The Association of Group-based Discrimination with Health and Well-being: A Comparison of Ableism with Other "isms"

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Abstract

Discrimination has negative consequences for the health and well-being (HWB) of individuals belonging to disadvantaged groups. Due to social and attitudinal barriers, we argue that disabled people comprise one of the groups most affected by discrimination. Using data from the European Social Survey, including representative samples from 32 countries surveyed in seven waves (2002-2014), we compared the effects of ableism on HWB with discrimination targeting other groups (e.g., sexism, ageism). We tested these effects *between* individuals (i.e., comparing the effects of individuals belonging to different disadvantaged groups) and *within* individuals (i.e., examining the case of individuals belonging to multiple disadvantaged categories). Results indicated that facing ableism is associated with lower HWB, and that this effect has a greater magnitude when compared to the effect of being discriminated because of other disadvantaged group memberships. Our findings highlight the significance of addressing ableism in research and social policy.

Keywords: Discrimination; disability; ableism; health and well-being.

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Group-based discrimination has deleterious consequences for the health and well-being of individuals belonging to disadvantaged groups (Pascoe & Smart-Richman, 2009; Schmitt, Postmes, Branscombe, & Garcia, 2014). These are well-known and established effects, but a curious paradox remains in this field of research – although disabled people are one of the largest social minorities (15% of the world's population; World Health Organization [WHO], 2011), they have received much less societal and academic attention than other disadvantaged groups (e.g., racial minorities). This is, for example, evident with the use of Google searches, which have been validated as measures of social attitudes (Stephens-Davidowitz, 2014) and we use them here to illustrate the relative salience of societal attitudes towards disadvantaged groups. Examining the relative 'popularity' of Google searches worldwide in the last ten years, we found that "racism" averaged a popularity of 43.5, compared with "sexism" (18.1), "ageism" (1.6), and "ableism" (1.04)[1]. Using other more common terms such as "disability discrimination" instead of ableism, or "age discrimination" instead of ageism, revealed the same order of popularity. This paradox is likely to reflect extant norms and societal priorities, whilst mirroring this group's status in multiple societies. In this paper, we compare the effect of group-based discrimination against different groups (e.g., ableism, ageism, sexism) on health and well-being. We argue that disabled people may comprise one of the disadvantaged groups that suffers the most from discrimination and, in the face of such evidence, it would be appropriate to challenge this relative lack of knowledge of their plight.

[1] We used Google Trends, which compares terms searched during a specified period of time and provides a "popularity score" for each term, ranging from 0 to 100. One-hundred represents peak popularity, 50 represents medium popularity, and 0 means there were no data available for that term. This analysis was performed on the 13th of March 2019.

Conceptualizing Disability

According to the social model of disability (Oliver, 1983; Oliver & Barnes, 2010; Shakespeare, 1996), disability derives directly from environmental, social, and attitudinal barriers, contrasting with the individual and medical model (Brisenden, 1986), which focuses the problem on individuals' bodies and minds. Defining disability as a societal problem derived from social barriers, rather than an individual issue, places the onus of change on society (Olkin & Pledger, 2003). Throughout this research, in line with the social model of disability and in accordance with the Movement and Organizations of Disabled People, we use the term "disabled people" to mean that "people are disabled by environmental, systematic, and attitudinal barriers in society, rather than by their impairment" (European Network on Independent Living, 2018). In fact, this term has been commonly used by disability rights activists and in disability studies, since the early 90s, as a marker of identity of a group bounded by common social and political experiences (Linton, 2006). It allows disabled people to claim disability as an important aspect of their identity (Dunn & Andrews, 2015), while the onus of social construction and change remains on society.

Disability has become a broader category over time, incorporating people with a wide range of conditions. According to the Convention on the Rights of Persons with Disabilities [CRPD] (United Nations [UN], 2006, art. 1, p. 4), disabled people are "those who have long-term physical, mental, intellectual or sensory impairments which in interaction with various barriers may hinder their full and effective participation in society on an equal basis with others". Therefore, mental, neurological, or chronic health conditions causing long-term impairments, which in interaction with various barriers may hamper full participation in society, could be considered disabilities. In addition, Bogart and Dunn (in press) note that, from a social model

perspective, anyone self-identified or identified by others as having a disability can be considered as such. This broad and inclusive definition of disability is adopted throughout our research.

Ableism: Discrimination toward Disabled People

Stigma is generally based on an attribute and serves as a motive to discount a person and to believe that they are not quite human, supporting discrimination and reducing the target's life opportunities (Goffman, 2006). Ableism has been mostly addressed in disability studies and conceptualized as a set of beliefs and practices that marginalize disabled people and subject them to a "diminished state of being human" (Campbell, 2001, p. 44), through the postulation of an abled corporeal standard that is essential and fully human. It is based on the belief that impairment is inherently negative and the cause of the problems experienced by disabled people (Campbell, 2008), masking the role of the social environment. As such, we argue that ableism is in line with the individual and medical perspective on disability. Moreover, the endorsement of such a perspective is related to the legitimization of the status quo (Dirth & Branscombe, 2017) and justifies the social segregation of disabled people. In this study, we adopt the broad definition, proposed by Bogart and Dunn (in press), equivalent to social psychological definitions of other "isms": "Ableism is stereotyping, prejudice, discrimination, and social oppression toward people with disabilities" [*note to editors: add page number once Bogart and Dunn is published*].

Research shows that able-bodied individuals tend to have negative attitudes towards disabled people, as well as negative emotional reactions, such as anxiety, avoidance and ambivalence (Dovidio, Pagotto, & Hebl, 2011; Vilchinsky, Findler, & Werner, 2010). A meta-analysis showed a consistent pattern of moderate to strong negative implicit attitudes toward

disabled people (Wilson & Scior, 2014). Over the years, research has identified multiple sources of negative attitudes toward disabled people. These include, for example, social and cultural conditioning, moral beliefs about disability (perception of disability as a punishment for a committed sin or as a justification for a future evil act, triggering unconscious fear), fear of death due to the parallelism between disability and death, and negative stereotypical reactions typically associated with marginalized group members (Dunn, 2015; Livneh, 1982, 1988).

