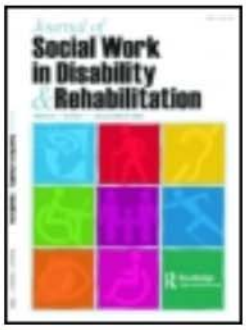

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Inclusion for People With Developmental Disabilities: Measuring an Elusive Construct

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Abstract

The philosophy of inclusion for people with intellectual and developmental disabilities (IDD) has evolved over the last fifty years. Over time, inclusion research has shifted from a focus on deinstitutionalization to understanding the extent to which individuals with IDD are meaningfully involved in the community and social relationships. Yet, there has been no agreed upon way to measure inclusion. Many different measurement and data collection techniques have been used in the literature. The present study proposes a brief measure of inclusion that can be used with family members and on survey instruments.

Keywords: community inclusion, community participation, confirmatory factor analysis, developmental disability, inclusion, integration, intellectual disability, measurement

Inclusion for people with developmental disabilities has been a theme in developmental disability policy, practice, and research for approximately fifty years. Early interest in inclusion coincided with deinstitutionalization, the movement of people from large group settings to smaller community-based settings (Rizzolo, Hemp, Braddock, & Pomeranz-Essley, 2004). In the early period of deinstitutionalization, inclusion took the form of normalization. Under the principle of normalization, Nirje (1985) and Wolfensberger (1972) argued that people with intellectual disabilities have the same rights as anyone else and should be included in all aspects of community and social life.

DEFINING INCLUSION

Although inclusion has been a theme for fifty years and the subject of many research studies, a clear definition of the construct remains elusive. Many different approaches to defining it have been taken. For example, Martin and Cobigo (2011) reviewed 1,341 assessment forms of residents of institutional and group settings for domains of inclusion. Domains present in these assessments included social relationships, leisure, productive activities, accommodations, and informal support. Martin and Cobigo (2011) found that rates of inclusion varied from 3.0% to 96.4% depending on which of these indicators were used.

Other authors have attempted to define inclusion through theory. For example, Thorn, Pittman, Myers, and Slaughter (2009) defined inclusion as a process of systems change which proceeded through four levels: community presence, community participation, community integration, and community inclusion. For Thorn et al. (2009), each level represents a greater level of participation and connectedness to the community. Social capital theory has also been used to define inclusion. Partington (2005) draws on social capital theory to argue that inclusion for people

with IDD encompasses participation, reciprocity, trust, social norms, common resources, proactivity, and tolerance of diversity. Still other scholars have modeled how inclusion exists at the interaction of individual and environmental factors. Lysaght, Cobigo, and Hamilton (2012) conceptualize social inclusion as the interaction of eleven components: social roles, personal skills and characteristics, environments, culture, choice and needs, tools, valorization, mutual satisfaction, competency, trust and reciprocity, and belonging.

Two meta-analyses have attempted to settle the question of a definition of inclusion. Verdonschot, de Witte, Reichrath, Buntinx, and Curfs (2009) conducted a systematic review of quantitative articles on inclusion, participation, community integration, community presence, and related constructs. They found that the literature describes four domains: (1) domestic life; (2) interpersonal life; (3) major life areas (i.e., education, employment); and (4) community, civic, and social life. Hall (2009) conducted a qualitative meta-analysis of the literature on social inclusion. Six major themes of inclusion emerged: (1) being accepted as an individual; (2) relationships; (3) involvement in activities; (4) appropriate living accommodations; (5) employment, and (6) supports.

Despite these attempts to define inclusion theoretically and through meta-analysis, there remains no consensus in the literature. Even the use of the term inclusion and its relationship to other terms such as integration is in question. In an extensive review of the literature, Amado, Stancliffe, McCarron, and McCallion (2013) concluded that there is no clear consensus on the differences between integration, inclusion, community participation, and community belonging. The literature uses a multitude of terms and they are defined differently in different contexts. For the purpose of this paper, we use the term "inclusion" to encompass all of the domains of social participation, employment participation, and relationships described in the literature review above.

RESEARCH FINDINGS ON INCLUSION

Much of the research on inclusion has been focused on individuals with disabilities in large group settings with paid providers (Amado et al., 2013; Jones, Ouellette-Kuntz, Vilela, & Brown, 2008). For example, Thorn et al. (2009) implemented an intervention designed to teach community living skills and increase opportunities for community presence and participation. They found increased community integrated activities for each month as the intervention progressed. Abbott and McConkey (2006) examined themes related to inclusion for people in group living settings and found that people with IDD described barriers to inclusion, but were also able to articulate solutions. Other research examining inclusion in paid staff settings has found challenges. Bigby, Clement, Mansell, and Beadle-Brown (2009) found that although staff accepted the idea of inclusion, they believed it would be too difficult to implement with the severe/profound IDD population. Similarly, Clement and Bigby (2008) found that staff had a limited understanding of inclusion and focused more on presence in the community than participation in activities.

