



Vocational Interests and Prospective College Majors Among Youth of Color in Poverty

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This study examines how well vocational interests predict prospective college major specification among high school-aged youth of color in poverty. It extends previous research conducted on college-aged youth, while partially addressing the more limited scholarly attention paid to the career development and work lives of marginalized youth (Blustein, 2006).

Study Hypothesis

Greater differentiation and strength of vocational interests will predict the selection of congruent¹ college majors. This hypothesis was tested with a sample of high school students who self-identify as ethnic minorities and who attend schools in high-poverty communities.

Variables

Vocational interests were operationalized² by the differentiation and strength of youths' vocational interests. Differentiation refers to a clear pattern of high interest in certain occupations and low interest in other occupations; strength refers to the magnitude of interest in high-interest occupations (Low et al., 2005; Tracey et al., 2005). Congruent college majors were examined by the match between youths' current vocational interests and their similarity to projected college majors (c.f. Hansen & Lee, 2006).

Participants

This study examined archival data from 1,930 youth who used the web-based *Kuder*[®] *Career Planning System*. High school juniors and seniors were selected because this is a critical period for college major specification and future-oriented exploration (Nurmi, 1991).

- Participants' mean age was 17.5. Young men comprised slightly more of the sample than young women.
- Youth who attended school in ZIP codes where the median household income fell below the federal poverty level (as defined by the U.S. Census Bureau) were selected into the study sample.

- Participants self-identified as American Indian/Alaska Native, Asian/Hawaiian/Pacific Islander, Black/African American, or Latino/a. Analyses were conducted by racial/ethnic group, given differences in the vocational interests among these groups (Kelly, 2002; Low et al., 2005).

Results

The first finding based on statistical analyses suggests that vocational interest strength and differentiation (in concert) may lead youth of color in poverty to specify college majors that are congruent with their current vocational interests. However, this model was not predictive of interest-major congruence for the American Indian/Alaska Native group. Moreover, GPA was not a significant predictor of congruence for any racial/ethnic group.

Total correct classification of interests and major-congruence was as follows:

- 67.0% (Asian/Hawaiian/Pacific Islander).
- 64.7% (Latino/a).
- 62.4% (Black/African American).
- 62.2% (American Indian/Alaska Native).

Overall, the full model correctly classified about two-thirds of the participants. The model's classification accuracy was also examined via receiver operating characteristic (ROC) curves, which examine the predictive accuracy of a model while simultaneously considering multiple cutoff points, ranging from 0 to 1. (The diagonal reference line from the bottom left to the top right on each graph represent the ROC curves.) The graphs on page five depict how well vocational interests classified predicted interest-major congruence for each racial/ethnic group. The further an ROC curve departs from this diagonal reference line, the more accurately a model predicts an outcome of interest (Woods et al., 2003).

The model was most accurate for the Asian/Hawaiian/Pacific Islander group (AUC = .71), exceeding the .70 cutoff for an acceptable model (Hosmer & Lemeshow, 1989). The model was less accurate for the American Indian/Alaska Native (AUC = .59), Black/African American (AUC = .60), and Latino/a groups (AUC = .64).

Discussion

This study demonstrates that vocational interest strength and differentiation (considered in concert) are significant predictors of interest/major congruence for samples of Asian/Hawaiian/Pacific Islander, Black/African American, and Latino/a youth in poverty. This suggests that vocational interests may help marginalized youth connect disparate phases of their work lives in a context of structural limitations (Constantine et al., 1998; Blustein, 2006).

