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Authors

Mills, Sarah D

Fox, Rina S

Pan, Tonya M

et al.

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THE PATIENT HEALTH QUESTIONNAIRE-4 IN HISPANIC AMERICANS

Sarah D. Mills, MS,¹ Rina S. Fox, MS,¹ Tonya M. Pan, MS,¹ Vanessa L. Malcarne, PhD,^{2,3} Scott C. Roesch, PhD^{1,2} and Georgia R. Sadler, PhD^{3,1}

¹SDSU/UCSD Joint Doctoral Program in Clinical Psychology, San Diego, CA; ²San Diego State University, San Diego, CA and ³Moore's UCSD Cancer Center, San Diego, CA.

The Patient Health Questionnaire-4 (PHQ-4) is increasingly used in primary care as a very brief screening measure of psychological distress, assessing current anxiety and depression symptoms. Adults with a current or lifetime diagnosis of anxiety or depression are more likely to smoke, be physically inactive and obese, and binge drink. Therefore, screening individuals for psychological distress may also help identify those who are likely to participate in unhealthy behaviors. However, despite the growing Hispanic American (HA) population in the United States, the psychometric properties of the PHQ-4 have not been evaluated for HAs. This study evaluated the reliability and structural validity of the PHQ-4 for English- and Spanish-speaking HAs. HAs with an English- (n = 210) or a Spanish-language preference (n = 226) completed the Generalized Anxiety Disorder-7 and the PHQ-9. The first two items from each measure were combined for these analyses to form the PHQ-4. Multiple-group confirmatory factor analysis was used to examine the goodness of fit of the two-dimensional factor structure across language-preference groups. Three separate models (i.e., configural invariance, metric invariance, and factor variance/covariance invariance) were evaluated using descriptive fit indices. The Satorra-Bentler X2 difference test was used to determine which model was the statistically superior fit. Results indicated a similar two-dimensional factor structure with equivalent response patterns and variances across language-preference groups. Internal consistency was good for both English ($\alpha = 0.86$) and Spanish ($\alpha = 0.87$) groups. Therefore, the two-dimensional PHQ-4 is suitable for use among HAs with English and/or Spanish language proficiency. The brevity of the measure makes it a good option for use in primary care as a quick screener of current anxiety and depression symptoms among HAs, and it may help identify those who are at high risk for engaging in unhealthy behaviors.

CORRESPONDING AUTHOR: Sarah D. Mills, MS, SDSU/UCSD JDP in Clinical Psychology, San Diego, CA, 92109; sarah.mills.29@gmail.com

A-077

A COMPARISON OF IPAD AND PAPER-BASED QUESTIONNAIRES IN HEALTHY AGING RESEARCH

Jason T. Fanning, MS and Edward McAuley, PhD

Kinesiology and Community Health, University of Illinois at Urbana-Champaign, Urbana, IL.

Digital questionnaires can validate data in real time, remove the need for data entry, dynamically display or hide content, prompt individuals to answer missing or mis-answered items, and can allow participants to explicitly state when items are skipped intentionally. Recent advances in tablet computer technology provide researchers with the ability to deliver such questionnaires using an intuitive interface that does not require the use of input devices (i.e., mouse and keyboard). This study compared a digital questionnaire battery delivered using an iPad-based web app designed for older adults with a traditional paper-based battery. Participants (N = 49; Mage = 66) completed three questionnaires using each delivery method followed by a brief evaluation assessing: Ease of use, perceived anxiety, and strengths and weaknesses of each method, as well as their preference. A non-parametric one-sample binomial test indicated that a significantly greater proportion of individuals preferred the iPad-delivered battery [41(3.428), $p < .001$]. Paired-sample t-tests indicated that measures collected by each method were not significantly different (all $p > .443$). Ease of use of the iPad interface, as well as anxiety while completing the digital battery were significantly correlated with preferences [$r_s = .665, p < .001$] and [$r_s = .552, p < .001$] respectively] such that those who preferred the digital battery tended to find it easier to use and were less anxious while using it. Participants most frequently found the iPad delivery increased speed of use and improved data entry, although navigation was perceived as being more difficult. By comparison, participants felt that the paper packet was easier to read and navigate, but was slow and cumbersome, and they disliked the lack of dynamic features. This study was the first to compare the use of traditional data collection with the use an iPad-based web app. We believe that it adds to the growing body of evidence that emerging technology can be effectively harnessed in health behavior research targeting older adults.