Although much of the research has focused on group settings, inclusion is still an important theme for people living in their own home or family home. Carter, Swedeen, Walter, and Moss (2012) examined parent-led conversations about community inclusion. They found that families had unmet needs for opportunities and supports around inclusion. Ault, Collins, and Carter (2013) examined the participation of children and adults with IDD in faith communities and found that parents experienced barriers to inclusion in that setting.

The relationship between integration or inclusion and individual characteristics has also been examined. Vine and Hamilton (2005) found a relationship between daily living skills and life circumstances. Neely-Barnes, Marcenko, and Weber (2008a), found that for people with

severe/profound IDD, living in one's own or family home predicted greater community inclusion. Yet for people with mild/moderate IDD, rates of community inclusion were comparable for people living in group settings and family home settings.

Yet another body of research has focused on how inclusion is present in work (Lysaght et al., 2012) or day activities (Sulewski, 2010). Lysaght et al. (2012) found that much of the research on supported employment from 2000 to 2010 focused on outcomes related to community inclusion. In a survey of day programs, Sulewski (2010) found goals in the areas of individualization, integration, choice and empowerment, and independence. Using a social analysis, Davidson (2009) found that for people with IDD, employment was strongly tied to community and residential integration.

MEASURING INCLUSION

Despite the large body of literature on inclusion, there is no validated and agreed upon measure. Sources of information have included staff interviews; interviews with the person with a disability and/or significant other; behavioral observation; participant observation; and social network analysis (Amado et al., 2013). Henry, Keys, and Balcazar (1996) developed a measure of staff attitudes that included the domains of empowerment, exclusion, sheltering, and similarity. Other researchers have used social distance measures to examine public attitudes toward people with IDD (Ouellette-Kuntz, Burge, Brown, & Arsenault, 2010).

A group of researchers have included community inclusion as an aspect of quality of life (Bertelli et al., 2013; Holburn, Jacobsen, Schwartz, Flory, & Vietze, 2004; Neely-Barnes, Marcenko, & Weber, 2008b). For example, Schalock, Bonham, and Verdugo (2008) conceptualized social participation as one of eight areas of quality of life. Within the social

participation area, they include interpersonal relations, social inclusion, and rights. Holburn, Jacobsen, Vietze, Schwartz, & Sersen (2000) created the Person-Centered Planning Quality of Life Indicators for people living in Intermediate Care Facilities (ICF). They conceptualized quality of life to include: (1) the home environment, (2) work or day activity, (3) the person's health, (4) relationships, (5) community places, (6) choices/preferences, (7) respect, and (8) enhancing competence. Lachapelle et al. (2005) include social belonging and participation as a quality of life domain along with satisfaction, competence/productivity, and empowerment/independence.

There is a need for more research on the development of inclusion measures. In particular, there is a lack of brief measures that can be used in survey instruments. A short measure of inclusion would facilitate more research in this area and ultimately, increase the knowledge base. Thus, the purpose of this study was to create and validate a brief measure of inclusion that could be used in survey research with parents and caregivers.

METHOD

Procedures

An online survey was conducted using the survey tool, Qualtrics. The online survey was originally designed for multiple purposes and was part of a collaboration with a community-based non-profit that serves people with IDD and their families in a city in the Southeastern United States. This region was targeted because the non-profit and researchers had concerns that families in the region were not getting access to information about community services and not having the opportunity for long term planning, particularly when they had transition-aged youth.

The online survey was distributed through a listserv of the lead non-profit as well as listservs of several collaborating agencies. An active parent in the community also secured spots

in local media to promote the survey. The email sent through the listservs explained that the survey was collaborative between a non-profit and a university. The email also stated that the survey was part of a research study and was anonymous. Once people clicked on a link to participate in the survey, they received an additional welcome message explaining that the survey was voluntary and anonymous. Participants were asked to consent by clicking on the forward arrow on the first page of the survey. No incentives were given for participation in the survey. This procedure was reviewed and approved by a university Institutional Review Board (IRB).

