

Human Development Institute | University of Kentucky

Research Brief



Research Brief
January 2022

Phillip D. Rumrill, Jr., Ph.D., CRC,
University of Kentucky Human
Development Institute

Stuart Rumrill, M.S., CRC, University
of Wisconsin, Madison

Employment Concerns Related to Legal Rights, Fair Treatment, and Personal/ Environmental Resources among Hispanic Americans and Caucasian Americans with Multiple Sclerosis

Acknowledgement

This research was funded partly through a Health Care Delivery and Policy Research grant from the National Multiple Sclerosis Society, New York, NY. The authors wish to thank the National Multiple Sclerosis Society, its participating chapters, and the study participants for their support and assistance with this research. This research was also supported by the Vocational Rehabilitation Technical Assistance Center on Targeted Communities grant (H264F150003) from the Department of Education. However, the ideas, opinions, and conclusions expressed do not necessarily represent the policy of the Department of Education, and endorsement by the Federal Government should not be assumed.

Introduction and Rationale

Multiple sclerosis (MS) is well known to medical science as an emerging disability (Koch & Rumrill, 2017) because of its sharply rising incidence and prevalence across the globe. As many as 1 million Americans are currently living with this demyelinating auto-immune disease. Long considered a chronic health condition primarily affecting people of European lineage in the Northern Hemisphere, MS is now known to occur in all racial and ethnic groups, with recent evidence documenting an increasing number of cases in Latin America (National Multiple Sclerosis Society [NMSS], 2019). With regard to employment, much of the extant MS research has focused on people of European descent who acquire the disease. Very little is known about the experiences and concerns of people with MS from traditionally underrepresented racial and ethnic minoritized groups (e.g., African Americans, Hispanic Americans), especially how their experiences and concerns compare to those of Caucasians with MS, even though evidence indicates that the incidence of MS is increasing among non-Caucasians worldwide (Buchanan et al., 2011; Cristiano et al., 2013; Rivera, 2009; Rivera-Olmos & Ávila, 2007).

Preliminary studies of the employment issues facing Hispanics with MS indicate that these individuals have a lower rate of labor force participation and a lower rate of job satisfaction than do Caucasians with MS (Roessler et al., 2016). However, MS researchers have not yet conducted a systematic comparison of the specific employment concerns of people with MS across the two racial/ethnic groups, nor have they systematically controlled for important demographic and disease-related covariates that influence employment experiences and outcomes. Accordingly, the purpose of this study was to examine racial/ethnic differences in satisfaction with employment issues related to fair treatment, personal-environmental resources, and legal rights within a national sample of Hispanics and Caucasians with MS. The following research question guided the study: *What differences exist between Hispanics with MS and Caucasians with MS in terms of their satisfaction with employment issues related to fair treatment, personal/environmental resources, and legal rights?*

Method

Data for this study were collected from a survey of the employment concerns of adults with MS from nine NMSS chapters in the United States. The survey elicited information regarding the demographic, disease-related, and social and environmental participation variables pertinent to the overall employment situation for Americans with MS.

Participants

A total of 1,351 Hispanic and Caucasian participants formed the present study sample. Participants ranged in age from 19 to 96 years old with an average age of 53.47 (SD = 11.79). The average age at MS onset was 37.16 (SD = 10.17). 31.4% of the sample reported being full-time (n = 422) and 12.1% reported part-time employment (n = 162). The majority of participants were female (n = 1063, 78.7%) and the overall sample was relatively highly educated (48% held bachelor's degrees or higher, 27.8% had completed community/vocational/technical college, and 24.3% had less than a high school diploma).

