Who Self-Identifies as Disabled? An Examination of Impairment and Contextual Predictors

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**Abstract**

**Purpose/Objective**: According to Social Identity Theory, minority group members, like people with disabilities, manage stigma by either “passing” as majority group members or identifying with their minority group. Approximately 15% of the world’s population has a disability, but only a fraction of those individuals identify themselves as people with disabilities. Disability identification has been associated with positive outcomes including psychosocial well-being, self-advocacy, and political engagement. The International Classification of Functioning (ICF) recognizes that “disability” is constructed through the intersection of impairment and context (i.e., personal and environmental factors). This is the first study to examine ICF *impairment factors* (duration, noticeability, presence of at least one congenital impairment, pain, severity, and total number of impairments), *personal factors* (age, ethnicity, gender, income, and psychological distress), and *environmental factors* (social support and stigma) that predict disability self-identification. **Research Method/Design**: Participants living in the U.S. completed an online survey measuring the factors listed above. To avoid selection bias, disability was not mentioned in recruitment materials. Those who reported at least one impairment (*n* = 710) were retained for analysis. **Results**: Supporting the ICF proposition that disability results from a combination of impairment and contextual factors, disability identification was predicted by severity, age, income, and stigma. Stigma partially mediated the relationship between severity and identification. **Conclusions/Implications**: Stigma and severity were the strongest predictors of disability identification. Future work should examine ways to foster positive disability identity such as cross-impairment connections through support groups, mentoring, and collective action against stigma.

*Keywords:* disability identity, International Classification of Functioning, stigma, social identity theory, chronic health condition

Impact

* This is the first study to examine whether factors identified in the International Classification of Functioning (ICF) predict whether people with impairments consider themselves to be people with disabilities. To avoid selection bias that may have been present in previous disability identity research, disability was not mentioned in recruitment materials.
* This study provides evidence that the ICF is valid for the lived experiences of lay people when considering whether their own impairment is a disability. Patient-centered disability rehabilitation should intervene upon impairment, personal, and environmental factors.
* Stigma and severity were the most powerful predictors in explaining disability identification, and stigma mediated the relationship between severity and identification. This suggests that severity can be leveraged as a way to increase awareness of stigma, and increase disability identification. Ultimately, this could lead to collective action against stigma. Stigma may be reduced and disability identity simultaneously strengthened through engagement in the disability community and advocacy.

Who Self-Identifies as Disabled? An Examination of Impairment and Contextual Predictors

Approximately 15% of the world population may be classified as a person with a disability according to the World Health Organization (WHO, 2011). According to the International Classification of Functioning, Disability, and Health (ICF; WHO, 2001), the terms “impairment” or “health condition” are used to represent chronic diseases, disorders, injuries, and congenital anomalies, while the term “disability” is an umbrella term for the intersection of an *impairment* and an individual’s contextual *personal* and *environmental* factors. Although the ICF definition of disability is widely used in research and practice (Jelsma, 2009), it is not clear whether members of the lay public use a similar conceptual framework when characterizing their own impairments and disabilities. This knowledge is crucial to meet the goal of the ICF to be used to “establish a common language for describing health and health-related states in order to improve communication between different users, such as health care workers, researchers, policy-makers and the public, including people with disabilities” (WHO, 2001, p. 5). The purpose of this study therefore, is to examine the impairment-related and contextual factors that predict disability self-identification.

Four principles guided the development and application of the ICF (WHO, 2002). 1) Universality: disability is a human universal that occurs on a continuum. 2) Etiological parity: disability is not determined by etiology. For example, mental, physical, and chronic health conditions are treated equally. This allows all impairments to be compared along a common metric. 3) Neutrality: ICF language is not positively or negatively valenced, to allow for the classification of both positive and negative aspects of disability. 4) Environmental influence: social factors are now recognized as important factors contributing to disability. This principle refers to the substantial revisions made to the ICF in 2001. Its previous version, the International Classification of Impairments, Disabilities and Handicaps, was based on the medical model of disability, which views disability as a pathology inherent in the individual and is traditionally used by members of the medical community. In contrast, the “social model,” which is endorsed by many Disability Studies scholars and advocates, posits that the negative or impairing aspects of disability are largely socially constructed through social stigma and a lack of accommodations (Olkin & Pledger, 2003). The new version of the ICF is a biopsychosocial model which recognizes the influence of psychological and social factors in addition to impairment factors. Thus, under the ICF framework, an impairment need not necessarily be disabling if the correct personal and environmental factors (e.g., coping skills, wheelchair access, lack of stigma) are present. On the other hand, if these factors are lacking, even a mild impairment can be disabling.