The researchers wanted to gauge how family access to information and interest in planning models was related to other variables including current levels of inclusion. Finding no measures in the literature, the research team decided to create a new measure. The purpose of this paper is to report on the development process of the new measure and the resulting reliability and validity.

To design a measure, the authors relied on a review of literature. Although the literature was initially reviewed broadly, the authors chose to use the Verdonschot et al. (2009) meta-analysis to create items for the survey reflective of the four domains: (1) domestic life, (2) interpersonal life, (3) major life activities, and (4) social, civic, and community life. Based on the Verdonschot et al. (2009) article, the operational definitions of each of the aforementioned domains were as follows: (1) domestic life relates to carrying out everyday actions within the domestic environment such as necessities, clothing, household care, and assisting in one's own personal care; (2) interpersonal life relates to relationships with others which includes informal relationships such as peer relationships, family relationships, and intimate relationships; (3) major life areas/ activities include the areas of education, employment, and economic life; and (4) social, civic, and community life includes recreational and leisure activities which could encompass hobbies, sports, and other extracurricular activities. This meta-analysis thus represents the

theoretical underpinning for the scale. We hypothesized that inclusion can be explained as a single phenomenon with these four domains. A draft measure was developed and distributed to local IDD experts through a process that will be described in the validity section below. **Table 1** demonstrates how the four domains correspond to the items in the scale.

Participants

One hundred thirty-six parents and caregivers participated in the anonymous, online survey. The survey was anonymous, but participants reported their zip code so it could be determined that all parents and caregivers came from the target region. The majority of the participants were female (87.2%) and white (75.7%) and most were between the ages of 45 and 64 (69%). The majority of participants were parents (81.7%), but other reported relationships included grandparent, aunt/uncle, brother/sister, and other. Since the survey was intended for caregivers, individuals that reported a role other than primary caregiver (i.e. teacher) were excluded. The majority of survey respondents lived in the same home with the person with the disability (84.3%) with a few survey respondents (15.7%) reporting that their family member lived primarily in a separate home.

Caregivers were also asked to report on the demographics of the person with a disability. Caregivers reported that the majority of people with disabilities were white (75%), male (63.6%), and under the age of twenty-four (66.1%). The most commonly reported diagnoses were autism (43.4%) and intellectual disability (30.9%). See **Table 2** for more demographics.

Measures

The survey also included questions about family needs, services and supports, and inclusion. Family needs were measured by three subscales of the Family Needs Scale: specialized

care, financial, and future concerns (Dunst, Trivette, & Deal, 2003). The measure of inclusion was designed for this research study based on a review of literature. A series of yes/no questions asked participants about their interest in web-based planning services, whether they would be willing to pay for such services, and comments about the idea of planning services. Demographic questions were included at the end of the survey and included the questions reflected in **Table 2**. Family income was measured in increments of $50,000, from less than $50,000 to $200,000 and over. Zip code was also collected so that the researchers could ensure that the participants lived in the target area.

Inclusion

The inclusion measure began with a prompt asking the caregiver to consider, "In a typical week, my family member is actively involved in the community in the following ways." It contained eleven items: (1) working or doing volunteer work; (2) doing recreational activities; (3) shopping; (4) using transportation; (5) going to movies, going out to eat, or involved in other types of entertainment; (6) participating in clubs or civic organizations; (7) going to health care appointments; (8) learning or going to educational programs; (9) going to church or other religious activities; (10) in friendships or relationships with people who do NOT have disabilities; and (11) spending most of his or her time in settings where people do NOT have disabilities. The eleven items were Likert-type with 1 = "almost never," 2 = "seldom," 3 = "sometimes," 4 = "often," and 5 = "almost always" and may be found in **Table 1**.

DATA ANALYSIS

Data were imported into SPSS version 20.0. First, Missing Value Analysis (MSA) was used to examine patterns of missing data and estimate the scores on missing items. Then,

descriptive statistics of all items used in the analysis were examined. Next, correlations between the eleven items were examined (see **Table 3**). The data analysis plan then turned to examining reliability of the scale. Cronbach's (1951) alpha was used to evaluate the internal consistency reliability. Validity of the scale was examined with a focus on content, discriminant, and factorial validity. The correlation between the inclusion measure and measures of family needs were used to examine discriminant validity.

Finally, data were then imported into Mplus 7.1 and Confirmatory Factor Analysis (CFA) was used to test model fit and determine the factorial validity. Using Verdonschot et al.'s (2009) meta-analysis which suggested four domains of inclusion, we tested a hierarchical model with four first order factors indicating the domains of: (1) domestic life, (2) interpersonal life, (3) major life areas, and (4) community, civic, and social life, and a second order factor indicating inclusion (Kline, 2005). Factor loadings and modification indices were examined and the model was re-specified (Muthen & Muthen, 2012).