Instrument

The *Satisfaction with Employment Issues Scale* developed by Merchant et al. (2019) was used as the dependent variable in the present study. It is comprised of 17 items and three subscales: (a) Fair Treatment (e.g., "People with MS are evaluated no more frequently than other workers"); (b) Environmental/Personal Resources (e.g., "People with MS have access to assistive technology resources needed for work"); and (c) Legal Rights (e.g., "People with MS know what to do if they encounter discrimination at work"). See Appendix A for a list of all 17 items, grouped according to their sub-scales. Each item is rated on a binary satisfaction scale (0 = No, 1 = Yes). Items for each sub-scale were averaged to yield an item mean score, with higher scores indicating greater degrees of satisfaction. In the Merchant et al. 2019 study, the internal consistency reliability coefficients (Cronbach's alphas) were computed to be .98, .96, and .98 for the Fair Treatment, Environmental/Personal Resources, and Legal Rights sub-scales, respectively. In the present study, the Cronbach's alpha coefficients were computed to be .85 for Fair Treatment, .88 for Environmental/Personal Resources, and .92 for Legal Rights.

Procedure

Data were collected from nine NMSS chapters across the United States. The aim of sampling for the overall survey was to ensure that participants were representative of the total population of people with MS with regard to geographic location, gender, race/ethnicity, income, and education. Of the 7,369 people with MS who were included in the overall target sample, 1,932 people returned questionnaires, resulting in a response rate of 26%. A total of 1,844 members of the original respondent sample provided complete information on the above-mentioned 17-item *Satisfaction with Employment Issues Scale*. From this group of complete responders, we extracted 1,351 Hispanic and Caucasian persons with MS for the present study.

Statistical Analysis

Eight prominent demographic predictors were used for the propensity score matching (PSM) analysis (i.e., prime working age, gender, marital status, education, course of MS, MS severity, financial situation, and health status), which utilized logistic regression analysis and the nearest neighbor method. The propensity score computed for each Hispanic person was used to locate a Caucasian person with a similar propensity score. The Hispanic group and the matched Caucasian group were compared on three dependent variables (i.e., fair treatment, personal-environmental resources, and legal rights). Researchers used the two-sample Hotelling T2 test for the between group comparisons on the three dependent measures.

Results

Propensity Score Matching

PSM using logistic regression analysis and the nearest neighbor method was conducted to equalize the eight prominent covariates between Hispanic and Caucasian participants. The demographic information for the Hispanic and Caucasian groups before matching and after matching is presented in Table 1. As can be observed from Table 1, PSM analysis using the eight prominent covariates identified 163 Caucasians who were a good match for the 163 Hispanics in the present study. Chi-square and t-test results indicated that there were no statistical differences on the eight prominent

Table 1
Comparison of Caucasian and Hispanic Participants Before and After Matching

		Before Matching (N = 1351)		After Matching (N = 326)	
Demographic Variables	Hispanic (n=163)	Caucasian (n=1188)	p Level	Caucasian (n=163)	p Level
Prime working age	110 (67.5%)	558 (47.0%)	$X^2(1, N=1351) = 24.13$ $p < 0.0001$	105 (64.4%)	$X^2(1, N=326) = 0.34$ $p = .56, n.s.$
Yes	53 (32.5%)	630 (53.0%)		58 (35.6%)	
Gender	123 (75.5%)	940 (79.1%)	$X^2(1, N=1351) = 1.15$ $p=0.31, n.s.$	124 (76.1%)	$X^2(1, N=326) = 0.01$ $p = .90, n.s.$
Female	40 (24.5%)	248 (20.9%)		39 (23.9%)	
Male					
Marriage Status	87 (53.4%)	841 (70.8%)	$X^2(1, N = 1351) = 20.22$ $p < .0001$	91 (55.8%)	$X^2(1, N=326) = 0.20$ $p = .66, n.s.$
Married	76 (46.6%)	347 (29.2%)		72 (44.2%)	
Non-married					
Education	63 (38.7%)	585 (49.2%)	$X^2(1, N = 1351) = 6.59$ $p < .05$	77 (47.2%)	$X^2(1, N=326) = 4.17$ $p = .13, n.s.$
Bachelor and above	55 (33.7%)	320 (26.9%)		39 (23.9%)	
Trade/technical/vocational training	45 (27.6%)	283 (23.8%)		47 (28.8%)	
High school or less					