**Disability Self-Identification**

The social model holds that people with disabilities share a number of similarities with other stigmatized groups (e.g., ethnic minorities), such as being the recipients of prejudice and the resulting disparities in healthcare and income (Olkin & Pledger, 2003). Many advances have been made in the study of ethnic and racial identity; however, research on disability identity is nascent. According to Social Identity Theory, minority group members manage stigma by either “passing” as majority group members or identifying with their minority group (Tajfel & Turner, 1979). For some, identification as disabled may promote a sense of pride, collective self-efficacy, and advocacy (Caldwell, 2011; Nario-Redmond, Noel, & Fern, 2013; Nario-Redmond & Oleson, 2016) and may form a cultural and social identity (Schrader, Jones, & Shattell, 2013). Others, however, may resist identifying as disabled despite having an impairment that limits daily life activities (Asaba & Jackson, 2011; Rhodes, Small, Ismail, & Wright, 2008; Finlay & Lyons, 1998). For example, in two samples of participants with disabilities, Nario-Redmond and colleagues (2013) found that 18% and 7% of participants, respectively, reported identifying as “abled-bodied” or “non-disabled” despite having an impairment. Another study found that only 28% of people with impairments self-identified as people with disabilities (Chalk, 2015).

Examining predictors of disability self-identification is important because previous studies have found that identification is associated with a variety of positive outcomes, including greater self-esteem, satisfaction with life, and political engagement, as well as lower psychological distress (Bat-Chava, 1994; Bogart, 2014, 2015; Nario-Redmond et al., 2013; Nario-Redmond & Oleson, 2016; Schur, 1998). Indeed, Chalk (2015) found that participants who experienced an impairment but did not self-identify as disabled reported lower self-esteem and higher stigma than people without disabilities, whereas participants who identified as disabled had the same levels of self-esteem and perceived esteem as people without disabilities. Furthermore, people who identify are more likely to seek accommodations and resources and to advocate for themselves in the workplace (Santuzzi & Waltz, 2016). In the next sections, we review literature examining reasons why people may identify as disabled.

**Impairment Factors**

There has been little systematic research on the relation of impairment categories to disability self-identification. Some suggest that those with physical or sensory impairments are more likely to self-identify, while those with mental health conditions, cognitive/learning disabilities, and developmental/intellectual disabilities are less likely to do so (Beart, Hardy, & Buchan, 2005; Hahn & Belt, 2004; Olney & Kim, 2001). However, these findings are highly dependent on the category definitions, for which no official criteria have been created and thus vary from study to study. As such, this study aims not to group impairments into categories, but rather to decompose them into the following impairment characteristics drawn from the literature: duration, time of onset (congenital or acquired), noticeability, severity, number of impairments, and pain.

It is generally found that the longer people live with an impairment (duration), the more likely they are to incorporate it into their identity (Alfano, Neilson, & Fink, 1993; Bogart, 2014; Hampton, 2004; Krause, 1992; Nario-Redmond & Oleson, 2016). Relatedly, whether a disability is congenital or acquired predicts important life outcomes such as adaptation (Bogart, Tickle-Degnen, & Ambady, 2012; Li & Moore, 1998) and identification above and beyond duration (Bogart, 2014). This may be because one goes through initial development with the impairment, enabling incorporation into one’s self-concept (Bogart, 2014).

Those with noticeable impairments are more likely to self-identify than those with hidden or invisible impairments because individuals with noticeable impairments do not have the option of “passing” as nondisabled (Nario-Redmond & Oleson, 2016; Olney & Brockelman, 2003). However, in certain cases, individuals with invisible conditions take pride in their disability identity, even if their disability status is not visible (Corrigan, Kosyluk, & Rüsch, 2013; Reeve, 2002).