CORRESPONDING AUTHOR: Jason T. Fanning, MS, Kinesiology and Community Health, University of Illinois at Urbana-Champaign, Urbana, IL, 61801; fanning4@illinois.edu

A-078

CLUSTER ANALYSIS: A RELEVANT STATISTICAL TOOL TO IDENTIFY DIFFERENT SOCIAL VULNERABILITY TRAJECTORIES IN A YOUNG PARENT'S PROGRAM EVALUATION

Jacinthe Lachance Fiola, PhD,¹ Sylvie Gendron, PhD,¹ Gilles Dupuis, PhD² and Jacques Moreau, PhD¹

¹University of Montreal, Montreal, QC, Canada and ²University of Quebec in Montreal, Montreal, QC, Canada.

Objective: To establish the relevance of cluster analysis as a statistical tool to identify different social vulnerability trajectories among pregnant teens participating in a young parent's program evaluation.

Method: 451 pregnant teens aged 20 years or less were recruited from 19 community health and social service centers across seven regions in Quebec, Canada, to respond to structured interviews. Theoretical and statistical criteria were applied to select 22 categorical and continuous variables that were submitted to a TwoStep cluster analysis. Missing data for at least one variable resulted in the exclusion of 14.2% (n = 64) cases.

Results: Three distinct social vulnerability trajectories were identified (R1, R2, R3). R1 (n = 153) predominantly includes young mothers who are pregnant for the first time and who live with their partner in a household reporting employment as the main source of income. Mothers of R2 (n = 101) are younger than the others, on average, and all live with their parents, or those of their partner, during their pregnancy. Young women from R3 (n = 133) tend to report a less favorable perception of their health and higher levels of psychological distress and childhood trauma than other study participants. The majority report a previous pregnancy and nearly nine out of 10 have dropped out of school.

Conclusion: The occurrence of missing data can reduce the number of cases in a study sample following cluster analysis. Careful variable selection resulted in the identification of different social vulnerability trajectories in a cohort of pregnant teens participating in a young parent's program evaluation, while ensuring the desired statistical power for subsequent analyses. Given the different realities and needs of these families, the derived clusters are essential indicators to discriminate the effects of an early intervention program.

CORRESPONDING AUTHOR: Jacinthe Lachance Fiola, PhD, Nursing, University of Montreal, Montreal, QC, H3C 3 J7; jacinthe014@hotmail.com

A-079

EFFECTS OF INDIVIDUALLY-TARGETED RECRUITMENT ON MINORITY ENGAGEMENT IN CLINICAL RESEARCH

Susan D. Brown, PhD,¹ Juanran Feng, BS,¹ Paula Partee, MPH,¹ Ashley Mevi, MPH,¹ Samantha Ehrlich, PhD,¹ Charles Quesenberry, PhD,¹ Monique Hedderson, PhD,¹ Michaela Kieman, PhD² and Ferrara Assiamira, MD, PhD¹

¹Division of Research, Kaiser Permanente Northern California, Oakland, CA and ²Stanford University School of Medicine, Stanford, CA.

To address racial/ethnic minority underrepresentation in health research, we examined whether individually-targeted, ethnic-specific letters improved recruitment to a diabetes prevention trial. This experiment was efficiently integrated in "A Pregnancy and Postpartum Lifestyle Evaluation Study" (APPLES), a randomized lifestyle intervention trial among women with gestational diabetes and impaired glucose tolerance in the Kaiser Permanente Northern California healthcare system. Pregnant women identified in the electronic medical record, or EMR (n = 252 Asian, n = 86 White, n = 89 Hispanic, n = 18 African American) were randomized to targeted recruitment letters noting diabetes health disparities and risk information specific to their racial/ethnic group (n = 216), or standard letters with risk information for the general population (n = 229). All letters were English-Spanish bilingual and offered retail gift cards for participating in the APPLES trial. We examined the effects of targeted v. standard letters by race/ethnicity and preferred language obtained from the EMR on two recruitment rates: response (i.e., screening) and trial enrollment. The targeted letter did not significantly improve response or enrollment rates in overall or by racial/ethnic group. However, the targeted letter as compared to the standard letter showed trends for improved response (66.7% v. 33.3%, $p = .06$) and enrollment rates (38.9% v. 13.3%, $p = .10$) among n = 33 Hispanic women who preferred Spanish. In contrast, the targeted letter significantly lowered response (29.6% v. 57.1%, $p = .04$) and showed trends for lowered enrollment rates (25.9% v. 50.0%, $p = .07$) among n = 55 Hispanic women who preferred English. A targeted approach of ethnic-specific risk information may improve recruitment among Spanish-dominant, but not English-dominant Hispanic women. Culturally-influenced attitudes about research engagement and disease risk may warrant tailored strategies for diverse subgroups.

CORRESPONDING AUTHOR: Susan D. Brown, PhD, Division of Research, Kaiser Permanente Northern California, Oakland, CA, 94612; susan.d.brown@kp.org