **Recommended Citation for Discrimination Module Instruments**

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## **Introduction**

The Multicultural Discrimination Module (DM) contains a set of questions developed to capture self-reports of racial and ethnic discrimination within multiethnic and multilingual populations. The DM can be used as a stand-alone set of measures or as part of a broader survey. The DM questions were field tested to a subset of adult respondents (18+) on the 2007 and 2009 California Health Interview Survey (CHIS).

The CHIS DM was designed as a multidimensional instrument to capture several dimensions of discrimination including: (1) recent (past 12-months) everyday discrimination, (2) lifetime discrimination, (3) stress appraisal of discrimination experiences, and (4) usual responses to discrimination experiences (Shariff-Marco et al., 2009). These dimensions are summarized in **Table 1** below.

## **Instruments**

Two versions of the DM were developed and fielded in CHIS 2007 and CHIS 2009 to test the two most common approaches to asking questions about racial and ethnic discrimination. Questions using the **1-stage approach (Version A)** first ask about “unfair treatment” in general and then ask about attribution for these experiences, including race/ethnicity, gender, age, and sexual orientation: “In the past 12 months, how often have you been treated unfairly at restaurants or stores?” and if yes, “Now I’m going to ask you why you may have been treated unfairly. In the past 12 months, have you been treated unfairly because of your race or skin color?...”.

[CHIS 2007 DM Version A](#)

[CHIS 2009 DM Version A](#)

Questions using the **2-stage approach (Version B)** ask directly about discrimination experiences due to race/ethnicity: “In the past 12 months, how often have you been treated unfairly or been discriminated against at restaurants or stores because of your race/ethnicity”.

[CHIS 2007 DM Version B](#)

[CHIS 2009 DM Version B](#)

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**Table 1. Summary Content of the Discrimination Module in CHIS 2007 and CHIS 2009**

Measure characteristics	Recent Experiences <sup>1</sup>	Lifetime Discrimination	Attribution to Discrimination Experiences <sup>2</sup>	Stress Appraisal of Discrimination Experiences	Usual Responses to Discrimination Experiences
<b>Indicators</b>	chronic or routine experiences of unfair treatment (incl. recurrent character assaults)	experiences of unfair treatment over the lifespan in the domains of school, work, medical care, police/courts and other domains (with opportunity to specify)	reasons why treated unfairly; for those reporting multiple attributions they are asked to identify the main reason	the amount of stress experienced as a result of discrimination	whether the respondent engaged in specific responses to overall experiences of discrimination
<b>No. of items</b>	8	4 (plus other-specify)	6 (plus other-specify)	2 (1 each for recent and lifetime discrimination item sets)	6 (plus other-specify)
<b>Response scale</b>	Never, Rarely, Sometimes, Often	Never, Rarely, Sometimes, Often	Yes/No	Not at all stressful, A little stressful, Somewhat stressful, OR extremely stressful	Yes/No for each of 6 specific responses to discrimination experience
<b>Scoring responses</b>	For each item <sup>3</sup> responses were scored with Never=0, Rarely=1, Sometimes=2, Often=3; compute average score for the 8	For each item, responses were scored with Never=0, Rarely=1, Sometimes=2, Often=3; sum score for the 5 items	N/A	For each item, responses were scored with Not at all stressful = 0, A little stressful = 1, Somewhat stressful = 2, Extremely stressful = 3. Items are independent; do not combine.	N/A

<sup>1</sup> Everyday discrimination during past 12 months.

<sup>2</sup> These items are only included in the 2-stage approach.

<sup>3</sup> Note that everyday discrimination and lifetime are operationalized differently. For 'everyday', we first summed the items then divided by the number of items to create a weighted average. For 'lifetime', we simply summed the items (without dividing by the number of items). These decisions mirror a broader literature on stress that has argued that chronic stressors are correlated whereas life events are not correlated. For an example of chronic stressors, it can be assumed that there may be correlations between ongoing stressors related to financial difficulties and marital difficulties. In the case of life events, it has been assumed that being fired is uncorrelated with death of a spouse. In our analyses, we chose to adopt these decision rules from the literature. Yet, we acknowledge that in the case of racial/ethnic discrimination, one could make a good argument that racial/ethnic life events are indeed correlated. We encourage users of the DM to be mindful of these arguments and purposeful when choosing a method for scoring the items.

