Assessing Perceived Social Support Among African American College Students with Disabilities: A Confirmatory Factor Analysis

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Abstract

A college education can help pave the way for a meaningful and rewarding career. However, college students with disabilities, especially students from ethnic and minority backgrounds, face many challenges as they transition from high school to college. Research has demonstrated the importance of social support from family members, friends, and significant others on college life adjustment of minority students with disabilities. The purpose of this study was to validate the *Multidimensional Scale of Perceived Social Support* (MSPSS) for use with African American college students with disabilities. The confirmatory factor analysis was conducted with 220 African American college students with disabilities. The results indicated that the three-factor measurement structure of the MSPSS fits the data relatively well: : $\chi^2(51, N = 202) = 151.59$, $p < .001$; $\chi^2/df = 2.97$ (< 3), CFI = .96 ($> .95$), TLI = .95 ($>= .95$), RMSEA = 0.099 (> 0.080), and SRMR = .04 ($< .08$). The three factors include perceived social support from (a) family, (b) friends, and (c) significant others. The results of the correlational analysis found significant relationships among these subscales as well as related constructs including goal persistence and college adjustment problems in expected directions providing initial support for the construct validity of the MSPSS. Assessing the levels of perceived social support received by African American students with disabilities can provide valuable information for disability service personnel to tailor their services to help these students develop social skills, social support, and social capital that are critical to college life adjustment and goal persistence.

Keywords: social support, African American students with disabilities, transition, confirmatory factor analysis

Employment is central to one's psychological, physical, economic, and social well-being (Chan et al., 2017; Dutta et al., 2020). However, data from the U.S. Bureau of Labor Statistics (2020) indicate that only 19.3% persons with a disability are employed, compared to 66.3% of those without disabilities. National data also indicate that approximately one-fourth (22.3%) of youth with disabilities between the ages of 16 to 19 are participating in the labor force, compared to 33.3% of individuals without disabilities in the same age group. Among 20 to 24 year olds, data suggest that less than half (47.7%) are engaged in the labor market in contrast to 71.5% of their same age peers without disabilities (U.S. Department of Labor, 2019). Employment opportunities for people with disabilities are further affected by the high poverty rate among this population. The poverty rate of 28.5% for individuals with disabilities is significantly higher than the 12.3% rate for people without disabilities (Federal Safety Net, 2015).

Research has indicated that long-term unemployed individuals have a higher rate of depression and anxiety, use alcohol and drugs more often, and have poorer quality of life than people who are gainfully employed (Dutta et al., 2008). The combined effects of unemployment, underemployment, and poverty on people with disabilities limit their community integration and participation, upward mobili-

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ty, and physical and mental health well-being (Chan et al., 2017; Hall et al., 2013; Muller et al., 2017). However, a recent employer survey indicated that even with record low unemployment and hiring managers reporting a high demand for workers, U.S. employers are still not hiring large numbers of people with disabilities to meet their workforce needs (National Organization on Disability [NOD], 2019). The Kessler Foundation's April 2019 National Trends in Disability Employment (nTIDE) job report indicates that employment opportunities for Americans with disabilities remain both limited and stagnant.

Improving transition and employment outcomes of young adults with disabilities has been the focus of several education and rehabilitation legislative mandates. For example, the Workforce Innovation and Opportunity Act of 2014 and the accompanying Amendments of the Rehabilitation Act of 1973 underscore the importance of postsecondary education and competitive integrated employment as optimal outcomes for transition-age youth and emerging adults with disabilities (U. S. Department of Education, 2017). To prepare students with disabilities for the 21st century digital economy, the Workforce Innovation and Opportunity Act also emphasizes career advancement through postsecondary education in high demand occupations (U.S. Department of Education, 2017). Another most recent employment trend is that referred to as the Gig Economy, that is part time and/or contract work which is proliferating as a result of technology and innovation. Whether or not people with disabilities are able to access this type of employment has not been explored.