RESULTS

Descriptive statistics of the eleven items in the brief inclusion scale were examined. Skewness and kurtosis were acceptable on all items. Then, the correlations between the eleven items on the scale were examined (see **Table 3**). All items correlated significantly with five exceptions. There were no significant correlations between educational activities and the following four variables: using transportation, spending time with people without disabilities, employment or volunteer work, and church or religious activities. There was also no significant correlation between spending time with people with disabilities and going to health care appointments.

Reliability

Reliability of the measure was assessed by examining the internal consistency using the Cronbach's alpha test (Cronbach, 1951). The internal consistency of the eleven item scale was good at .853. Cronbach's alpha was not calculated for the four subscales (*community, civic, social life; domestic life; major life activities; and interpersonal life*) due to the small number of items in each subscale.

Validity

Validity of the measure was assessed by examining the content validity, discriminant validity, and factorial validity. Content validity reflects the degree to which the measure covers the range of meanings included within the construct (Rubin & Babbie, 2014). Three steps were used during the development of the measure to ensure content validity. First, the literature was reviewed and a list was created of the domains of inclusion that are frequently mentioned in the literature. Second, building from the review of literature, a set of items was created. Third, the initial measure was distributed to a panel of local developmental disability experts for review. The panel included both parents and professionals, and each panel member had more than ten years of experience in the IDD field. The panel focused on content and measure length. The panel emphasized that it was important to keep the scale short so that participants would not lose interest in the overall survey. The final measure included eleven items and reflects the feedback given by the panel (see **Table 1**).

There were no other measures of inclusion in the survey that could be used to establish convergent validity. Discriminant validity is examined by looking at the correlation between the proposed measure and measures of other constructs that are not theoretically related (Rubin & Babbie, 2014). For this study, the correlations between inclusion and the three measures of family

needs (specialized care, financial, and future concerns) were examined. Correlations between inclusion and the three measures of family needs were weak indicating good discriminant validity between the constructs of inclusion and family needs: specialized care $r = -.06$, $p = .51$, financial $r = .197$, $p = .02$, and future concerns $r = -.09$, $p = .28$.

Confirmatory Factor Analysis

Factorial validity was established through use of confirmatory factor analysis (CFA). Using the Verdonschot et al. (2009) meta-analysis to provide the theoretical structural model, a five factor hierarchical model was tested with four first order factors (*community, civic, social life; domestic life; major life activities; and interpersonal life*) and one second order factor (*inclusion*). Model testing began with the theoretical model outlined in **Table 1** with four items loading on to *community, civic, and social life*; three items loading on *domestic life*; two items loading onto *major life activities*; and two items loading onto *interpersonal life*. This model had good fit according to the comparative fit index (CFI) and the standardized root mean square residual (SRMR), however the root mean square error of approximation (RMSEA) indicated a poor fit (CFI = .927, RMSEA = .084, SRMR = .056). In this model, the residual variance for the item *relationships to people without disabilities* had to be constrained to zero due to the factor loading for this item exceeding 1.0. The estimation problems for this item likely occurred because there were only two items available to load onto that factor (Kline, 2005).

Examination of the modification indices for the theoretical model indicated that the item *clubs and civic organizations* loaded more strongly on the *major life activities* factor than on the *civic, community, and social life* factor and was the item with the strongest loading on the *major life activities* factor. Thus, the model was re-specified with the move of the *clubs and civic*

organizations item to the *major life activities* factor. The resulting model had a good fit (CFI = .962, RMSEA = .061, SRMR = .055). Once again, the residual variance of the *relationships with people without disabilities* item was constrained to zero. Standardized factor loadings for the final model are reported in **Table 4**. Unstandardized factor loadings may be found in **Figure 1**.

DISCUSSION

Inclusion of people with IDD has been an important topic of research for fifty years, yet researchers have struggled to define the theoretical framework underlying the concept of inclusion. This struggle has resulted in difficulty with operationalizing and measuring the concept. The results of this study suggest that the Verdonschot et al. (2009) meta-analysis of inclusion can be used to provide a good theoretical framework. The measurement model had a close fit to the four domains of inclusion outlined by Verdonschot and colleagues. There were two noteworthy exceptions. First, the item, *clubs and civic organizations,* loaded onto the *major life activities* factor rather than the *community, civic, and social life* factor. Second, there were problems with the model fit on the *interpersonal life* factor.