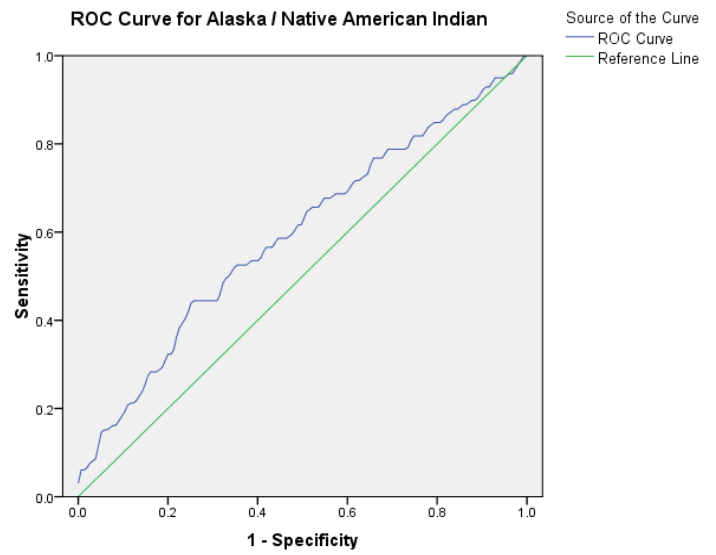
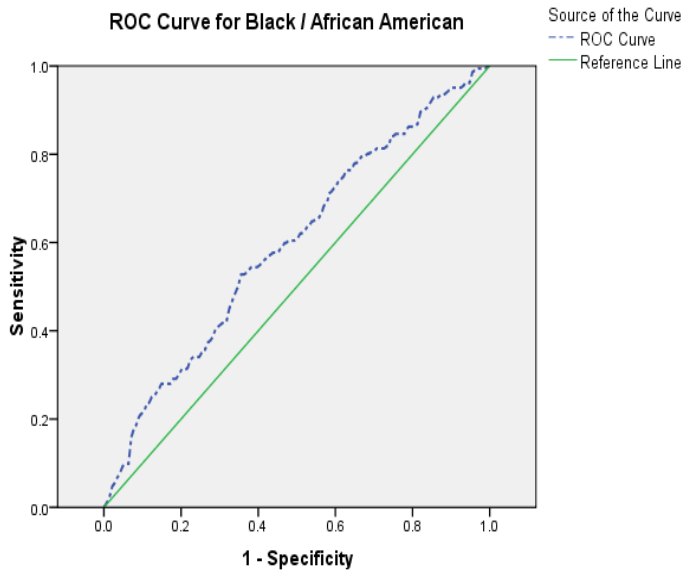
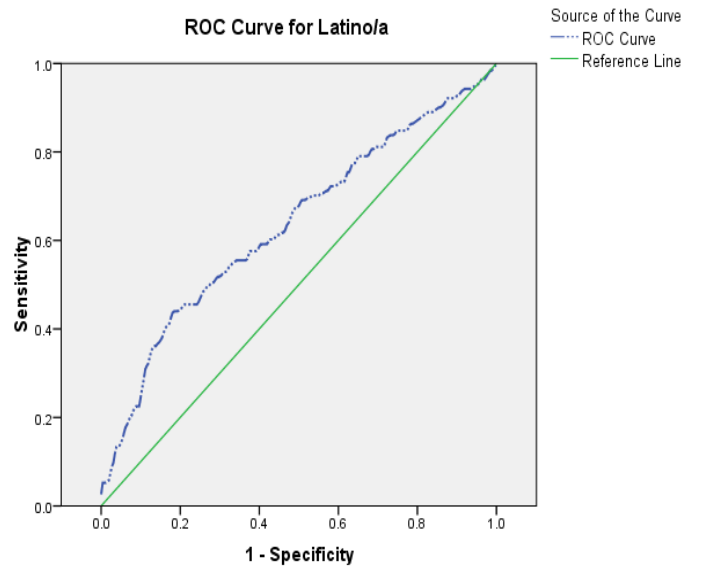
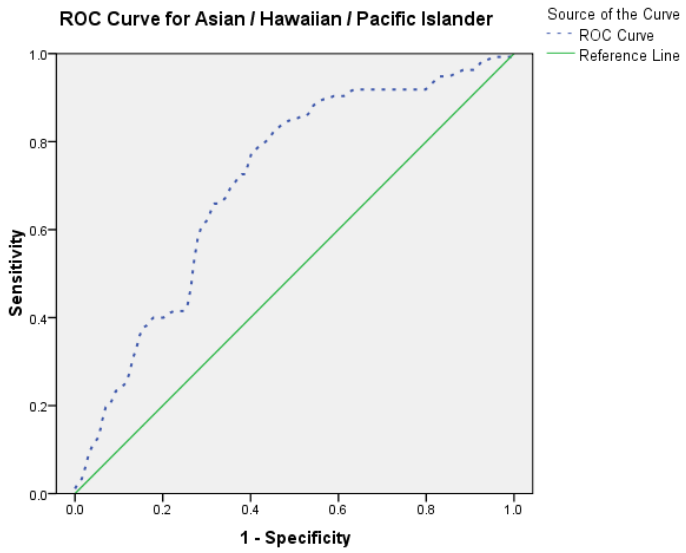
GPA, gender, and grade level were not associated with interest/major congruence. One might speculate that high-achieving students would be more likely to specify college majors that are congruent with their current interests, assuming high-achieving youths' greater investment in academics and their future careers.