Without a doubt, a college degree has significant positive effects on lifetime earnings, and it can help emerging adults pave career pathways to the middle class (Julian & Kominski, 2011; O'Neill et al., 2015). However, only one-third of the students with disabilities who enroll in a four-year college or university graduate within eight years (Mader & Butrymowicz, 2017). According to the Bureau of Labor Statistics (2015), people with disabilities are less likely to complete a Bachelor of Science degree compared to people without disabilities. Low completion rates for students with disabilities are not limited to postsecondary education, as challenges for this population begin in high school. The National Council on Disability (NCD; 2017) found that students with disabilities often graduate from high school at rates nearly 20 percentage points lower than students without disabilities. Completion rates are also complicated by race. For African American college students, the graduation rate is about 42%, significantly below the 62% rate for European American students.

In addition, findings from the National Longitudinal Transition Study-2 (NLTS-2) indicated a significant gap in college completion rates between European American students with disabilities and minority students with disabilities. Specifically, only 33% of African American students with disabilities were still currently enrolled or had completed college at follow up, compared to 44% of European American students with disabilities and the 42% rate of African American college students without disabilities (Newman et al., 2011).

Helping students with disabilities, especially students from racial and ethnic minority backgrounds, graduate from high school, attend college, graduate from college, and obtain and maintain employment is a high priority for disability service providers (National Center for Education Statistics, 2019; O'Neill et al., 2015). However, transition from high school to college can be very stressful especially for African American youth with disabilities, since many are first-generation college students coming from low-income families (Postsecondary National Policy Institute [PNPI], 2018). Social stigma, loneliness, financial difficulty, and academic problems can further elevate the level of stress and anxiety for African American college students with disabilities, making them vulnerable to depression and dropping out of college (Gibbons et al., 2012). For African American college students with disabilities, social support from family, friends, and significant others is very important to their college life adjustment and commitment to the goal of graduation and the pursuit of a rewarding career (Cardoso et al., 2013; Demaray & Maleck, 2002; Lafreniere et al., 1997; Strom & Savage, 2014; Thompson, 2008).

Social Support

The presence of meaningful relationships in one's life and work has been found to contribute to overall wellbeing (Ryff, 1995; Seligman, 2018; Stephens et al., 2012). Often, relationships provide several integrative benefits to include social supports. There are several well-accepted definitions of social support. Costa and colleagues (2012) defined social support as the social network in which an individual interacts, maintains contact, and shares with others. Thoits (1986) conceptualized social support as "coping assistance" that helps people to shield the negative effects of a stressful situation (p. 416), while Zimet et al., (1988) described three types or sources of social support: family, friends, and significant others.

Strom and Savage (2014) conducted a longitudinal study to evaluate the relationship between social support and goal persistence in first-year college stu-

dents. They reported that initial support from family and friends was positively associated with initial commitment to the goal of graduation. Subsequent support from family significantly affected a commitment to the goal of graduating and a commitment to graduating impacted intention to persist. Other research has shown that perceived support from family is a strong predictor of students' academic performance in both high school and college (Cutrona et al., 1994; DeBerard et al., 2004; Mortenson, 2006; Wintre & Yaffe, 2000). Support from friends is also an important protective factor for students in colleges and universities. Friendship/s formed during the first year of college may replace high school friendship/s in terms of availability of support, and has a strong impact on goal persistence toward graduation (Strom & Savage, 2014). College students tend to be more successful academically if they are confident in their ability to develop friendship/s and work effectively with other students outside of the classroom setting during the first year of college (Thompson, 2008).

The importance of developing social relationships has been supported by the theory of social capital (Chenowith & Stehlik, 2004; Stephens et al., 2012; Trainor, 2008). Social capital is defined as a set of relationships and social structures, at an individual level and also within an organizational context, that can expand self-determination, increase one's options, and enrich quality of life as well as enhanced perception of meaning and purpose in one's life. Social capital was found to be associated with goal persistence in a sample of Latina/o engineering majors (Dika & Martin, 2018), and useful for developing and sustaining the inclusion of people with disabilities and families in community life (Chenowith & Stehlik, 2004). Further, expanding the foci of postsecondary transition to include the study of capital may increase the efficacy of transition planning and instruction for youth with disabilities from racial and ethnic minority backgrounds (Trainor, 2008).