According to the stereotype content model (Cuddy, Fiske & Glick, 2008; Fiske, Cuddy, Glick, & Xu, 2002; Fiske, Xu, Cuddy, & Glick, 1999), there are two fundamental dimensions of social perception – warmth and competence – that, in combination, generate distinct emotions of admiration, contempt, envy, and pity. Disabled people have been associated with low competence and high warmth, a combination that elicits pity and sympathy emotions, and thus paternalistic prejudice (Cuddy et al., 2008; Fiske et al., 1999; Fiske et al., 2002). At an implicit level, however, disabled people are associated with both low competence and low warmth (Rohmer & Louvet, 2012) - the least positive of the four quadrants that result from crossing low/high warmth with low/high competence. This profile is associated with dehumanization (Harris & Fiske, 2006) and is often only attributed to marginalized groups such as drug addicts and homeless people[2]. Recent studies have shown that implicit prejudice toward disability increased over time between 2004-2017 (Harder, Keller, & Chopik, in press). In addition, disabled people's experiences of ableism are associated with paternalism (e.g., unwanted help, infantilization), dehumanization, objectification, hostility (Nario-Redmond, Kemerling, &

[2] This discrepancy, between explicit and implicit levels, could be explained by the fact that implicit measures offer less opportunity to control responses, blocking the explicit stereotype content associated with the normative protected group (Rohmer & Louvet, 2012).

Silverman, in press), and with denial of equal rights and invalidation (Olkin, Hayward, Schaff, & VanHeel, in press).

Our argument is that ableism targets a particularly vulnerable group and, as such, may have critical and deleterious consequences for disabled people's health and well-being. One of the reasons for this vulnerability stems from the poor socioeconomic conditions and multiple forms of social exclusion to which they are exposed. Due to social and attitudinal barriers, disabled people tend to have poorer access to health services, education, and employment, together with a higher risk of exposure to violence and poverty (UN, 2015; WHO, 2011). Compared to the nondisabled, disabled people have a higher prevalence of secondary chronic diseases and are less likely to receive preventive care (Reichard, Stolzle, & Fox, 2011).

Moreover, evidence shows that disability seems to play a central role when compared to other social categories. For instance, the magnitude of socioeconomic disadvantage is lower between disabled women and men, compared to the magnitude between nondisabled women and men (Kavanagh et al., 2015). Perceived gender differences are minimized between disabled women and men, when compared to perceived gender differences between nondisabled men and women (Nario-Redmond, 2010). In line with these findings, research has also shown that blind targets were rated as ruder and less warm after confronting patronizing help, regardless of their gender (Wang, Walker, Pietri, Ashburn-Nardo, in press). In addition, Rohmer and Louvet (2009) found that disabled people are immediately described by disability, independent of their sex or ethnicity, suggesting that disability could be a primary, superordinate and highly salient category. This is supported by a meta-analysis reviewing the effects of perceived discrimination on psychological well-being (Schmitt et al., 2014). Although this work did not compare directly between different types of discrimination, the meta-analysis revealed weaker effect sizes for

racism and sexism and larger effect sizes for ableism. Taken together, this body of work suggests that, due to the vulnerable position of disabled people, ableism could be one of the most damaging forms of group-based discrimination.

The Present Study

We compare the effects of ableism with the effects of facing discrimination as a member of other disadvantaged groups on health and well-being. We hypothesized that, compared to discrimination against other stigmatized groups (e.g., sexism), discrimination against disabled people would have a stronger (negative) effect on health and well-being. To test this hypothesis, we examined these effects *between* individuals (i.e., comparing the effects of individuals enduring different types of group discrimination; Analysis 1) and *within* individuals (i.e., examining the case of disabled individuals belonging to multiple disadvantaged categories; Analysis 2). While Analysis 1 allows for a comparison between individuals who belong to various stigmatized groups and thus accounts for a broad range of demographic backgrounds, Analysis 2 focuses only on disabled individuals who also belong to at least another stigmatized category. The latter analysis provides a comparison between disabled people and tests, within this group, whether being discriminated on the grounds of disability has a stronger effect on health and well-being than other types of discrimination. In Analysis 2, because all individuals are disabled, it serves to mitigate the effects of unmeasured variables associated with the different stigmatized groups.

Analysis 1 – Effects of Group-based Discrimination between Individuals

To address our research question, we analyzed data from the European Social Survey (ESS). This large cross-country survey included nationally representative samples, generated through random probability sampling, from 36 European countries and, at the time of our study,

seven waves of cross-sectional data. The ESS is an academically driven and repeated cross-national survey conducted across Europe from 2001 until the present year. Data were collected through face-to-face interviews and included a wide range of measures assessing attitudes, beliefs, and behavior patterns. The ESS has been used across various disciplines (e.g., sociology, social policy, psychology), resulting in multiple publications relevant for social policy and practice.

Respondents

We selected for analysis all individuals who responded affirmatively to the question "Would you describe yourself as being a member of a group that is discriminated against in this country?", resulting in a total sample available for analysis of 18,660 respondents, from 32 countries. Of these respondents, 53% were female, 34% were disabled, 26% were from an ethnic minority background, and 13% were older adults (i.e., individuals who were 65 and above). On average, respondents of this sample were 42.8 years old (*SD* = 16.5) and had 12.7 years (*SD* = 4.2) of full-time education completed. More details about our sample are reported in see Table 1.

Measures

Group-based discrimination. The perception of discrimination based on group background was measured with the question, "On what grounds is your group discriminated against?" in which respondents could choose either "no" (0) or "yes" (1) across several options from the following list: "Color or race", "Nationality", "Religion", "Language", "Ethnic group", "Age", "Gender", "Sexuality", and "Disability". For our analysis, all of these options were used as separate dummy variables and introduced in our model as independent variables to assess perceptions of group-based discrimination. Table 2 shows the number of respondents that responded "yes" to each option and percentages by country.

Health and well-being (HWB). The WHO (2005, p. 1) defines health as "a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity". Thus, health (and well-being) cannot be reduced to a single factor. As such, we measured health and well-being by averaging answers to questions on self-rated happiness, satisfaction with life, and health: "Taking all things together, how happy would you say you are?" (answers ranging from 1, "extremely unhappy" to 10, "extremely happy"); "All things considered, how satisfied are you with your life as a whole nowadays?" (answers ranging from 0, "extremely dissatisfied" to 10. "extremely satisfied"); and "How is your health in general?" (answers ranging from 1, "very good" to 5, "very bad"), which was reversed-scored. Responses to the three questions were standardized and then averaged to yield a measure of HWB ($\alpha = 0.71$, with only one factor explaining 65% of the variance emerging from an exploratory factor analysis). A higher score on this variable indicated better HWB. Table 3 shows HWB mean scores by group-based discrimination and country. In support of our measure, self-reported measures of general health, happiness, and satisfaction with life have been widely used to measure health and well-being (e.g., Pascoe & Smart-Richman, 2009; Schmitt et al., 2014), and these three measures have been found to be highly correlated in previous research (Clark & Oswald, 1994; Kahneman & Sugden, 2005).