Regarding the factor loading of the *clubs and civic organizations* item, it may be that the three new *major life activities* items (work/volunteer work, learning/education, and clubs/civic organizations) all represented activities that are done daily or several times during the week. On the other hand, the three remaining items on *community, civic, and social life* factor all represented activities that individuals would participate in one to two times per week or less. Thus, it may be that the frequency of activity explains the relationship between items in these cases. Regarding problems with the *interpersonal life* factor, the model fit issues were most likely caused by the

limited number of items that were available to load on this factor. If a third item could be developed for this factor, it is possible that the factor model would have a better fit.

If inclusion research is to continue to move forward, more measures are needed. A brief measure such as the one proposed by this study will be useful to future researchers who are trying to examine the relationship between inclusion and other constructs. A brief measure could also be useful to clinicians as many current practice interventions are aimed at increasing inclusion. For example, practitioners who work in the area of behavior intervention teach socially appropriate behaviors that generalize to community settings and typical social relationships. Thus, it is important for these practitioners to have a way to measure how frequently their clients gain access to inclusive environments. If individuals with IDD are not getting access to inclusive environments, there is no way to practice and generalize new skills.

Future research could aim to have researchers and practitioners working together to improve the opportunities for inclusion for people with IDD. For example, future research might examine how behaviors including both adaptive and maladaptive behaviors impact experiences of inclusion. Another avenue for future research is to examine how inclusion relates to the process of generalization of behaviors that are learned in the clinical setting (Cooper, Heron, & Heward, 2007). If the individual with IDD is to be truly supported in an inclusive setting, the skills learned must be witnessed across multiple settings. Ensuring that inclusion is occurring is crucial to ensuring that the individual experiences success.

LIMITATIONS

Limitations of this study include the small number of participants, and the limited region in which the participants participated. The representativeness of the sample poses some limitations

because the data was collected online and may not have been accessible to people who have limited access to computers. Additionally, a small number of items were tested in the creation of the measure. Further research could examine additional items and whether they should be added to the scale. The measure asked the perception of parents or other caregivers about inclusion. Thus, the measure could be criticized for not being a direct observation of the level of inclusion.

Also, some additional steps could have been taken to test the reliability and validity of the measure. Triangulation could be used in a future study. Researchers could examine how this measure corresponds to other types of data collection on inclusion such as interviews or direct behavioral observation. The convergent validity of the measure could also be tested. Researchers could find another measure of participation, integration, or inclusion and examine the correlation of this new measure to that existing measure.

IMPLICATIONS AND CONCLUSIONS

Despite the limitations, the study has important implications for inclusion theory, practice, and future research. Regarding theory, the study provides strong support for the Verdonschot et al. (2009) four domain model of inclusion including civic, community, and social life; domestic life; major life activities; and interpersonal life. Thus, the study may help future researchers move toward a more solidified definition of the concept of inclusion. Regarding practice, the study provides a brief instrument that can be used to quickly assess whether a particular client is experiencing inclusion. If the client is not experiencing inclusion, action can be taken to increase opportunities in areas identified by the measure. Finally, the study provides a measure that can be used in future research. The proposed short instrument can be used in surveys and settings that

require quick assessment. The instrument is appropriate for work with families and people who are living in community based settings, but may not be fully experiencing inclusion.

We live in a time in which shrinking budgets put inclusion of people with IDD in jeopardy (Jackson, 2011).Thus, it is critical that we track whether opportunities for inclusion are being lost. In order to effectively track opportunities for inclusion, we must have measures. This study makes a contribution to the literature by proposing a short instrument and adding to our understanding of how inclusion can be operationalized.

AUTHOR NOTE

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Table 1. Item domains

Domains	Items
Domain 1: Domestic Life	Shopping
	Using transportation
	Going to health care appointments
Domain 2: Interpersonal Life	In friendships or relationships with people who do NOT have disabilities
	Spending most of his or her time with people who do NOT have disabilities
Domain 3: Major Life Areas	Working or doing volunteer work
	Learning or going to educational programs
Domain 4: Community, Civic, Social Life	Doing recreation activities
	Going to movies, going out to eat, or involved in other types of entertainment
	Participating in clubs or civic organizations*
	Going to church or other religious activities

*Modification indices indicated that "clubs and civic organizations" loaded on the major life activities factor.