Severity, or the extent to which one’s impairment lessens one’s ability to perform activities of daily living, may be a key predictor of identification (Bogart, 2014; Rhodes et al., 2008; WHO, 2001). For example, in a study of people with epilepsy, Rhodes and colleagues (2008) found that participants who experienced epileptic seizures often and intensely were more likely to identify as disabled than those who experienced the symptoms of epilepsy less often.

Similarly, individuals with multiple conditions may be more likely to identify as disabled. For example, a study by Kelley-Moore, Schumacher, Kahana, and Kahana (2006) showed that older adults with more health conditions were more likely to consider themselves disabled, regardless of the actual impact these conditions had on their functionality. Moreover, in a study of 2,764 people with disabilities, Rottenstein (2013) found that those with a higher number of conditions were 1.08 times more likely to self-identify as disabled than those with a lower number of conditions. Finally, the presence of pain makes one’s impairment highly salient (Linton, 1998).

**Personal Factors**

We anticipate that personal factors including gender, race/ethnicity, income, age, and psychological distress will influence disability self-identification. The intersection of gender and disability has been and continues to be fertile ground for scholarly work (e.g. Fine & Asch, 1988; Garland-Thomson, 2005; Morris, 1993). One key finding is the notion that women with disabilities, as members of two low-status groups, will experience a double-oppression of ableism and sexism. How these experiences will shape women’s likelihood to self-identify as disabled, however, has not yet been studied.

 The intersection of race and disability is an important topic despite the paucity of research (Block, Balcazar, & Keys, 2001). What little work there is suggests that people of color with disabilities, similar to women with disabilities, face a form of double oppression (Stuart, 1992, 1993; Vernon, 1999). For example, in a study of young Black disabled people, Bignall and Butt (2000) reported that participants described experiences of racial segregation in environments already segregated by disability. Experiences of ableism in one’s racial community and racism in one’s disability community may lead many people of color with disabilities to feel that they do not fully belong to or identify with either a racial or disability identity (Mpofu & Harley, 2006; McDonald, Keys, & Balcazar, 2007).

 Disability is intrinsically linked with lower income (Block, Balcazar, & Keys, 2001). While scholars have examined how income may exacerbate or mitigate negative experiences associated with disability (Morris, 1991; Block et al., 2001; Vernon, 1999), virtually no work has been done to explore the relationship between income and disability self-identification. The literature on the effect of age on identification is mixed, with some studies finding older adults are less likely to identify (Bogart, 2014), some finding older adults are more likely to identify (Darling & Heckert, 2010), and some finding age to be unrelated to disability identification (Nario-Redmond et al., 2013; Nario-Redmond & Oleson, 2016). More research is needed to clarify the relationship between demographic variables and disability identification.

Consistent with the predictions of Social Identity Theory that identifying with one’s minority group is a way to preserve one’s well-being, in two studies with different populations of people with disabilities, Bogart (2014, 2015) found that affirming a disability identity is associated with lower psychological distress. Thus, it may be expected that lower levels of psychological distress could predict higher likelihood of disability identification.

**Environmental Factors**

 The ICF (WHO, 2001) highlights the role of environmental factors including stigma and social support in the experience of disability. Stigma is defined as social devaluation based on a discrediting difference or identity (Goffman, 1963). It is an environmental factor that limits the participation of people with disabilities in a variety of ways, from subtle experiences of micro-aggressions to overt employment discrimination and accessibility barriers (WHO, 2001). The rejection-identification hypothesis (Branscombe, Schmitt, & Harvey, 1999) predicts that minority group members who experience stigma and discrimination preserve their well-being by identifying with their ingroup. This process allows them to make external attributions about negative events to social stigma, as opposed to negative internal attributions. For example, Crabtree, Haslam, Postmes, and Haslam’s (2010) study of individuals with mental health conditions found that group identification predicted an increase in participant (1) resistance to stigma, (2) rejection of harmful stereotypes, and (3) perception of social support. Importantly, high levels of these three factors were associated with high levels of participant self-esteem.