Individual-level controls. We controlled for a wide range of relevant individual-level characteristics, associated with health and well-being (e.g., Wilkinson & Marmot, 2003). We included the following variables and coding: sex (1 = Male), born in country (1 = No); belonging to minority ethnic group in country (1= Yes); hampered in daily activities by illness/disability/infirmity/mental problem (1 = Yes); belonging to a religion (1 = No); marital status coded with 4 dummies, using the reference group "Married" (1 = Separated; 2 = Divorced;

3 = Widowed; 4 = Never married); employment status, coded with 2 dummy variables, with the reference group "Employee" (1 = Self-employed, and 2 = Working for own family business); ever unemployed and seeking work for a period more than three months (1 = Yes); and, feeling about household's income, coded with 3 dummy variables, using the reference group "Coping on present income" (1 = Living comfortably on present income; 2 = Difficult on present income; 3 = Very difficult on present income). We also controlled for other continuous and ordinal variables for which we maintained the original coding. These included age; years of education completed; how often meet socially with friends, relatives or colleagues; take part in social activities compared to others of same age; state of education in country; and state of health services in country.

Country-level controls. To account for contextual variables associated with individual health and well-being (e.g., Marmot, Allen, Bell, Bloomer, & Goldblatt, 2012), we included additional variables at the country-level. These variables included macro-level indicators such as country wealth, social inequalities, and life expectancy. Country wealth was measured with the gross domestic product (GDP per capita in current US$) using World Bank data. We created a social inequalities measure using a dissimilarity index (Massey & Denton, 1988) containing respondents' educational distributions. Life expectancy was measured with life expectancy at birth (in years) using World Bank data. These data were matched by country and year. A higher score on these variables indicates, respectively, higher wealth, social equality, and life expectancy.

Procedure

The ESS is not longitudinal and in each wave different respondents were sampled. With this characteristic in mind, we performed a multilevel repeated cross-sectional analysis

(Fairbrother, 2014) within the structural equation modeling (SEM) framework, using Mplus 8.0. This approach allowed us to account for dependence due to the hierarchical structure of the data (i.e., individuals nested within countries and waves), through a three-level model in which respondents were nested within country-waves, which in turn were nested within countries. With this model specification, it is possible, at a higher hierarchical level, to control for differences between countries by introducing a coefficient representing the mean of each country-level variable across all available waves for each country. It also allowed us, at an intermediate level, to control for within country changes by introducing a coefficient representing how much a country had changed in each wave relative to its mean value across waves. Therefore, we had two coefficients per variable by disaggregating each variable into a between-country coefficient (time-invariant) and a within-country coefficient (time-variant, representing change). We also included in our equation a linear effect of time, through the inclusion of a variable corresponding to survey year, to account for time trends in coefficients. This method provided the added value of accounting for differences between countries, whilst accounting for within-country changes. Moreover, this modeling technique allowed us to take full advantage of all waves of the ESS and to consider the evolving nature of the social context in which respondents were embedded.

At the individual-level, we coded all "don't know", "refuse to answer", and no responses as missing values. The total number of missing values in the ESS is generally low (around 5%). We used full information maximum-likelihood estimates with robust standard errors (MLR), which allows estimation with missing data and produces less biased results than other methods (Little & Rubin, 2000). This estimation method has the advantage of using all observed data.

In addition, we used a variable to weight the sample, composed by an interaction of design weight and population size weight. Design weight allows us to correct for possible sample

selection bias, related to the inclusion probabilities of some individuals in the population. Population size weight guarantees that each country is represented in proportion to its population size. These weights are provided by the ESS to adjust for sampling error, allowing us to obtain more accurate estimates based on the proportion of individuals in society.

In this analysis, we compared the effects of group-based discrimination on the HWB of people belonging to different disadvantaged groups, by simultaneously introducing all types of group-based discrimination in our analysis. We first estimated a model without control variables, followed by a model controlling for both individual- and country-level variables. We then used a *z* test to compare dependent and overlapping correlations (Dunn & Clark, 1969) between group-based discrimination against the different groups. To avoid having multiple comparisons of all groups, we compared only those who showed a statistically negative effect of group-based discrimination on HWB.

Results

The SEM multilevel model yielded a good fit as shown by the comparative fit index (CFI), root mean square error of approximation (RMSEA), and standardized root mean square residual (SRMR) indices (CFI = 0.99; RMSEA = 0.001; SRMR = 0.001). Comparison between models revealed that the model including the control variables had higher predictive power than the model without the controls, as shown by the lower scores in the fit indicators (i.e., log-likelihood, Akaike information criterion, and Bayesian information criterion) and by a lower proportion of unexplained variance (Table 4)[3]. Results showed that only discrimination based on age, b = -.133; $p < .001$, and disability, b = -.267; $p < .001$, were negatively and significantly associated with lower HWB. When compared to the effect of being discriminated based on age, the effect of

[3] Main effects were the same in both models (except for gender which was significant without control variables), indicating that control variables did not cancel out or reverse the main effects.

discrimination based on disability had a greater magnitude, $z = -13.4726$, $p < .001$. This finding suggests that discrimination based on disability (i.e., ableism) has a stronger negative effect on HWB, compared to the effects of discrimination based on membership of other disadvantaged groups, supporting our hypothesis. Discrimination scores based on race, $b = -.063$; $p = .079$, nationality, $b = -.040$; $p = 0.226$, language, $b = -.022$; $p = 0.706$, ethnicity, $b = -.024$; $p = .532$, and gender, $b = .007$, $p = .800$, did not have statistically significant impacts on HWB. In contrast, some disadvantaged groups showed a positive association with HWB. This was the case for discrimination based on religion, $b = .195$; $p < .001$, and sexuality, $b = .126$; $p = .010$. One reason that could explain weaker effects of discrimination would be the perceived illegitimacy of discrimination based on some of these groups (Schmitt et al., 2014), which is associated with a higher minority group identification (Jetten, Schmitt, Branscombe, Garza, & Mewse, 2011). Positive effects of discrimination have been reported in previous research where there is a strong minority group identification. Research has shown that ingroup identification emerges in the face of discrimination, acting as a buffer of the negative effects of discrimination on well-being (Branscombe, Schmitt, & Harvey, 1999; Ramos, Cassidy, Reicher, & Haslam, 2012).

Analysis 2 – Effects of Group-based Discrimination within Individuals

In this analysis we also used ESS data but with a different approach as we considered for analysis only disabled individuals.