As mentioned above, college students with disabilities represent a growing and diverse subpopulation on campus. College students with disabilities are more likely to be first-generation college students from low-income families, and they are less equipped to deal with academic and social demand challenges that are part of college life (Lombardi et al., 2016). College adjustment issues can result in higher course failure rates, lower retention rates, and significantly lower rates of graduation for students with disabilities. The development of social integration in higher education has been found to enhance retention and academic success of non-traditional college students, such as students coming from lower socio-economic background or marginalized areas, students with ethnic minority background and students with chronic illnesses and disabilities (Thomas & Hanson, 2014). Lombardi et al. (2016) examined the impact of social support on academic success of 200 students with disabilities in a four-year university, and found a significant positive relationship between support from parents, peers and partners, and mental health well-being, academic success and goal persistence in college students with disabilities. The authors concluded that types of relationship result in differentiating effects upon college experiences of students with disabilities. There is also empirical evidence to indicate that perceived social support increases students with disabilities' academic milestone efficacy (i.e., confidence in completing and ability to complete college level courses successfully) and positively relates to self-determination, locus of control, and hope (Constantine et al., 2003; Murray et al., 2013; Morningstar et al., 2010; Sarason & Sarason 2009; Wilks & Spivey 2010). Cardoso et al. (2017) evaluated the Social-Cognitive Career Theory (SCCT) constructs and positive person-environment factors as predictors of goal persistence in minority college students with disabilities and found a significant relationship ($r = .32$, $p < .01$) between social support and goal persistence. Hefner and Eisenberg (2009) conducted a study with 1,378 college students and found that marginalized students are at high risk of social isolation and students with low quality social support have a six-fold risk of depressive symptoms relative to students with high quality social support. These findings demonstrate that social support is considered a major determinant of college life adjustment and goal persistence.

Purpose of the Study

As previously mentioned, a college education can help pave the way for a meaningful and rewarding career. However, college students with disabilities, especially students from ethnic and minority backgrounds, face many challenges as they transition from high school to college. Research has demonstrated the importance of social support from family members, friends, and significant others on college life adjustment, goal persistence, and employment outcomes of students with disabilities, especially minority students with disabilities. However, the majority of social support measures are validated for European Americans without disabilities. There is a need, then, for a psychometrically sound social support measure that can be used to assess supports available for minority students with disabilities. Zimet et al. (1988)

developed the *Multidimensional Scale of Perceived Social Support* (MSPSS) specifically to assess social support from family, friends, and significant others. The MSPSS was validated in a sample of White university students and results indicated that high levels of perceived social support were associated with low levels of depression and anxiety symptomatology. They also found that females had higher levels of perceived social support than males. As mentioned, social support is of paramount importance to the mental health and academic success of African American college students with disabilities. It is important for diversity service providers to use psychometrically sound social measures to assess types and levels of social support received by minority college students with disabilities. The purpose of the present study was to validate the MSPSS for use with African American college students with disabilities.