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	items				
<b>High scores represent</b>	More recent everyday discrimination experiences	More lifetime discrimination experiences	N/A	More stress	N/A
<b>Score range</b>	0-3	0-15	N/A	0-3	N/A
<b>Languages available<sup>4</sup></b>	English, Spanish, Korean, Vietnamese, Cantonese, and Mandarin	English, Spanish, Korean, Vietnamese, Cantonese, and Mandarin	English, Spanish, Korean, Vietnamese, Cantonese, and Mandarin	English, Spanish, Korean, Vietnamese, Cantonese, and Mandarin	English, Spanish, Korean, Vietnamese, Cantonese, and Mandarin

The CHIS 2007 and 2009 DM codebooks provide more information about the total DM sample and distribution of responses across all DM indicators.

[CHIS 2007 DM Codebook](#)  
[CHIS 2009 DM Codebook](#)

**CHIS Field Tests and Evaluation**

In 2006, with encouragement from the California Health Interview Survey (CHIS) Multicultural Technical Advisory Committee, the National Cancer Institute (NCI) led a workgroup to ascertain how to validly and reliably measure and monitor racial/ethnic discrimination in a diverse multiethnic population. NCI initiated staffing and funding support to operationalize the development of the DM for implementation in CHIS.

The DM was created with two versions corresponding to the 1-Stage and 2-Stage approaches. In 2007, we randomly assigned the 1-stage or 2-stage approach to a subset of 7,401 English-speaking participants in the CHIS. This allowed us to directly test the two versions using a controlled design. The DM then underwent psychometric evaluation and behavior coding. Details of these tests are shown in **Table 2**. A refined version of the DM was then translated into Spanish, Korean, Vietnamese, Cantonese and Mandarin. In 2009, we randomly assigned the 1-stage or 2-stage approach to a subset of 4,744 adults in the CHIS. This time, the DM was administered in English and in the five translated languages. In 2009, the main goal was to evaluate whether the translated versions were equivalent to the English versions with respect to content, reliability, and validity. After the 2009 fielding and behavior coding analyses, we also conducted a Translation Workshop and as a result of those efforts, made additional revisions to the DM. Investigators who would like to use the DM in new studies should use the latest version of the DM (V2.1) found [here](#).

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<sup>4</sup> For CHIS 2007, only English is available.

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**Table 2. Sample Characteristics of Two Field Tests in CHIS 2007 and 2009**

	2007 Field Test (V1.0)		2009 Field Test (V2.0)	
	1-stage	2-stage	1-stage	2-stage
<b><u>Race/Ethnicity &amp; Language of interview</u></b>				
Non-Hispanic White-English	1,011	1,017		
African American/Black-English	534	511		
American Indian/Alaska Native-English	371	378		
Multiracial respondents-English	112	108		
Latino/Hispanic-Spanish			539	551
Latino/Hispanic-English	1,018	1,008	524	521
Asian American, Native Hawaiian, Pacific Islander-English	637	696		
Chinese-Cantonese			70	60
Chinese-Mandarin			48	71
Chinese-English			255	251
Korean-Korean			257	258
Korean-English			148	150
Vietnamese-Vietnamese			275	262
Vietnamese-English			252	252
Total	3,683	3,718	2,368	2,376
<b><u>Administration time (average in minutes)</u></b>	5.4	7.3	5.1	6.6

To evaluate the DM, a mixed methods approach was developed that included: literature and expert panel reviews, cognitive testing, behavior coding, psychometric analyses, assessment of associations with adverse health/behavioral outcomes, and a translation workshop (see **Table 3** below). Findings from the mixed methods approach used to evaluate the DM have been published (Shariff-Marco, Gee et al. 2009; Reeve, Willis et al. 2011; Shariff-Marco, Breen et al. 2011; Johnson, Shariff-Marco et al, 2014). The DM research team is continuing to analyze the CHIS field test data to understand how the DM measures using the two approaches are related to health outcomes and how the instruments performed in languages other than English.