Respondents

We used a combination of disability together with other social categories (i.e., sex, age and ethnicity), which appeared in combination with disability, resulting in five subsamples in which disability was always present: disabled women ($n = 39,091$), disabled person over 65 years old ($n = 25,659$), disabled person with a minority ethnic group background ($n = 3,699$), disabled

women over 65 years old (*n* =15,199), and disabled women with a minority ethnic group background (*n* = 2,065). These are the most common associations of multiple categories including disability in the literature. Note that we also considered the possibility of including individuals who belonged to more than three disadvantaged groups, but this resulted in small sample sizes, producing unreliable estimates. Moreover, as a more conservative test of our hypothesis, we excluded categories that showed a positive association with HWB in Analysis 1 (religion and sexuality) or were not available in the survey to select as a subsample.

Procedure and Measures

We used the same measures and procedure as in the previous analysis. However, we now selected the subsample of individuals who were disabled by including all those who had responded "Yes a lot" and "Yes to some extent" to the question, "Are you hampered in your daily activities in any way by any longstanding illness, or disability, infirmity or mental health problem?" In this analysis, we compared the effects of group-based discrimination within the five subsamples of multiple social categories described above. As in our previous analysis, we used a *z* test (Dunn & Clark, 1969) to compare the statistically negative effects of group-based discrimination on HWB.

Results

The SEM multilevel models yielded a good fit to the data (CFI = 0.99; RMSEA = 0.001; SRMR = 0.001). Results supported our initial findings, such that discrimination based on disability had a stronger negative impact on HWB, when compared to the effect of multiple disadvantaged social categories (see Table 5). We report below all group combinations and compare the effects of being discriminated on the grounds of disability with the effects of being discriminated because of another category.

Gender and disability. The effect of discrimination based on disability, b = -0.522; p < .001, had a greater magnitude, z = 63.709, p < .001, on the HWB of *disabled women* compared to the effect of being discriminated based on gender, b = -.130; p = .037.

Age and disability. The effect of discrimination based on disability, b = -.646; p < .001, had a greater negative effect, z = 51.3635, p < .001, on the HWB of *disabled people over 65 years old* compared to the effect of being discriminated based on age, b = -0.327; p < .001.

Ethnicity and disability. The effect of discrimination based on disability, b = -.438; p = .003, had a greater negative effect, z = 11.1559, p < .001, on the HWB of *disabled people belonging to a minority ethnic group* compared to the effect of being discriminated based on ethnicity, b = -.217; p < .001,.

Gender, age and disability. The effect of discrimination based on disability, b = -.630; p < .001, had a greater negative effect, z = 38.1461, p < .001, on the HWB of *disabled women over 65 years old* compared to the effect of being discriminated based on age, b = -0.324; p < .001. Discrimination based on gender was not statistically significant, b = -.072; p = .726.

Gender, ethnicity and disability. The effect of discrimination based on disability, b = -.703; p = .012, had a greater negative effect, z = 24.1525, p < .001, on the HWB *of disabled women belonging to a minority ethnic group* compared to the effect of being discriminated based on ethnicity, b = -.153; p = .043. Discrimination based on gender was not statistically significant, b = -.400; p = .154.

In all five combinations of multiple social categories, the effect of discrimination based on disability had a greater magnitude when compared to the effect of discrimination based on gender, age, or ethnicity.

Additional Analyses

To account for the possibility that the reported effects could be due to disabled people having worse health, we tested our model in Analysis 1, but this time controlling for health when assessing the effects of belonging to different disadvantaged groups on well-being. For the well-being measure, the ESS questions on happiness and life satisfaction were averaged in one variable (Spearman-Brown Coefficient = .80, with only one factor emerging and explaining 84% of the variance)[4]. The self-reported health measure was introduced as a predictor in our model. In this model, only discrimination based on age, b = -.224; p < .001, and race, b = -.111; p = .009, were statistically significant. However, compared to our proposed model, this model had a poor fit to the data (see Table 6), which could be due to the interdependence between health and well-being. This finding, in itself, highlights the importance of examining the effects of health and well-being together as we propose in our analyses and emphasizes the relevance of treating heath as an outcome of discrimination instead of a predictor. Moreover, note that in Analysis 1 we had controlled for whether individuals felt hampered in their daily activities as this could indicate the presence of ill health. Note also that, in Analysis 2, all individuals were disabled, so the fact that disabled individuals might have lower levels of health is irrelevant for this analysis and our results were still supported.

Overall, we believe that the argument suggesting that disabled people have inherently worse health (compared to the remaining sample) is supportive of an individual or medical approach and neglects the impact (and relevance) of social factors in disabled people's lives. In our research, we followed the approach promoted in a large body of work examining effects of

[4] Results revealed the same pattern for all three variables in the comparisons between disability and age. The only exception was for happiness, a variable in which discrimination based on age had a higher magnitude than discrimination based on disability.

discrimination on health and well-being (Pascoe & Smart-Richman, 2009; Schmitt et al., 2014). If the health of social minorities is affected by social factors (e.g., discrimination, poor access to health services), we would expect the same for disabled people. The tendency of prior research to treat disability as an individual and medical factor has potentially obscured important aspects of how health is produced and maintained, undermining efforts to eliminate health disparities and the social factors interfering with these processes.

Discussion

Our results indicated that facing ableism is associated with lower health and well-being (HWB) and that this effect was greater when compared to the effect of being discriminated against because of other disadvantaged group memberships (e.g., sexism, racism). These effects were evident in analyses *between* individuals (i.e., Analysis 1, comparing the effects of individuals experiencing different types of group discrimination) and *within* individuals (i.e., Analysis 2, examining the case of disabled individuals belonging to multiple disadvantaged categories).

These effects may be due to the vulnerability of this specific group. Disabled people are more likely to endure social isolation, not only due to prejudice, but also due to environmental barriers, which in turn may result in a lack of social support. Disabled people are perhaps more likely to internalize that they are not as capable as other individuals and, for this reason, may be disposed to believe that some experiences of discrimination are justified. Research has shown that responses to discrimination could be undermined when discrimination is perceived as legitimate, resulting in lower group identification and reduced intentions to engage in collective action (Jetten et al., 2011). In contrast, perceiving that discrimination is illegitimate is associated with high self-esteem and empowerment (Rüsch, Lieb, Bohus, & Corrigan, 2006).