Method

Participants

Participants in the present study comprised 202 African American college students with disabilities recruited from an Historically Black College and University (HBCU) in a Southern state. The sample included 58 (28.7%) males and 144 (71.3%) females. One hundred and thirty-two participants (65.3%) were freshmen, 48 (23.8%) were sophomores, 14 (6.9%) were juniors, and 8 (4.0%) were seniors. Disability was assessed using the six-question disability measure in the Current Population Survey (CPS; U.S. Census Bureau, 2019). The disability measure includes six disability types: hearing difficulty, vision difficulty, cognitive difficulty, ambulatory difficulty, self-care difficulty, and independent living difficulty. Respondents who endorse any one of the six disability types are considered to have a disability. The six-question disability measure was added to the CPS in 2008. The U. S. Bureau of Labor Statistics (BLS; 2020) used data collected from this measure to compute employment-to-population ratio and unemployment rate for people with disabilities. The test-retest reliability was reported to be between .41 and .64 (Brault, 2013). In addition, Joy (2017) analyzed the longitudinal CPS Annual Social and Economic Supplement ($N = 11,721$) data of respondents who indicated a positive answer to the disability questions in both survey months that the disability variables were measured. Joy conducted a correlation analysis utilizing Kappa coefficients and demonstrated that all six measures of types of disability in the CPS are stable across time, and Fisher Z transformations show that among the six questions, measures of physical and mobility difficulties were the most stable. Table 1 provides detailed information regarding demographic characteristics and disability information of participants in the present study.

Measures

The following measures were used.

Multidimensional Scale of Perceived Social Support (MSPSS)

The MSPSS was developed by Zimet et al. (1988) to measure social support from multiple sources. The MSPSS is composed of 12 items, within three major domains of social support sources: (a) Family, with four items (e.g., "I can talk about my problems with my family"), (b) Friends, with four items (e.g., "I can count on my friends when things go wrong"), and (c) Significant Others, with four items (e.g., "There is a special person who is around when I am in need"). Each item is rated on a seven-point Likert-type scale ranging from 1 (*very strongly disagree*) to 7 (*very strongly agree*). Scores for each subscale are represented by the mean of the raw scores for items in the subscale. The total score is represented by the mean of the scores obtained on the three subscales with higher means reflecting greater perceived social support. Internal consistency reliability (Cronbach's alpha coefficient) for the significant other, family, and friends' subscales were .91, .87, and .85, respectively (Zimet et al., 1990). In the present study the Cronbach's alpha were computed to be .93, .92, and .94, respectively.

Inventory of Common Problems (ICP)

The ICP was developed by Hoffman and Weiss (1986, 1987) to assess problems associated with college life adjustment. It is composed of 24 items and six subscales (four items each): (a) depression, (b) anxiety, (c) academic problems, (d) interpersonal problems, (e) physical health problems, and (f) substance use problems. Each item is rated on a five-point Likert type scale ranging from 1 (*not at all*) to 5 (*very much*). Possible scores for each subscale range from 4 to 20, and total presenting problems scores range from 24 to 125. The Cronbach's alpha coefficient for the ICP total scale was reported by Hoffman and Weiss to be .85. In the present study, only the depression, interpersonal problems, and substance use problems scales were included. These three scales were validated as unidimensional measures using principal components analysis and the Kaiser-Guttman criterion (Nunnally & Bernstein, 1994). The one-factor measurement structure for the depression scale accounted for 70.78% of the vari-

ance with factor loadings ranging from .67 to .89. The interpersonal problem scale accounted for 54.94% of the variance with factor loadings ranging from .65 to .79. The interpersonal problem scale accounted for 52.59% of the variance with factor loadings ranging from .67 to .77. The Cronbach's alpha coefficients for these three factors were computed to be .89, .75, and .65, respectively.

Goal Persistence Scale (GPS)

The GPS was adapted from Lent et al.'s (2003) Goal Persistence Scale for Science and Technology Majors. Participants rated their level of agreement from 1 (*strongly disagree*) to 5 (*strongly agree*) with eight statements about their academic plans (e.g., "I will complete my college degree."). Lent et al. (2003, 2005) reported that the goal persistence measure yielded excellent estimates of the Cronbach's alpha coefficients (from .93 to .95) and correlated with academic self-efficacy in the theoretically expected direction. In addition, Lent et al. (2003) found the GPS useful in predicting college completion in engineering majors. The generic GPS was reported to have an internal consistency reliability coefficient (Cronbach's alpha) of .74 (Dutta et al., 2019). In the present study, we confirmed the GPS as a unidimensional scale using principal components analysis and the Kaiser-Guttman criterion (Nunnally & Bernstein, 1994). The one-factor solution accounted for 45.63% of the variance, factor loadings range from .42 to .79, and the Cronbach's alpha was computed to be .82.