**Table 3. Mixed Methods Evaluation of the Discrimination Module**

	Recent everyday discrimination	Lifetime discrimination	Stress appraisal	Usual responses
<b><u>2007 English Field Test</u></b>				
Literature (& Expert Panel) review	X	X	X	X
Cognitive testing	X	X	X	X
Behavior coding	X	X	X	X
Psychometric analyses				
Internal Reliability (Cronbach's alpha)	X	X		
Inter-item correlation	X	X		
Correlations with Total Score	X	X		
Factor loading	X			

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Differential Item Functioning (IRT)	X			
Associations with health/behavioral outcomes	X	X		
<b>2009 In-language Field Test</b>				
Behavior coding	X	X	X	X
Psychometric analyses				
Internal Reliability (Cronbach's alpha)	X	X		
Inter-item correlation	X	X		
Correlations with Total Score	X	X		
Factor loading	X			
Differential Item Functioning (IRT)	X			
Associations with health/behavioral outcomes				
Translation workshop	X	X	X	X

X=evaluation was conducted

**Weighting and Imputation of the DM**

The following documents address the methodology used for weighting the DM sample to California's population and imputation of missing data for each respective CHIS DM year.

- [Weighting Methods Report for CHIS DM 2007](#)
- [Weighting Methods Report for CHIS DM 2009](#)
- [Imputation Methods Report for CHIS DM 2007](#)
- [Imputation Methods Report for CHIS DM 2009](#)

In summary, the DM has evolved over time in response to empirical evidence designed to improve its usability.

For additional information and resources about using the Discrimination Module (DM), please visit the [CHIS FAQs webpage](#) or contact [chis@ucla.edu](mailto:chis@ucla.edu).

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**Bibliography**

Shariff-Marco, S., Gee, G. C., Breen, N., Willis, G., Reeve, B. B., Grant, D., Ponce, N. A., Krieger, N., Williams, D. R., Landrine, H., Alegria, M., Mays, V., Johnson, T. P., & Brown, E. R. (2009). A mixed-methods approach to developing a self-reported racial/ethnic discrimination measure for use in multiethnic health surveys. *Ethnicity and Disease, 19*, 447–53.

Reeve, B. B., Willis, G., Shariff-Marco, S., Breen, N., Williams, D. R., Gee, G. C., Alegria, M., Takeuchi, D. T., Kudela, M. S., & Levin, K. Y. (2011). Comparing cognitive interviewing and psychometric methods to evaluate a racial/ethnic discrimination scale. *Field Methods, 23*, 397–419.  
doi:10.1177/1525822X11416564.

Shariff-Marco, S., Breen, N., Landrine, H., Reeve, B. B., Krieger, N., Gee, G. C., Williams, D. R., Mays, V. M., Ponce, N. A., Alegria, M., Liu, B., Willis, G., & Johnson, T. P. (2011). Measuring everyday racial/ethnic discrimination in health surveys: How best to ask the questions, in one or two stages, across multiple racial/ethnic groups? *Du Bois Review: Social Science Research on Race, 8*, 159–177.  
doi:10.1017/S1742058X11000129.

Johnson, T.P., Shariff-Marco, S., Willis, G., Cho, Y.I., Breen, N., Gee, G.C., Krieger, N., Grant, D., Alegria, M., Mays, V.M., Williams, D.R., Landrine, H., Liu, B., Reeve, B.B., Takeuchi, D., & Ponce, N.A. (2014). Sources of interactional problems in a survey of racial/ethnic discrimination. *International Journal of Public Opinion Research*, doi: 10.1093/ijpor/edu024.