An interesting finding emerging from our analyses relates to the fact that group-based discrimination based on age (i.e., ageism) was also one of the most harmful forms of discrimination, emerging as the second type of discrimination most negatively related with health and well-being. Indeed, ableism and ageism share some similarities that might help us to understand in further detail the reasons that both groups face such harsh consequences. For example, older adults are also more vulnerable to social isolation and paternalism (assuming low competence and low agency of both groups). Both ableism and ageism incorporate biological normative beliefs, related to body uniformity, ability, independence and energy, which are used to justify ableist and ageist oppression (Overall, 2006). Another interesting similarity pertains to the fact that both groups seem to be somewhat heterogeneous. For instance, disabled people's attitudes toward different groups of impairment could prevent them from forming a homogeneous and strong minority group identification (Deal, 2003). A number of factors related to the nature, duration, and type of disability have been associated with disability prejudice from disabled people (Harder et al., in press). Similarly, older people's distancing themselves from ageist stereotypes and behaviors prevents them from becoming aware of discrimination against their group, and engaging in collective action against ageism (Minichiello, Browne, & Kendig, 2000). In some cases, this heterogeneity may prevent disabled people and older adults from forming a strong minority group identification, which is critical for buffering the deleterious effects of discrimination (Branscombe et al., 1999), and mobilizing collective action on behalf of their group.

With this research, we unveil another side of our initial paradox: one of the largest disadvantaged groups – disabled people – is, despite receiving less societal and academic attention, one of the most affected by discrimination. Our results show the importance of

addressing disability and ableism in social research – specifically, in social psychology – which has paid less attention to this issue than to discrimination faced by other disadvantaged groups (e.g., see the small number of studies addressing disability, 8, in Schmitt et al.'s (2014) meta-analysis, when compared to racism, sexism, and heterosexism, 211, 23, and 21, respectively).

Limitations and Future Directions

In the ESS, a low percentage of disabled people self-identified as being a member of a group discriminated by society and, in fact, low percentages were found across all disadvantaged groups. Only 7% of the total sample mentioned that they belonged to a group that is socially discriminated, suggesting that experiences of discrimination were perhaps underreported. One reason might be due to socially desirable responding that could have been enhanced by face-to-face interviews. In addition, responses were binary (i.e., belonging or not belonging to a group discriminated against by society) and, perhaps, a Likert type scale tapping into perceptions of discrimination would be more sensitive to different experiences. In this study, we benefited from the large data set, but were restricted to the available data. For researchers designing their own studies, it could be fruitful to include a scale tapping into perceptions of personal discrimination given that in their meta-analysis, Schmitt and colleagues (2014) found larger effect sizes for perceptions of personal discrimination compared to group discrimination.

The data used in our analyses were cross-sectional and this prevented us from testing the causal direction of the proposed relationships. Furthermore, while our study offered the added value of testing our hypothesis with representative samples in a Europe-wide context, it limits more fine-grained analysis at the individual level that would require psychological variables missing from these surveys. An avenue for future research would be to test the effects of ableism in a smaller scale longitudinal survey, which could allow researchers to draw more confident

conclusions about causality and to identify the psychological mechanisms leading to poor well-being and health outcomes.

Implications for Social Policy

Our findings have critical implications for social policy. This research shows the strong implications of the discrimination endured by disabled people, and addressing this issue is likely to require intervention in multiple layers of our societies. To produce much-needed social change, efforts should be directed at both social and individual levels.

At the social level, it is crucial to raise awareness of the plight of disabled people and to develop synergies challenging current stereotypes. This might be achieved, for example, with campaigns showing counter-stereotypical group members (Ramasubramanian, 2011). Another relevant effort, would be the promotion and endorsement of the social model of disability, given that this model creates awareness of structural discrimination, which in turn produces policy support among nondisabled people (Dirth & Branscombe, 2017). Another potential intervention to reduce intergroup prejudice would be the promotion of positive intergroup contact (Allport, 1954; Brown & Hewstone, 2005) through various activities and spaces designed to facilitate such contact. A meta-analysis with different outgroup targets found that intergroup contact reduces prejudice and that effects for physically and mentally disabled people were of larger-than-average and average size, respectively (Pettigrew & Tropp, 2006).

At the individual level, efforts should be channeled toward a greater empowerment and resilience of disabled people by creating a positive disabled identity. The rejection-identification model (Branscombe et al., 1999) states that positive ingroup identification acts as a buffer of the negative effects of perceived discrimination, protecting self-esteem. More recent research found that a disability identity was associated with higher self-esteem (Bogart, Lund, & Rottenstein,

2018; Cooper, Smith, & Russell, 2017; Nario-Redmond, Noel, & Fern, 2012), satisfaction with life (Bogart, 2014), increased social support, stereotype rejection and stigma resistance (Crabtree, Haslam, Postmes, & Haslam, 2010), greater use of collective strategies (Nario-Redmond et al., 2012; Nario-Redmond & Oleson, 2016), and lower psychological distress (Bogart, 2015). Another potential path for interventions is to address the perceived legitimacy of some experiences. As we argued, perceived legitimacy could be related to the recognition of ableist behaviors, and research has found that perceiving discrimination as illegitimate is associated with high self-esteem and empowerment (Rüsch et al., 2006). Therefore, it is important to address perceived legitimacy of discrimination and promote awareness about what is discrimination/ableism. It is critical to show that this form of treatment is not justified, and to provide means of reporting any instances to legal authorities. This could perhaps be achieved by promoting the social model given that this model is associated with the perception of discrimination as illegitimate (Dirth & Branscombe, in press). Moreover, given that disability intersects with other social categories, it is important to take an intersectional perspective to address disability and ableism (for a social justice framework, see Liasidou, 2013). Overall, to ensure self-determination and empowerment of disabled people, it is of paramount importance to address social policies in coordination with the organizations representing disabled people, to meet the moto "nothing about us, without us" (Charlton, 1998).

Summary

This study shows that ableism is associated with lower health and well-being, and that this effect has a greater magnitude when compared to the effects of being discriminated against because of other disadvantaged group memberships (e.g., sexism, racism). Our findings show that the quality of life of disabled people can no longer be ignored. It is imperative for academics

and policy makers to work in tandem with the organizations of disabled people and governements to ensure that, accordingly the CRPD, “States Parties shall prohibit all discrimination on the basis of disability and guarantee to persons with disabilities equal and effective legal protection against discrimination on all grounds” (UN, 2006, art. 5, p. 7).

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Short biographies

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Miles Hewstone is Professor of Social Psychology and Public Policy, and Fellow of New College, Oxford University, UK. He has published extensively on a wide range of topics in social psychology, focusing recently on prejudice and stereotyping, intergroup contact, and the reduction of intergroup conflict. He is a Fellow of the British Academy.