Procedures

Institutional review board approval was obtained from an HBCU in a Southern state of the United States. Undergraduate course instructors were contacted to seek their participation in the study. Data were collected from African American college students enrolling in several Introduction to English and Introduction to Mathematics classes. Only students identified by the Current Population Survey's six-question disability measure as having a disability were included in the present study.

Results

Confirmatory factor analysis (CFA) was computed to examine the measurement structure of the *Multidimensional Scale of Perceived Social Support*, using the SPSS AMOS statistical software program version 22.0 and the statistical program Stata 16. First, we tested the one-factor model. CFA results indicated a poor fit for the one-factor model: $\chi^2(54, N = 202) = 721.29$, $p < .001$; $\chi^2/df = 13.36$ (> 3), comparative fit index (CFI) = .72 ($< .95$); Tucker-Lewis Index (TLI) = .66 ($< .95$); standardized root mean square residual (SRMR) = .10 ($> .08$); and the root mean square error of approximation (RMSEA) = 0.25 (> 0.08), 90% confidence interval (CI) [0.23, 0.26]. Next, we tested the three-factor model that has been well validated in the literature (e.g., Canty-Mitchell, & Zimet, 2000; Zimet et al., 1988; Zimet et al., 1990). CFA results yielded a relatively good fit model: $\chi^2(51, N = 202) = 151.59$, $p < .001$; $\chi^2/df = 2.97$ (< 3), CFI = .96 ($> .95$), TLI = .95 ($>= .95$), RMSEA = 0.099 (> 0.08), and SRMR = .04 ($< .08$). However, in reviewing the modification index we found a large *expected parameter change* (EPC) value of 50.82, indicating the error terms for e1 ("There is a special person who is around when I am in need") and *e*2 ("There is a special person with whom I can share my joys and sorrows") could be correlated based on empirical guidance. Correlated errors frequently occur with items using similar wording or appearing in close physical proximity to each other on the scale (Bollen & Lennox, 1991). It also suggests item #1 and item #2 share variance that may be unrelated to the construct. However, it is not advisable to connect atheoretical pathways to improve model fit at the expense of theory and reduction in parameter value replication (Hermida, 2015). Therefore, we choose not to compute a CFA for a revised three-factor measurement model. Future research should consider revising the contents of item #1 and item #2 to clearly distinguish these two items. Figure 1 provides a graphical representation of the three-factor measurement model.

In addition, the factor loadings for the three factors were very high, with factor loadings ranging from .80 to .94 for the significant other factor, from .82 to .88 for the family factor, and from .84 to .95 for the friends factor. The Cronbach's alpha coefficients for the three factors were also very high indicating high reliability of the items constituting each factor with .92 for the significant other factor and .92 for the family factor, and .93 for the friends factor. The mean rating was 5.08 (*SD* = 1.64) for the significant other factor, 5.18 (*SD* = 1.53) for the family factor, and 5.08 (*SD* = 1.55) for the friends factor.

External Correlates

The correlation matrix between the three factors of the *Multidimensional Scale of Perceived Social Support* and related constructs is presented in Table 2. According to Cohen (1988, 1992), the effect size for Pearson correlation coefficient is low if the value of r varies around .10, medium if $\underline{r}$ varies around .30, and large if *r* varies more than .50. The significant other factor was significantly associated with goal

persistence (r =.26, p < .001), depression (r = -.33, p < .001), substance use problems (r = -.14, p < .05) and interpersonal problems (r = -.37, p < .001). The family factor was significantly related to goal persistence (r =.28, p < .001), depression (r = -.37, p < .001), substance use problems (r = -.24, p < .001) and interpersonal problems (r = -.40, p < .001). The friends factor was significantly associated with goal persistence (r =.28, p < .001), depression (r = -.33, p < .001), substance use problem (r = -.18, p < .05) and interpersonal problems (r = -.34, p < .001).