Relatedly, social support provides a sense of belonging and emotional understanding, buffers stigma, and serves as a coping resource (Beals, Peplau, & Gable, 2009; Pachankis & Goldfried, 2010). Indeed, Nario-Redmond and Oleson (2016) found that people who were willing to engage with others with disabilities were more likely to identify as a person with a disability.

**Present Study**

Although the research described above suggests links between impairment, personal, and environmental factors and disability identification, there has been little systematic research on disability identification, and it is not known which of these factors are the most crucial to this process. The present research is an exploratory study examining the relative importance of impairment, personal, and environmental factors within the ICF framework in predicting the extent to which people identify themselves as a person with a disability. Corresponding to the traditional medical model view that impairment is the primary determinant of disability, we predicted that impairment factors including duration, noticeability, presence of at least one congenital impairment, pain, severity, and total number of impairments, would predict disability identification. Further, based on the new version of the ICF, moving outward from the impairment to the person and the environment, we predicted that personal factors, including age, ethnicity/race, gender, income, psychological distress, and finally, the most conceptually new and thus least researched, environmental factors, including social support and stigma, would explain identification over and above impairment factors. To examine these questions, we conducted a large internet-based study. Rather than recruit participants for a study on disability, which may promote self-selection of people who identify as disabled or prime disability identification, our study was described as a “health and identity survey,” and included no mention of disability or requirements of having a health condition or impairment in the recruitment materials or consent form. Thus, our study would avoid a common issue in disability research, namely, that people who have impairments but who do not self-identify as disabled are not sampled.

**Method**

**Participants**

Participants were recruited through Amazon Mechanical Turk (MTurk). MTurk is a popular participant recruitment website in which workers are awarded a small amount of Amazon.com credit for completing online tasks. MTurk studies have produced valid and reliable data on a variety of psychological measures among people with and without disabilities and allow for the recruitment of large samples quickly and for minimal cost (Buhrmester, Kwang, & Gosling, 2011; Lund, Nadorff, Winer, & Seader, 2016). MTurk samples have been shown to be gender-balanced, geographically distributed, racially and ethnically representative, and representative of the distribution of disabilities in the US (Buhrmester et al., 2011; Lund et al., 2016; Thomas, Lund, & Bradley, 2015). Inclusion criteria in the present study were 18 years of age or older and living in the United States. Table 1 shows participant characteristics.

A total of 1105 participants completed the survey. Participants were excluded for the following reasons: four participated twice (determined by MTurk ID codes entered), so their second entry was deleted; 126 failed attention checks[[1]](#footnote-1); 267 did not endorse any impairments. Thus, the final dataset included 710 participants. Participants received $1 in Amazon credit as compensation, a typical-to-high amount for MTurk studies (Brochu, Pearl, Puhl, & Brownell, 2014; Buhrmester et al., 2011).

**Measures**

**Endorsement of impairment.** Participants were instructed to select all health conditions they had from a list of 86 common impairments and to indicate other conditions using fillable boxes. Consistent with ICF’s etiological parity principle, rather than make a priori assumptions about whether a health condition might be considered disabling, a number of health conditions were included in order to examine the factors that may contribute to disability identification. The list of impairments was derived from consultations with a center for independent living and experts in disability studies, social work, physical medicine and rehabilitation, and rehabilitation psychology (see Rottenstein, 2013, for details about this process). The 10 most commonly endorsed impairments were: allergies (*n* = 281), anxiety (*n* = 221), depression (*n* = 206), back injury/pain (*n* = 140), migraines (*n* =108), attention-deficit/hyperactivity disorder (*n* = 80), respiratory disease (*n* = 78), arthritis (*n* = 73), hypertension (*n* = 64), and chronic pain (*n* = 59).

**Impairment factors.** For each impairment endorsed, conditional logic presented the following items about the perceived characteristics of the impairment: 1) “my health condition is severe (it significantly affects my daily life)”; 2) “indicate how often this condition causes you physical pain.”; 3) “indicate how often this condition is noticeable to other people. That is, if you didn’t tell people about it, would they know you have it?”; 4) “Select the statement that best describes the onset of the condition (1 = congenital, 0 = acquired)”; and 5) “indicate how many years you have had symptoms of the health condition.” These items are similar to disability characteristic items used by Bogart (2014), Nario-Redmond and Oleson (2016), and Rottenstein (2013). Responses for the first three items were given on a scale from 1 (strongly disagree or never) to 5 (strongly agree or always).