Table 1

Sample Socioeconomic Information by Country

Variables	Country										
	Austria	Belgium	Switzerland	Czech Republic	Germany	Denmark	Estonia	Spain	Finland	France	Great Britain
N	402	726	532	468	804	394	892	524	958	1265	1848
Sex (%)											
Male	51	55	46	45	52	49	44	52	44	47	49
Female	49	45	54	55	48	51	56	48	56	53	51
Age (years)											
M	41.6	43.4	41.8	51.2	41.1	45.2	46.6	38.5	46.6	42.9	47.0
SD	17.1	17.0	14.8	16.5	15.1	16.0	17.1	14.0	17.8	15.4	16.7
Education (years)											
M	12.8	12.8	12.3	12.3	13.5	13.4	13.0	13.4	13.2	13.0	13.9
SD	4.0	4.1	4.1	2.5	3.8	4.9	3.1	6.2	4.3	4.0	4.1
Born in country (%)											
Yes	71	75	62	96	76	77	62	75	93	81	86
No	29	25	38	4	24	23	38	25	7	19	14
Belong to minority ethnic group (%)											
Yes	25	24	36	14	25	21	69	20	6	14	19
No	75	76	64	86	75	79	31	80	94	86	81
Hampered (%)											
Yes	32	30	29	52	39	44	28	15	48	33	33
No	68	70	71	48	61	56	72	85	52	67	67
Belonging to a religion (%)											
Yes	62	54	55	29	52	61	52	62	57	50	54
No	38	46	45	71	48	39	48	38	43	50	46
Marital status (%)											
Married	33	47	46	49	41	45	52	44	44	35	44
Separated	2	2	2	1	1	2	1	2	1	1	3
Divorced	12	12	10	16	12	12	14	5	15	15	13
Widowed	8	4	3	17	3	4	9	2	5	4	6
Never married	45	34	38	18	43	36	24	47	35	44	34
Employment status (%)											
Employed	82	85	85	91	89	91	92	87	85	91	86
Self-employed	16	14	13	9	10	8	7	12	13	8	12
Working for own family business	1	1	2	1	1	1	1	1	2	0	1
Ever unemployed (%)											
Yes	40	42	34	37	50	47	40	50	46	52	34
No	60	58	66	63	50	53	60	50	54	48	66
Feeling about household's present income (%)											
Living comfortably	17	25	37	7	16	46	6	24	16	19	30
Coping	49	41	36	29	46	37	44	39	53	48	44
Difficult	22	24	18	35	26	12	32	25	21	26	19
Very difficult	12	10	9	30	11	5	19	12	10	7	7

Table 1 (continued)

Variables	Country										
	Hungary	Ireland	Israel	Lithuania	Netherlands	Norway	Poland	Portugal	Sweden	Slovenia	Bulgaria
N	567	639	1683	196	944	616	497	343	920	267	551
Sex (%)											
Male	49	50	50	37	45	51	50	42	36	51	42
Female	51	50	50	63	55	49	50	58	64	49	58
Age (years)											
M	41.8	41.5	39.4	52.1	43.5	42.0	43.8	44.2	43.8	41.3	49.2
SD	15.2	15.6	16.1	17.2	16.1	16.0	16.7	17.2	17.9	15.9	16.5
Education (years)											
M	10.8	14.1	13.3	13.1	13.4	13.8	12.4	8.8	13.5	12.6	10.0
SD	4.1	4.3	3.9	3.1	4.2	4.1	3.6	4.6	3.7	3.8	3.9
Born in country (%)											
Yes	97	69	83	92	77	82	99	62	79	90	99
No	3	31	17	8	23	18	1	38	21	10	1
Belong to minority ethnic group (%)											
Yes	43	18	46	25	27	16	3	21	13	9	50
No	57	82	54	75	73	84	97	79	87	91	50
Hampered (%)											
Yes	40	24	16	56	43	39	45	27	42	43	27
No	60	76	84	44	57	61	55	73	58	57	73
Belonging to a religion (%)											
Yes	56	66	95	88	45	57	84	72	36	60	83
No	44	34	5	12	55	43	16	28	64	40	17
Marital status (%)											
Married	48	39	62	49	40	39	53	41	36	48	51
Separated	1	8	0	0	1	2	2	3	1	0	1
Divorced	15	5	7	16	13	10	6	8	14	5	9
Widowed	6	5	3	18	5	3	9	9	4	3	14
Never married	30	44	28	17	42	46	30	39	45	44	24
Employment status (%)											
Employed	94	85	84	97	87	88	82	83	90	90	94
Self-employed	5	14	15	2	12	11	16	16	9	5	5
Working for own family business	1	1	1	1	1	1	2	1	1	5	2
Ever unemployed (%)											
Yes	52	45	28	31	38	31	41	45	36	36	65
No	48	55	72	69	62	69	59	55	64	64	35
Feeling about household's present income (%)											
Living comfortably	2	17	15	10	29	44	6	5	41	28	1
Coping	22	40	40	41	41	37	40	34	38	49	12
Difficult	29	24	27	27	21	13	45	32	16	15	20
Very difficult	47	18	18	22	8	5	10	29	5	8	67

Table 1 (continued)

Variable	Country									
	Cyprus	Greece	Iceland	Italy	Luxembourg	Slovakia	Turkey	Ukraine	Kosovo	Croatia
N	166	495	165	64	110	315	338	259	626	86
Sex (%)										
Male	39	43	37	61	51	43	46	43	39	55
Female	61	57	63	39	49	57	54	57	61	45
Age (years)										
M	41.3	42.4	45.6	43.4	36.8	43.3	33.1	50.7	48.6	51.7
SD	16.4	16.4	16.9	15.4	13.4	16.0	12.1	17.9	18.2	16.4
Education (years)										
M	12.5	10.6	14.8	13.0	12.5	12.2	7.5	12.3	12.4	11.8
SD	4.3	4.2	4.2	5.7	3.9	3.8	4.5	3.5	3.2	4.1
Born in country (%)										
Yes	78	63	95	89	52	97	99	80	90	85
No	22	37	5	11	48	3	1	20	10	15
Belong to minority ethnic group (%)										
Yes	13	30	4	13	25	32	33	14	21	14
No	87	70	96	88	75	68	67	86	79	86
Hampered (%)										
Yes	27	20	33	23	29	32	19	63	51	43
No	73	80	67	77	71	68	81	37	49	57
Belonging to a religion (%)										
Yes	98	90	47	66	55	78	92	67	60	74
No	2	10	53	34	45	22	8	33	40	26
Marital status (%)										
Married	54	58	45	56	53	57	60	55	41	69
Separated	0	1	6	2	3	0	1	1	1	0
Divorced	11	5	10	5	5	6	2	9	18	5
Widowed	5	8	6	2	3	8	4	21	20	11
Never married	30	28	33	36	37	28	33	13	19	15
Employment status (%)										
Employed	83	71	85	70	91	91	79	95	94	89
Self-employed	12	28	12	26	9	7	18	3	5	7
Working for own family business	6	1	3	4	0	2	3	2	1	4
Ever unemployed (%)										
Yes	33	45	24	42	27	49	25	43	33	48
No	67	55	76	58	73	51	75	57	67	52
Feeling about household's present income (%)										
Living comfortably	10	6	36	21	37	4	9	2	3	22
Coping	32	25	33	49	35	33	44	12	25	38
Difficult	35	34	18	24	14	32	28	39	39	20
Very difficult	24	35	13	6	15	30	20	48	33	20