Discussion

There is strong empirical evidence to support postsecondary education as an effective intervention to help emerging adults with disabilities increase their odds of finding good paying jobs with benefits, leading to a middle-class life. Increasingly, students with disabilities are pursuing postsecondary education as a career option (National Center for Education Statistics, 2019; O'Neill et al., 2015). However, students with disabilities face many challenges in their transition from teenagers to emerging adults. For minority students with disabilities who choose to go to college, adjusting to the life of a college student can be particularly challenging. This is because they may lack social maturity, character strengths, social support, and social capital to cope with problems such as stigma, social isolation, academic concerns, interpersonal problems, and financial difficulties that affect their mental health, academic performance, and goal persistence. The intersectionality of disability with race/ethnicity, gender, and socioeconomic status further intensified these challenges. Social support from family members, friends, and significant others is a major protective factor for psychosocial adjustment and goal persistence of minority students with disabilities. There is a need to develop and validate measures to assess perceived social support among African American college students with disabilities. One of the most commonly used perceived social support measures is the MSPSS and its three latent factors (family, friends, and significant others) were validated with White college students and in the general population (e.g., Edwards, 2004; Gabardo-Martins et al., 2017; Zimet et al., 1988).

The present study evaluated the psychometric properties of the MSPSS in a sample of African American college students with disabilities. The CFA results of the present study confirmed the same three-factor measurement structure (family, friends, and significant other) of the MSPSS originally validated by Zimet et al. (1988) in a sample of White college students. The internal consistency reliability coefficients for the family, friends, and significant others factors were computed to be .93, .92, and .92, respectively. Reliability greater than .90 is considered excellent (George & Mallery, 2003). Construct validity of the MSPSS was assessed by evaluating the relationships between social support and related constructs. The effect sizes of the Pearson correlations range from small to medium, with the substance use variable having the lowest correlation with social support constructs. Support from family was positively associated with goal persistence and negatively related to depression, substance use problems, and interpersonal problems. Support from friends was positively associated with goal persistence and negatively related to depression, substance use problems, and interpersonal problem. Support from significant others was positively associated with goal persistence and negatively related to depression, substance use problems, and interpersonal problems. All of these results provide empirical support for the construct validity of the MSPSS, and its application as a valid measure for assessing levels of social support for African American college students with disabilities. Although all three support factors were significantly related to goal persistence and college life adjustment problems, family support had the highest correlation with goal persistence, depression, substance use problems, and interpersonal problems, which indicated that family support is the strongest protective factor against depression, substance use and interpersonal problems and a supportive factor for goal persistence. This research finding is consistent with previous social support research (Edwards, 2004; Gabardo-Martins et al., 2017).

Implications for Postsecondary Education Interventions

Disability service providers play a crucial role in helping African American college students with disabilities to succeed in college. The present study demonstrated that social support is positively related to college life adjustment and goal persistence, and students with higher levels of social support will have less interpersonal problems, which is consistent with other related studies (Chao, 2012; Demaray & Maleck, 2002; Fleming et al., 2018; Galatzer-Levy et al., 2012; Walton & Cohen, 2011). In the present study, we evaluated the psychometric properties of the MSPSS in a large sample of African American college students with disabilities. We support the use of the MSPSS as a measure of social support for African American college students with disabilities. Assessing the levels of perceived social support re-

ceived by African American students with disabilities can provide valuable information for disability service providers to help students develop social skills, social support, and social capital that are critical to their college life adjustment and goal persistence. Disability support service professionals are encouraged to include this assessment in disability service practices to identify students who are at risk for dropping out of college and those who may have college life adjustment problems.