This study also supports the use of interest inventories, the *Kuder® Career Search with Person Match*, in particular, to inform college counseling and guidance professionals who work with marginalized youth. It also suggests that clarifying vocational interests may prepare youth to connect disparate aspects of their work lives by implementing their occupational self-concept in congruent educational environments. Vocational interests, and interest differentiation in particular, appear to be particularly useful in helping Asian/Hawaiian/Pacific Islander youth connect their current vocational interests to prospective college majors.

Practitioners could help high school students link current vocational interests to prospective majors, provide information regarding these majors, and help youth explore the connection of prospective majors to future work roles. Preparing youth to enter postsecondary education with a clearer sense of their vocational interests and occupational self-concepts may help them select satisfactory college majors. Tracey and Robbins (2006) suggest that high school students' interest-major congruence is predictive of college academic performance.

Summary

The results of this study suggest that vocational interests may help marginalized youth connect disparate phases of their work lives. The study also demonstrates that vocational interest strength and differentiation (considered in concert) are significant predictors of interest/major congruence among this study's sample of high school students who self-identified as racial/ethnic minorities and who attend schools in high-poverty communities. The finding that vocational interests may help such marginalized youth connect current interests to their future work lives supports the use of interest assessments, and the *Kuder® Career Search with Person Match*, in particular.



References

- Blustein, D. L. (2006). *The psychology of working: A new perspective for career development, counseling, and public policy*. Mahwah, NJ: Lawrence Erlbaum.
- Constantine, M, Erickson, C.D., Banks, R.W. & Timberlake, T.L. (1998). Challenges to the career development of urban racial and ethnic minority youth: Implications for vocational intervention. *Journal of Multicultural Counseling & Development, (26)2*, 82-95.
- Hosmer, D.W., Lemeshow, S. (1989). *Applied logistic regression*. New York: John Wiley.
- Kelly, K.R. (2002). Concurrent validity of the Kuder Career Search activity preference scales and career clusters. *Journal of Career Assessment, 10*, 127-144.
- Low, D.K.S., Yoon, M., Roberts, B. W., & Rounds. J. (2005). The stability of interests from early adolescence to middle adulthood: A quantitative review of longitudinal studies. *Psychological Bulletin, 131*, 713-737.
- Tracey, T.J.G., Robbins, S.B. & Hofsess, C.D. (2005). Stability and change in interests: A longitudinal study of adolescents from grades 8 through 12. *Journal of Vocational Behavior, 66(1)*, 1-25.
- Tracey, T.J.G. & Robbins, S.B. (2006). The interest-major congruence and college success relation: A longitudinal study. *Journal of Vocational Behavior, 69*, 64-89.
- Woods, S.P., Weinborn, M. & Lovejoy, D.W. (2003). Are classification accuracy statistics underused in neuropsychological research? *Journal of Clinical and Experimental Neuropsychology, 25(3)*, 431-439.

¹ **Congruence** refers to the relationship of degree of fit between two factors.

² In research, the term **operationalized** refers to how the study's variables are defined.