Table 2

Percentages of Individuals Affirming that They Belong to a Group that is Discriminated in Society by Type of Discrimination and Country

	Group-based discrimination								
Countries	Race/color	Nationality	Religion	Language	Ethnicity	Age	Gender	Sexuality	Disability
N	2754	3578	3278	2002	2421	2460	2021	944	1404
Austria	8.7	23.9	15.9	12.4	8.7	10.7	15.2	11.2	4.7
Belgium	18.7	18.3	23.1	9.9	5.9	6.6	4.5	5.9	7.4
Switzerland	10.2	29.1	16.9	5.5	11.1	5.1	11.8	8.6	6.4
Czech Republic	16.5	6.2	5.3	1.5	6.6	39.7	15.6	3.4	16.2
Germany	5.6	22.9	13.1	10.0	13.8	5.7	9.0	9.0	9.1
Denmark	17.0	11.9	20.3	7.1	11.9	10.7	5.3	5.1	9.6
Estonia	.1	55.5	2.0	59.3	3.6	12.7	6.8	1.5	4.8
Spain	16.4	23.3	16.4	9.9	5.0	5.2	11.5	7.4	5.2
Finland	2.5	3.0	7.6	9.5	2.9	15.8	7.7	4.9	5.9
France	22.3	9.6	13.4	2.8	6.6	6.2	11.5	5.5	7.0
Great Britain	25.7	14.7	22.3	2.2	8.9	16.6	13.4	7.6	6.9
Hungary	34.9	18.7	6.0	1.8	34.9	15.2	3.5	.7	8.3
Ireland	11.4	19.2	14.9	2.8	6.3	12.4	11.6	5.8	7.8
Israel	24.0	44.7	46.8	31.9	28.0	11.5	16.2	7.0	8.0
Lithuania	1.0	6.1	6.6	13.8	12.8	46.9	6.6	3.6	13.8
Netherlands	19.1	18.0	21.3	3.8	10.7	11.0	7.9	10.8	9.5
Norway	7.8	8.6	18.3	3.1	11.5	6.7	11.5	6.2	11.5
Poland	.8	2.0	15.7	1.0	1.0	13.7	9.7	1.0	14.1
Portugal	21.6	19.2	13.1	2.0	5.0	12.0	3.5	3.5	5.5
Sweden	5.8	11.6	9.0	5.5	9.1	15.1	33.3	3.6	8.4
Slovenia	5.6	3.4	19.5	2.6	15.7	9.7	10.5	5.2	15.4
Bulgaria	10.9	6.9	7.8	5.6	43.6	31.4	5.4	.4	7.6
Cyprus	7.2	22.9	9.0	4.2	2.4	7.8	7.2	10.2	6.0
Greece	15.2	37.8	10.9	6.1	4.2	14.1	10.3	2.6	3.6
Iceland	1.8	1.8	3.0	1.2	2.4	16.4	24.8	1.8	8.5
Italy	7.8	10.9	20.3	0.0	4.7	6.3	9.4	9.4	3.1
Luxembourg	8.2	38.2	7.3	10.0	1.8	0.0	4.5	3.6	8.2
Slovakia	23.8	15.2	4.4	4.8	20.0	20.3	9.2	.6	7.3
Turkey	6.8	16.3	24.9	25.7	23.7	14.8	4.7	2.7	.6
Ukraine	6.6	3.9	7.7	18.1	10.8	20.8	3.1	.4	9.7
Kosovo	5.4	4.8	8.3	4.0	22.0	31.3	7.7	3.0	12.6

Croatia	0.0	5.8	9.3	0.0	2.3	27.9	7.0	1.2	12.8

Note. N is the number of respondents that nominated each group-based discrimination. Percentages are relative to the number of respondents that nominated each group-based discrimination in each country (row).