Table 2. Demographics*

		Parent/Caregiver		Person with Disability	
		n = 136	%	*n* = 136	%
Gender	Male	17	12.8	84	63.6
	Female	116	87.2	48	36.4
Age	Under 18	–	–	40	29.4
	18–24	1	.7	50	36.7
	25–34	3	2.2	19	14.0
	35–44	26	19.1	12	8.8
	45–54	47	34.5	8	5.9
	55–64	47	34.5	4	2.9
	65–74	10	7.4	3	2.2
	75–84	3	2.2	–	–
Race	African American	21	15.4	23	16.9
	White	103	75.7	102	75.0
	Asian American	0	0	1	.7
	Native American	2	1.5	2	1.5
	Pacific Islander	1	.7	1	.7
	Latino/Hispanic	2	1.5	2	1.5
	Other	2	1.5	3	2.2
Family Relationship	Parent	107	81.7	–	–
	Grandparent	1	.7	–	–

	Aunt/Uncle	7	5.3	–	–
	Brother/Sister	11	8.4	–	–
	Other	5	3.8	–	–
Education	Some high school	2	1.5	–	–
	High School	7	5.1	–	–
	Some College	32	23.5	–	–
	College Degree	46	33.8	–	–
	Some Grad School	12	8.8	–	–
	Graduate Degree	37	27.2	–	–
Family Income	Less than $50,000	38	27.9	–	–
	$50,000-$99,999	45	33.1	–	–
	$100,000-$149,999	29	21.3	–	–
	$150,000-$199,999	15	11.0	–	–
	Over $200,000	9	6.6	–	–
Employment status	Full Time	64	49.2	–	–
	Part Time	32	24.6	–	–
	Unemployed	34	26.2	–	–
Diagnosis	Autism	–	–	59	43.4

	Intellectual Disability	–	–	42	30.9
	Physical/Medical	–	–	21	15.4
	Down Syndrome	–	–	18	13.2
	Cerebral Palsy	–	–	12	8.8
	Other	–	–	42	30.9

*There are some missing values for gender, race, and family relationships. Therefore, valid percentages (percentages out of the good data) were used.

Table 3. Inclusion items descriptive statistics and correlation matrix

	M	SD	Correlation Matrix									
			1	2	3	4	5	6	7	8	9	10
1) Shopping	3.02	1.23	1.0									
2) Using transportation	2.24	1.53	.44**	1.0								
3) Health care appointments	3.13	1.19	.34**	.36**	1.0							
4) Relationships w/people w/disabilities	2.97	1.35	.43**	.34**	.36**	1.0						
5) Time with people with	3.37	1.20	.22**	.20*	.12	.54**	1.0					

disabilities												
6) Participating clubs and civic orgs.	2.14	1.36	.54**	.32**	.29**	.33**	.20*	1.0				
7) Working or volunteering	2.17	1.50	.47**	.32**	.21*	.32**	.24**	.58**	1.0			
8) Learning or educational activities	2.99	1.54	.20*	.12	.37**	.29**	.07	.38**	.12	1.0		
9) Recreational activities	3.26	1.28	.67**	.43**	.43**	.52**	.21*	.52**	.40**	.35**	1.0	

10) Church or religious activities	3.41	1.47	.35***	.18*	.18*	.42***	.31***	.36***	.26**	.14	.38***	1.0
11) Go out to eat, movies, entertainment	3.20	1.25	.67***	.39***	.32***	.50***	.23*	.52***	.38***	.33***	.74***	.35***

*$p < .05$, **$p < .01$, ***$p < .001$.

Table 4. Standardized factor loadings

Parameter	Factor Loading	Standard Error
Community, Civic, Social → Doing recreation activities	.874	.030
Community, Civic, Social → Movies, out to eat, entertainment	.843	.033
Community, Civic, Social → Church or religious activities	.455	.073
Domestic Life →Shopping	.806	.047
Domestic Life →Transportation	.528	.070
Domestic Life → Health Care Appointments	.476	.073
Major Life Activities → Clubs or civic organizations	.867	.056
Major Life Activities → Work or volunteer work	.651	.062
Major Life Activities → Learning or education	.411	.081
Interpersonal Life → Relationships people w/out disabilities	1.000*	.000
Interpersonal Life → Time w/people w/out disabilities	.539	.061
Community, Civic, Social → Inclusion	.750	.068
Domestic Life → Inclusion	.983	.052
Major Life Activities → Inclusion	.973	.038
Interpersonal Life → Inclusion	.608	.060

*The residual variance for this item was constrained to zero.

Figure 1. Confirmatory factor analysis.