 **Personal factors.** Self-report information on gender (dummy coded as female = 0, male = 1), race/ethnicity (dummy coded as 0 = white, 1 = nonwhite), income, and age was collected.

The 10-item Kessler Psychological Distress Scale (K10) was used as a global measure of distress based on anxiety and depressive symptoms experienced over the past 4 weeks (Kessler et al., 2002). It shows excellent convergent validity with structured clinical interviews (Kessler et al., 2002). Response options ranged from 1 (none of the time) to 7 (all of the time). Items were summed, with higher scores representing greater distress (α = .94).

**Environmental factors.** The 12 item Multidimensional Scale of Perceived Support was used as a measure of global perceived social support in three domains: family, friends, and significant other (Zimet, Dahlem, Zimet, & Farley, 1988). It has good psychometric properties including factorial validity and convergent validity (Zimet et al., 1988). Response options ranged from 1 (very strongly disagree) to 7 (very strongly agree). Items were averaged, with higher scores representing greater perceived social support (α = .95).

The 8 item Stigma Scale for Chronic Illnesses is a unidimensional measure of enacted and internalized stigma validated for use in a variety of impairments (Molina, Choi, Cella, & Rao, 2013). Items request participants to consider their experience with their impairment when responding. For example, one item read: “because of my health condition(s)/disability(ies), people seemed uncomfortable with me.” Response options ranged from 1 (never) to 5 (always). Items were summed, with higher scores representing greater perceived stigma (α = .92).

**Disability self-identification**. Participants were asked “how strongly do you agree/disagree with the following statement? ‘I identify as a person with a disability.[[2]](#footnote-2)’” Response options ranged from 1 (strongly disagree) to 5 (strongly agree). Similar items have been used in Chalk (2015) and Rottenstein (2013).

**Procedure**

This study was approved by the first author’s Institutional Review Board. Participants followed a link from MTurk to the survey administration website Qualtrics. This maintained participant confidentiality and ensured that all data was collected via an encrypted, password-protected platform. Measures were presented in the following order: demographics, impairment endorsement, impairment factors, disability pride, stigma, disability self-identification, attitudes toward disability, self-esteem, psychological distress, and social support. Disability pride, attitudes toward disability, and self-esteem were included for the purposes of other research and are not included in this study. The survey took approximately 20 minutes to complete.

**Data Analysis**

Because many participants endorsed multiple impairments, each participants’ maximum rating for duration, noticeability, pain, and severity, was used. As previously described, having a congenital impairment may predispose the participant to identify as a person with a disability. Thus, if a person endorsed at least one congenital impairment, they received a dummy code of 1. If no congenital impairments were endorsed, a dummy code of 0 was given.

As can be seen in Table 1, responses to the disability self-identification item were positively skewed. As such, we used bootstrapping, a technique robust to violations of parametric assumptions. 1,000 bootstrap samples were used, and bias-corrected confidence intervals are presented.

A correlation matrix was created to examine bivariate intercorrelations. Next, we conducted a hierarchical multiple linear regression based on the ICF framework to examine the unique contribution of impairment, personal, and environmental factors on disability self-identification. The first step included impairment characteristics (duration, noticeability, presence of at least one congenital impairment, pain, severity, and total number of impairments) to represent the traditional medical model view that impairment factors are the primary determinant of disability. Thus, the next steps allowed us to test whether contextual factors, based on the new version of the ICF and social model of disability, explain identification over and above impairment factors. The second step included personal factors (age, ethnicity/race, gender, income, and psychological distress). The third step added environmental factors (social support and stigma). Significant R and R2 change would indicate which ICF factors explain a significant amount of variance in disability identification.

**Results**

Table 2 shows the intercorrelation matrix. The variables with the strongest bivariate correlations with self-identification were stigma and severity, which showed large effects. Table 3 shows the hierarchical regression predicting identification as a person with a disability. In the first step of the model, which included impairment characteristics, the significant predictors in order from most contribution to the model to least were severity and number of impairments. Congenital onset, duration, noticeability, and pain were not significant predictors. The adjusted R2 indicated that this step explained 26% of the variance in disability identification.