A close examination of the subscale scores indicated that participants in the present study rated their social support as between average and slightly better than average, which is slightly lower than other research studies reported in the social support literature (e.g., Edwards, 2004). In addition, participants in the present study reported relatively higher support from family compared with significant other or friend support, while there is no difference between friend support factor and significant other support factor. One of the reasons may be because a majority of the participants in the present study were freshmen and sophomores who need time to develop their social network with friends and seek out mentors in their college environment. The present study also showed that African Americans with disabilities continue to rely on their family for support in college. Research showed that new peer relationships formed during the first year may become more important than prior friendships in terms of availability of support and impact on the goal to persist toward graduation (Strom & Savage, 2014). As such, with knowledge of each student's perceived social support type, disability support service professionals can provide psychosocial interventions customized to the need of their students with disabilities.

In addition, the importance of developing positive relationships has been supported by the research of positive psychology as well as that of the theory of social capital (Seligman, 2018; Stephens, Heaphy, & Dutton, 2012). Chenowith and Stehlik (2004) found that the social capital model is useful to develop and sustain the inclusion of people with disabilities and families in community life. Supporting college life adjustment and goal persistence of African American students with disabilities by assessing the levels of perceived social support along with academic supports, will also contribute to enhancing social capital, which in turn, optimizes community integration and quality of life.

With the passage of the Workforce Innovation and Opportunity Act and the Rehabilitation Act, state vocational rehabilitation agencies are required to strengthen their capacity to emphasize local labor market analysis, employer engagement, job-driven training, postsecondary education, and competitive employment for transition-age youth with disabilities that can lead to meaningful careers and economic security to facilitate entry to the middle class (U.S. Department of Education, 2017). Rehabilitation counselors can provide tuition support for youth with disabilities to attend college and pre-employment transition services to help college students with disabilities cope with the challenges and demands of college life. Disability service providers can partner with counselors to use these state resources to provide self-advocacy training, soft skills training, assistive technology services, and job interviewing skills training for African American college students with disabilities.

Limitations

Several potential limitations should be considered in interpreting the results of the study. First, we used the Current Population Survey's six disability questions to identify students with disabilities, which limits our ability to report distribution of specific disabilities (e.g., autism spectrum disorders). Instead, we were only able to describe the distribution of disabilities based on six functional limitations. Second, African American students with disabilities were recruited from one single HBCU in a Southern state, and more than 70% were females, limiting the generalizability of the findings. Future research should also be conducted to determine factorial invariance of the MSPSS across gender, year in school, services used, and functional limitations.

Conclusions

The results of this study provide strong empirical support for the psychometric validity of the MSPSS and its use with the African American college students with disabilities population. The CFA confirmed a three-factor measurement structure consistent with findings of the previous studies, including family, friends and significant other supports. It can be used to assess perceived social support of African American college students with disabilities in both school and research settings, which allow disability service personnel to tailor their support for African American college students with disabilities to adjust to post-secondary school and pursue their goal of graduation.

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Table 1

Participant Demographic Characteristics (N=202)

Variable	N	(%)	M (SD)
Age			20.34 (6.47)
Gender			
Female	144	(71.3)	
Male	58	(28.7)	
Year in School			
Freshmen	132	(65.3)	
Sophomores	48	(23.8)	
Juniors	14	(6.9)	
Seniors	8	(4.0)	
Disability-Related Services			
Special Education	20	(9.9)	
University Disability Services	10	(5.0)	
Vocational Rehabilitation	6	(3.0)	
Functional Limitations			
Cognition Difficulty	105	(52.0)	
Visualizing Difficulty	63	(31.2)	
Getting-around Difficulty	26	(12.9)	
Mobility Difficulty	25	(12.4)	
Hearing Difficulty	19	(9.4)	
Self-care Difficulty	13	(6.4)	