		Before Matching (N = 1351)		After Matching (N = 326)	
Demographic Variables	Hispanic (n=163)	Caucasian (n=1188)	p Level	Caucasian (n=163)	p Level
Relapsing-remitting MS Yes No	69 (42.3%) 94 (57.7%)	796 (67.0%) 392 (33.0%)	$\chi^2(1, N = 1351) = 5.56$ $p < .05$	97 (59.5%) 66 (40.5%)	$\chi^2(1, N=326) = 0.11$ $p = .74, n.s.$
MS severity Mean (SD)	2.91 (1.16)	2.86 (1.10)	$t(1349) = -.51$ $p = .61, n.s.$	2.75 (1.06)	$t(324) = -1.25$ $p = .21, n.s.$
Financial problem Mean (SD)	1.75 (0.71)	1.52 (0.72)	$t(1349) = -3.76$ $p < .0001$	1.68 (0.78)	$t(324) = -.83$ $p = .41, n.s.$
Health status Mean (SD)	2.62 (0.93)	2.86 (0.96)	$t(1349) = 3.02$ $p < .01$	2.86 (0.87)	$t(324) = .62$ $p = .54, n.s.$

A two-sample Hotelling's T^2 test was conducted on the three dependent variables of fair treatment, personal-environmental resources, and legal rights. The independent variable was race/ethnicity (Caucasian vs. Hispanic). Using Hotelling's trace as the criterion to evaluate all multivariate effects, the composite dependent variable was significantly affected by race/ethnicity, Hotelling's trace = .034, $F(3,242) = 2.76$, $p = .043$. Univariate ANOVAs were conducted on each dependent measure separately to determine the locus of the statistically significant multivariate effect. There were two statistically significant univariate effects. First, Hispanics with MS had higher legal rights scores ($M = .61$, $SD = .42$) than Caucasians with MS ($M = .47$, $SD = .39$), $F(1, 244) = 7.95$, $p = .005$. Second, Hispanics with MS had higher personal-environmental resources scores ($M = .67$, $SD = .35$) than Caucasians with MS ($M = .57$, $SD = .35$), $F(1, 244) = 4.72$, $p = .031$. There was no difference between the two groups on fair treatment scores: Hispanics with MS ($M = .75$, $SD = .35$); Caucasians with MS ($M = .69$, $SD = .36$), $F(1, 244) = 1.50$, $p = .222$. Means and standard deviations for the three outcome variables for the Hispanic and Caucasian groups are presented in Table 2.

Table 2
Means and Standard Deviations of Satisfaction for the Caucasian and Hispanic Groups

Factor	Caucasian	Hispanic
Fair Treatment	.69 (.39)	.75 (.36)
Environmental/Personal Resources	.57 (.35)	.67 (.35)
Legal Rights	.47 (.39)	.61 (.42)

Discussion

The PSM procedure utilized in this study enabled the researchers to isolate the effects of racial/ethnic status on participants' satisfaction with employment issues related to fair treatment, personal/environmental resources, and legal rights. The two groups were equal with respect to the eight covariates that served as the basis for the PSM, which effectively controlled for any variability on the dependent measures that could be attributed to those factors.

At the most general level of analysis, on all three outcome measures, holding important demographic and disease-related covariates constant, Hispanics with MS were at least as satisfied with their employment situation as Caucasians with MS; moreover, Hispanics were more satisfied with the employment situation than the matched comparison group of Caucasians on the two sub-scales of legal rights and personal-environmental resources. In a recent study that compared Caucasians with MS to Hispanics and African Americans with MS without using PSM analysis to match sub-samples on important status covariates, Merchant et al. (in press) found Caucasians reporting higher levels of satisfaction with the employment situation than did non-Caucasians. Only by isolating the effects of race/ethnicity by matching groups on other potentially differentiating characteristics, as the researchers did in this study, did Hispanic people with MS emerge as more satisfied overall than their Caucasian counterparts.