In the second step, which added personal factors, the significant factors were severity, number of impairments, lower income, older age, and gender (males showed higher identification). Congenital onset, duration, noticeability, pain, ethnicity and psychological distress were not significant. The addition of this step explained 30% of the variance according to adjusted R2.

In the last step, which added environmental factors, the significant factors were stigma, severity, age, lower income, and number of impairments. However, the bias-corrected CI of number of impairments included zero, indicating that, when accounting for bias, it may not be a predictor. Congenital onset, duration, noticeability, pain, ethnicity, gender, psychological distress, and social support were not significant. The adjusted R2 indicated that the addition of this step explained 36% of the variance. Each step showed a significant R2 change, indicating that the addition of the new variables significantly enhanced the model’s explanatory power.[[3]](#footnote-3)

An anonymous reviewer suggested calculating a mediation model to parse the effects of severity and stigma on disability self-identification. This was tested using PROCESS, an SPSS path analysis script (Hayes, 2013). Bootstrapping was utilized, with 1,000 bootstrap samples, to estimate bias-corrected confidence intervals. The predictor for the model was severity, the outcome was disability self-identification, and the mediator was stigma. The total effect of severity on self-identification was significant, *b* = .58 *SE* = .04, *p* < .001, 95% CI [.51, .66]. The direct effect, which is the effect of severity on self-identification, controlling for stigma, was reduced but remained significant, *b* = .34, *SE* = .04, *p* < .001, 95% CI [.26, .42]. The indirect effect of stigma, which represents the difference between the total and direct effect, was significant, *b* = .25, *SE* = .03, 95% CI [.20, .30]. Thus, stigma partially mediates the effect of severity on self-identification.

**Discussion**

 This study tested whether the ICF framework predicts the extent to which individuals with impairments identify themselves as people with disabilities. Our results show that when considering their own disability identity, a combination of impairment factors (severity), personal factors (age and income), and environmental factors (stigma) all played a role. In addition to being a useful framework for healthcare professionals and scholars to use when characterizing disability, our findings suggest that the ICF is helpful in explaining the way that lay individuals with impairments consider their identity. These findings lend support to the ICF goal of developing a common language between people with disabilities and those who support them (WHO, 2001). By focusing on these factors, policy makers, healthcare professionals, and researchers can understand and intervene upon disability in a person-centered way.

Severity was a strong predictor of disability identification. Several previous studies found that severity or limitations in performing activities of daily living is a key predictor of identification (Bogart, 2014; Rhodes et al., 2008). When considering whether an impairment is a disability, people may make judgements about the legitimacy of the condition, that is, whether it is severe enough to warrant a disability label (Rhodes et al., 2008; Santuzzi & Waltz, 2016). Further, our mediation analysis shows that severity operates partially through stigma to affect disability identification. People with severe impairments may encounter more stigmatizing social and environmental barriers, which, in turn, make disability identity more salient. Severity might be leveraged to promote the development of disability identification by increasing awareness of stigma. That is, if perception of severity is associated with greater awareness of common social devaluation and exclusion, and this in part contributes to disability identification, then this could inform rehabilitation strategies and policies that promote more community opportunities, collective action, and positive disability identification.

Disability and income share a bidirectional relationship in which disability contributes to barriers to education and employment, high healthcare costs, and housing disparities while low income leads to poor health literacy and limited access to healthcare and assistive technology (American Psychological Association, n.d.). The combination of low income and disability create double oppression (Block, Balcazar, & Keys, 2001) and may heighten disability identification by increasing awareness of discrimination (Branscombe et al., 1999; Nario-Redmond & Oleson, 2016). This may help explain why lower income was linked to greater likelihood of disability identification in our sample, because the impairments and social consequences of disability may be more acutely felt by those with limited financial resources. Older age and disability may create a similar double oppression predicting disability identification in our study. Additionally, disability is perceived as more expected in older age rather than younger age, perhaps leading older adults with impairments to identify more readily (Darling & Heckert, 2010).