Figure 1

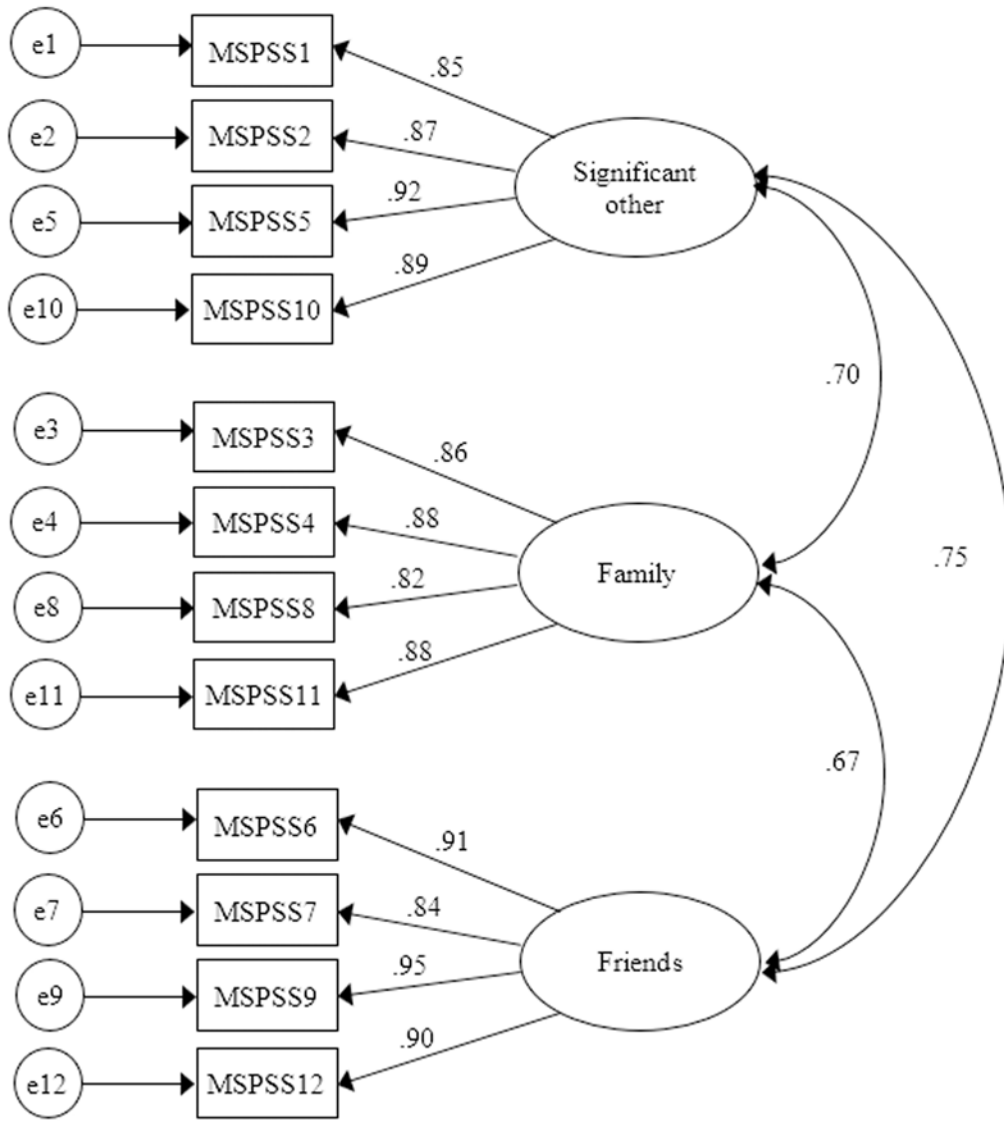Three-Factor Intercorrelated Model for the Multidimensional Scale of Perceived Social Support

Table 2

Correlations Between Subfactors of the Multidimensional Scale of Perceived Social Support and Related Constructs

	1	2	3	4	5	6	7
1. Significant other support	--	0.63**	0.75**	0.26**	-0.33**	-0.14*	-0.37**
2. Family support		--	0.69**	0.28**	-0.37**	-0.24**	-0.40**
3. Friends support			--	0.28**	-0.33**	-0.18*	-0.34**
4. Goal persistence				--	-0.22**	-0.30**	-0.23**
5. Depression					--	0.42**	0.66**
6. Substance use problems						--	0.47**
7. Interpersonal problems							--

*Note. *p< 05 ; **p< .01 .*