Fair Treatment

It is noteworthy that more than two-thirds of both groups (75% of Hispanics and 69% of Caucasians) were satisfied on average with the items that constituted the Fair Treatment sub-scale. Even though only around half of the overall sample were employed for pay at the time of the national survey, both Hispanics and Caucasians expressed considerable satisfaction with the manner in which people with MS are treated in the workplace.

Personal-Environmental Resources

Within the Personal-Environmental Resources factor, averages of 67 percent of Hispanic respondents and 57 percent of Caucasians reported satisfaction with any given item. Hispanics reported significantly higher Personal-Environmental Resources scores than did Caucasians. One possible explanation for this could be the collectivist, family-oriented nature of Hispanic cultures and the tendency to derive meaning from group membership rather than from individualism (Stone et al., 2007). These tendencies would be expected to lead to stronger familial and social bonds, which often serve as essential sources of support and encouragement,

which in turn can flow into one's overall perceptions of personal/environmental resources and positively impact her or his employment outlook.

Legal Rights

Significant differences were found on the Legal Rights factor between Hispanics and Caucasians with MS, with the former rating their satisfaction significantly higher (item mean .61) than the latter (item mean .47). The items associated with this factor primarily address the extent to which participants have knowledge of their employment rights and protections and disability benefits programs. These findings suggesting high levels of satisfaction with legal rights items on the part of Hispanics with MS oppose prior research (e.g., Rumrill et al., 2016) in which minoritized people with MS in general reported a lack of awareness of the ADA, the Family and Medical Leave Act, and Social Security Disability Insurance -- as well as unfamiliarity with the process by which workplace accommodations are requested and implemented.

COVID-19 Implications

One must consider the current employment and living situations for people with MS of both racial/ethnic groups in the era of COVID-19 when interpreting these results and their implications. COVID-19 poses an unprecedented threat to many people's health and lives, and this seemingly never-ending pandemic has led to heretofore unimaginable disruptions in daily life; social interactions; employment and activity participation; and increased fear, anxiety, and other negative emotions (Umucu & Lee, 2020). Further, people with disabilities and racially/ethnically minoritized people are disproportionately affected both by the risk of contracting the virus (which can lead to increased stress and poorer health in and of itself) and by social distancing requirements and the effects they have on employment, finances, and social supports. It can be expected that all three areas examined in this study (i.e., fair treatment, personal/environmental resources, legal rights) will continue to be impacted by COVID-19 as this global pandemic continues to wind its way toward a conclusion.

Conclusion

This study has identified significant differences in the satisfaction that Hispanic Americans with MS and Caucasian Americans with MS ascribe to the overall employment situation in the areas of personal/environmental resources and legal rights. Hispanic participants in this study reported higher levels of satisfaction with employment issues in those two key areas. Although Hispanic respondents reported relatively high levels of satisfaction with the protection of their legal rights and their personal/environmental resources

(and with their fair treatment in the workplace, for that matter), the fact that most Hispanic Americans with MS are unemployed warrants further inquiry to reconcile what seems to be an inconsistency between reported satisfaction levels and actual labor force participation. By understanding more fully the mechanisms that drive the choice to continue working or disengage from the workforce following MS onset or an MS diagnosis, as well as how those mechanisms are determined by the person's racial or ethnic membership status, rehabilitation and healthcare professionals can ensure that employment-related interventions are grounded in the expressed needs and priorities of the growing population of Americans with MS.