 Stigma predicted disability identification over and above the impairment and personal factors examined in the current study. This finding supports the validity of the social model of disability from the perspective of people with impairments, suggesting that disability is at least somewhat socially constructed (Olkin & Pledger, 2003). The rejection-identification hypothesis predicts that experiencing stigma leads people to identify with their stigmatized group (Branscombe et al., 1999). Combined with previous findings that disability identity is associated with positive outcomes like self-esteem and well-being (Bogart, 2014; Chalk, 2015), this process appears to be protective. It enables the person to make external attributions about the stigma (“people are ableist”) rather than internal attributions (“I’m unlovable”). Indeed, the experience of stigma may spur the high level of political activism found among highly identified individuals (Nario-Redmond & Oleson, 2016).

Although many of our proposed factors significantly predicted disability identification, there were some that failed to do so. The impairment characteristics of duration, congenital or acquired onset, noticeability, number of impairments, and pain failed to significantly predict identification. Relatedly, the person variables, gender, race/ethnicity and psychological distress, and the environmental factor social support failed to significantly predict identification. Nearly all of these variables showed significant bivariate correlations with identification, but they may be simply less powerful in predicting disability identification relative to the significant predictors discussed. However, we hesitate to draw this conclusion based on a single study, especially since these factors were derived from previous research. Perhaps these findings are reflective of our particular sample of participants and the limitations described below.

**Strengths and Limitations**

 As with any convenience sample, ours may not be representative of the population. However, of 710 participants with impairments, 48% reported having an impairment that they agreed or strongly agreed was severe. This suggests that MTurk allowed us to successfully recruit people who believe they have severe impairments. Of note, our sample was limited to those with the capacity to read and understand informed consent documents and study materials, excluding those with significant cognitive impairments. Further support for generalizability comes from the finding that the most commonly endorsed impairments are among the most prevalent in the US, with allergies affecting up to 40% of the population (World Allergy Association, 2013), anxiety affecting 18% (“Any Anxiety Disorder Among Adults,” n.d.), depression affecting 7% (“Major Depression Among Adults,” n.d.), low back injury/pain affecting 10% (Freburger et al., 2009), and migraine affecting 17% (Smitherman, Burch, Sheikh, & Loder, 2013). Our sample was also somewhat more white, had somewhat lower income, and was slightly younger than the US population at large (U.S. Census Bureau, 2016). Because of the larger number of white participants in our study, we used a dichotomous race/ethnicity dummy variable, which may have obscured differences in identification patterns between different racial and ethnic minority groups.

Additionally, our study was cross-sectional in nature, meaning we cannot infer causality from our results. The order in which measures were presented may have influenced participants’ responses. Single-item measures were used for several predictor and outcome variables in the internet-based survey for brevity and to reduce cognitive load. Although concerns exist about their psychometric properties, there is evidence for adequate validity and reliability in single item measures of a variety of global or unidimensional constructs, including disability identification, disability characteristics, psychosocial functioning, and quality of life (Bogart, 2014; Chalk, 2015; DeSalvo et al., 2006; Nario-Redmond & Oleson, 2016; Rottenstein, 2013; Zimmerman et al., 2006). For example, evidence for construct validity of a single-item measure of disability self-identification is supported by Chalk's (2015) findings that participants who reported impairments, but did not self-identify as disabled according to a single item, reported lower self-esteem and higher stigma than participants with no impairments. These findings are similar to Nario-Redmond et al., (2013)’s findings that disability identity (measured with a 5-item scale validated with factor analysis for structural validity) is associated with higher self-esteem, suggesting convergent validity. Additionally, we intended to assess global disability identification, so we did not specify the domains participants should consider when responding to this item. Some participants may have been thinking about specific contexts (e.g. workplace experiences, romantic relationships, interactions with the general public) which may have introduced additional error variance in responses.

To avoid selection bias, disability was not mentioned in recruitment materials. For this reason, our sample, although perhaps more representative of the population, which contains the high prevalence impairments described above, differs from previous research on disability identity. Previous work has sampled less prevalent impairments more traditionally labeled as disabilities, such as spinal cord injury, visual impairments, and developmental disability. This may explain the low mean disability identification ratings. Our sampling procedure may also mean that people who would self-identify as disabled, or who are highly identified are not overrepresented in the sample. This may explain why were not enough participants who endorsed “identity-first” language to compare these terms. “Identity-first” language use is associated with disability activists in the U.S., so our study may not have captured many of those with the strongest disability identity. The use of “person-first” language for our disability self-identification variable may have obscured differences associated with the use of “identity-first” language (Dunn & Andrews, 2015). Only one percent of our sample preferred “identity-first” language, which is an even smaller proportion than found in previous disability identity studies (Haller, Dorries, & Rahn, 2006; Linton, 1998; Zola, 1993), suggesting its usage among the general public in the U.S. is rare.

**Implications**

Our finding that people were unlikely to endorse a disability identity supports the observation in the literature that disability self-identification continues to be rare relative to the prevalence of health conditions. Future work should examine ways to foster positive disability identity, ameliorate stigma, and reduce severity. Whereas other social identities have created positive identities (e.g. Black pride, gay pride), disability pride is often viewed as an oxymoron to all but a select group of disability activists (Darling & Heckert, 2010; Hahn & Belt, 2004). Socialization with ingroup members encourages identity development (Bat-Chava, 1994; Roccas & Brewer, 2002), but people with disabilities are often isolated in their communities (Santuzzi & Waltz, 2016). Unlike people who are ethnic minorities, but similar to people in the LGBT community, people with disabilities are often the only person in their family or even their community with a disability. Well-intentioned nondisabled family and community members often try to “normalize” people with disabilities so they will fit in with the majority culture, rather than fostering a sense of disability identity (Olkin, 2009). Further, the widespread medical model perpetuates the view that impairment is an individual problem, and deemphasizes the effects of social stigma. This may lead people to identify with their diagnosis and seek out impairment-specific support groups (e.g. spinal cord injury support groups), rather than recognizing a cross-disability identity that involves shared experiences of oppression with people with a variety of types of impairments. However, the ICF principle of etiological parity encourages looking beyond diagnostic categories. Thus, encouraging cross-impairment connections through support groups, mentoring, and collective action which focus on finding commonalities among and improvements to impairment, personal, and environmental factors could foster disability identity (Olkin, 2009), and with time, hopefully increase psychosocial well-being, self-advocacy, and political engagement.

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Table 1

*Participant Characteristics*



Note. Percentages may not sum to 100 due to rounding.

Table 2

*Intercorrelation Matrix*



*Note.* \*\* *p* < .01. \* *p* < .05

Table 3

*Regression Predicting Disability Self-Identification*

**

*Note.* \*\* *p* < .01. \* *p* < .05

1. Two instructional manipulation checks were presented during the survey (i.e. “Please click on the button for ‘agree’ so we can screen out random clicking.”; Oppenheimer, Meyvis, & Davidenko, 2009). [↑](#footnote-ref-1)
2. Person-first language (e.g. “person with a disability”) is the commonly accepted language in U.S. policy and practice (Dunn & Andrews, 2015). On the other hand, “identity first” language (e.g. disabled person) is common across the UK but is rarely used in the U.S. (Haller, Dorries, & Rahn, 2006; Linton, 1998; Zola, 1993). We chose to use the term “person with a disability” as the disability self-identification variable based on findings from previous studies that the use of identity-first language in the U.S. was rare (Nario-Redmond et al., 2013; Rottenstein, 2013). Supporting this notion, a separate survey item asked participants to select the category that best described them: “person with a disability”; “disabled person”; “nondisabled person”; “able-bodied person.” Only 1 percent of our sample selected “disabled person,” while 13% selected “person with a disability.” [↑](#footnote-ref-2)
3. Although Likert-type data such as our dependent variable is traditionally treated as interval data in psychology, it could be considered ordinal data (Norman, 2010). At the recommendation of an anonymous reviewer, we also conducted an ordered logistic regression using the same variables, which revealed the same pattern and significance of results. This is consistent with research showing that analyzing Likert-type data as interval rather than ordinal usually does not change the results of statistical tests (Norman, 2010). [↑](#footnote-ref-3)