References

- Buchanan, R. J., Zuniga, M. A., Carrillo-Zuniga, G., Chakravorty, B. J., Tyry, T., Moreau, R. L., & Vollmer, T. (2011). A pilot study of Latinos with multiple sclerosis: Demographic, disease, mental health, and psychosocial characteristics. *Journal of Social Work in Disability & Rehabilitation*, 10(4), 211-231. www.doi.org/10.1080/1536710X.2011.622959
- Cristiano, E., Rojas, J. I., Romano, M., Frider, N., Machnicki, G., Giunta, D. H., Calegaro, D., Corona, T., Flores, J., Gracia, F., Macias-Islas, M., & Correale, J. (2013). The epidemiology of multiple sclerosis in Latin America and the Caribbean: A systematic review. *Multiple Sclerosis Journal*, 19(7), 844-854. www.doi.org/10.1177/1352458512462918
- Koch, L. C., & Rumrill, P. D., Jr. (2017). *Rehabilitation counseling and emerging disabilities: Medical, psychosocial, and vocational aspects*. Springer Publishing Company.
- Merchant, W., Leslie, M., Li, J., Rumrill, P., & Roessler, R. (in press). Racial/ethnic status as a differential indicator of employment concerns related to fair treatment, legal rights, and personal/environmental resources among people with multiple sclerosis. *Journal of Rehabilitation*.
- Merchant, W. R., Li, J., Rumrill, P., Jr., & Roessler, R. T. (2019). The factor structure of satisfaction ratings for selected employment concerns among people with multiple sclerosis. *Journal of Vocational Rehabilitation*, 51(1), 55-66. www.doi.org/10.3233/JVR-191025
- National Multiple Sclerosis Society. (2019). *MS prevalence*. Retrieved May 23, 2019 from: www.nationalmssociety.org/About-the-Society/MS-Prevalence
- Rivera, V. M. (2009). Multiple sclerosis in Latin America: Reality and challenge. *Neuroepidemiology*, 32(4), 294-295. www.doi.org/10.1159/000204913
- Rivera-Olmos, V. M., & Avila, M. C. (2007). Multiple sclerosis in Latin America. Are McDonald's criteria really

applicable? *Revista Mexicana de Neurociencia*, 8(1), 49-56.

Roessler, R. T., Rumrill, P. D., Jr., Li, J., Daly, K., & Anhalt, K. (2016). High priority employment concerns of Hispanics/Latinos with multiple sclerosis in the United States. *Journal of Vocational Rehabilitation*, 45(2), 121-131. www.doi.org/10.3233/JVR-160817

Rumrill, P. D., Jr., Roessler, R. T., Bishop, M., Li, J., & Umeasiegbu, V. I. (2016). Perceived strengths and weaknesses in employment policies and practices among African Americans with multiple sclerosis. *Journal of Rehabilitation*, 82(1), 27-35.

Appendix A

The 17-item Satisfaction with Employment Issues Scale

Fair Treatment

- Are provided the same retirement benefits as other workers.
- Receive the same on-the-job training opportunities as other workers.
- Have their seniority honored in the same way as other employees.
- Are evaluated no more frequently than other workers.

Environmental/Personal Resources

- Have opportunities for job training or retraining.
- Are encouraged to take control of their lives.
- Have access to service providers who understand the needs of people with MS.
- Can expect employers to respond to their accommodation needs in a timely manner.
- Have physical access to workplace facilities.
- Are considered for other jobs in the same company if their MS prevents them from returning to their former jobs.
- Have access to assistive technology resources needed for work.

Legal Rights

- Have adequate information about benefits such as health and disability (short- and long-term) insurance.
- Have access to adequate information about Social Security programs.
- Understand the employment protections of Title I in the Americans with Disabilities Act as Amended (ADA).
- Know what to do if they encounter discrimination at work.
- Understand the risks and benefits of disclosing disability status to employers.
- Understand the health insurance provisions and protections of the Affordable Care Act (i.e., Obamacare).

HDI Research Briefs highlight the research activities at the Human Development Institute.

Projects at HDI focus on building inclusive communities, addressing inequities, and improving the lives of all people who experience disability across the lifespan. Research priority areas include: early childhood and education, leadership and self advocacy, employment, health, universal design and assistive technology. With each issue of HDI Research Briefs, we will provide a cross-section of HDI's research activities. The brief reports are intended to give an overview of the research and emphasize the implications of the studies.

You can find more examples of our research at www.hdi.uky.edu