Table 3

Mean Health and Well-being (HWB) Scores by Type of Discrimination and Country

	Group-based discrimination								
Countries	Race/color	Nationality	Religion	Language	Ethnicity	Age	Gender	Sexuality	Disability
M	2.03	2.11	2.57	2.00	1.83	1.47	2.36	2.53	1.14
Austria	2.56	2.30	2.23	2.37	2.59	1.84	2.09	2.39	1.84
Belgium	2.35	2.47	2.62	2.65	2.53	2.19	2.72	2.66	.98
Switzerland	2.22	2.66	2.73	2.81	2.39	2.86	2.59	2.92	.87
Czech Republic	1.31	1.42	.75	2.07	1.68	1.08	1.85	1.95	.52
Germany	1.72	2.20	2.31	2.21	2.13	1.50	2.06	2.23	.84
Denmark	2.88	3.01	2.95	2.75	3.10	2.85	2.66	2.90	1.66
Estonia	1.55	1.42	1.70	1.45	1.69	.77	1.84	2.93	.10
Spain	2.32	2.16	2.63	2.53	1.94	2.20	2.31	2.27	1.85
Finland	2.90	2.48	3.20	3.08	2.60	2.50	2.66	2.78	2.17
France	1.83	1.86	2.09	2.04	1.83	1.20	2.02	2.31	1.06
Great Britain	2.34	2.23	2.66	2.29	2.24	2.27	2.49	2.70	1.34
Hungary	.79	.80	1.59	1.04	1.00	.09	.77	1.98	.08
Ireland	2.11	2.32	2.72	2.69	2.08	2.13	2.05	2.24	1.53
Israel	2.53	2.65	2.93	2.52	2.53	2.17	2.71	2.52	2.04
Lithuania	-1.92	1.80	1.55	.95	1.64	.79	1.41	1.88	-.44
Netherlands	2.60	2.55	2.84	2.24	2.53	2.20	2.62	2.79	1.54
Norway	2.70	2.66	3.14	2.71	2.89	2.46	2.88	2.77	1.98
Poland	2.20	1.11	2.29	1.96	2.95	.85	1.80	1.35	1.20
Portugal	1.92	1.90	1.70	1.93	1.38	.77	2.17	1.93	.36
Sweden	2.33	2.62	2.89	2.56	2.36	2.38	2.78	2.93	1.83
Slovenia	1.97	1.59	2.50	2.88	1.68	1.55	2.48	2.76	.75
Bulgaria	-.26	.27	1.06	.49	.25	.03	.33	.51	-.34
Cyprus	1.86	1.72	2.92	1.66	2.37	2.33	1.52	2.21	.57
Greece	1.33	2.04	2.27	2.04	1.49	1.00	1.92	2.99	.36
Iceland	2.99	1.99	3.44	2.04	2.88	2.83	3.50	3.22	2.17
Italy	2.48	1.65	2.46	-	3.07	.63	2.68	2.18	.43
Luxembourg	2.04	2.33	2.28	2.91	2.28	-	3.38	3.23	1.46
Slovakia	1.73	1.01	2.00	1.77	1.19	.89	1.95	4.25	1.04
Turkey	.54	.76	1.57	.72	.67	.47	1.50	3.00	-.04
Ukraine	1.41	1.86	1.11	.34	.73	-.30	.44	1.22	.11
Kosovo	1.34	.97	1.99	1.87	1.63	.48	1.55	.76	.09
Croatia	-	2.57	3.42	-	.45	1.24	2.04	4.22	-.48

Note. HWB scores are standardized. Minimum value was -3 and maximum value was 7. Mean of HWB was 2.01 (*SD* = 1.708) in the sample of Analysis 1.

Table 4

Effects of Group-based Discrimination between Individuals

		Health and Well-being	
	Variables	Without control variables	With control variables
Within level coefficients	Discrimination based on:		
	Color or race	-0.082 (0.084)	-0.063 (0.079)
	Nationality	-0.028 (0.543)	-0.040 (0.226)
	Religion	0.426 (0.000)***	0.195 (0.000)***
	Language	-0.065 (0.440)	-0.022 (0.706)
	Ethnic group	-0.096 (0.153)	-0.024 (0.532)
	Age	-0.444 (0.000)***	-0.133 (0.000)***
	Gender	0.276 (0.000)***	0.007 (0.800)
	Sexuality	0.354 (0.000)***	0.126 (0.010)*
	Disability	-0.918 (0.000)***	-0.267 (0.000)***
Within level coefficients (control variables)	Sex (male)	-	0.134 (0.000)***
	Age	-	-5.362 (0.004)**
	Education	-	0.017 (0.000)***
	Born in country	-	-0.051 (0.164)
	Belong to minority ethnic group	-	0.090 (0.051)
	Hampered	-	-0.672 (0.000)***
	Belonging to a religion (no)	-	-0.028 (0.303)
	Marital status: ref. married		
	Separated	-	-0.594 (0.000)***
	Divorced	-	-0.365 (0.000)***
	Widowed	-	-0.403 (0.000)***
	Never married	-	-0.280 (0.000)***
	Employment status: ref. employed		
	Self-employed	-	-0.020 (0.666)
	Working for own family business	-	-0.084 (0.439)
	Ever unemployed	-	0.241 (0.000)***
	Feeling about household's income: ref. coping on present income		
	Living comfortably on present income	-	0.344 (0.000)***
	Difficult on present income	-	-0.466 (0.000)***
	Very difficult on present income	-	-1.084 (0.000)***
	Socially meet	-	0.101 (0.000)***
	Take part in social activities	-	0.165 (0.000)***
	State of education	-	0.052 (0.000)***
	State of health services	-	0.099 (0.000)***
Unexplained variance		2.424 (0.000)***	1.678 (0.000)***
Between level coefficients (control variables)	Wave	-	0.071 (0.043)*
	GDP (average)	-	0.613 (0.020)*
	GDP (change)	-	-0.352 (0.148)
	Equality (average)	-	0.671 (0.204)
	Equality (change)	-	1.512 (0.191)
	Life expectancy rate (average)	-	0.028 (0.202)
	Life expectancy rate (change)	-	-0.056 (0.271)
Unexplained variance		0.428 (0.000)***	0.070 (0.004)**
Fit indicators	Loglikelihood	-43032.340	-31439.821
	Akaike information criterion (AIC)	86088.681	62959.643
	Bayesian inform. criterion (BIC)	86185.185	63273.008
Sample Size	Countries; country-waves;	36; 176;	32; 166
	Respondents	22971	18660

Note. Total sample changes between models, because variables are not available in all countries and respondents.
*$p < .05$. **$p < .01$. ***$p < .001$.

Table 5

Effects of Group-based Discrimination within Individuals

		Health and Well-being				
	Variables	Disabled women	Disabled over 65 years	Disabled of minority ethnic group	Disabled women over 65 years	Disabled women of minority ethnic group
Within level coefficients	Discrimination based on:					
	Ethnic group	-	-	-0.217 (0.000)***	-	-0.153 (0.043)*
	Age	-	-0.327 (0.000)***	-	-0.324 (0.000)***	-
	Gender	-0.130 (0.037)*	-	-	-0.072 (0.726)	-0.400 (0.154)
	Disability	-0.522 (0.000)***	-0.646 (0.000)***	-0.438 (0.003)**	-0.630 (0.000)***	-0.703 (0.012)*
Within level coefficients (control variables)	Sex (male)	-	0.063 (0.013)	0.129 (0.010)*	-	-
	Age	-0.663 (0.508)	-	0.590 (0.814)	-	2.504 (0.371)
	Education	0.015 (0.000)***	0.014 (0.000)***	0.019 (0.003)**	0.012 (0.008)**	0.023 (0.021)*
	(Not) Born in country	-0.094 (0.021)**	-0.006 (0.874)	-0.053 (0.438)	-0.044 (0.351)	-0.033 (0.666)
	Belong to minority ethnic group	0.073 (0.275)	0.003 (0.969)	-	-0.067 (0.356)	-
	Belonging to a religion (no)	-0.047 (0.048)*	-0.091 (0.000)***	-0.017 (0.774)	-0.075 (0.002)**	-0.018 (0.803)
	Marital status: ref. married					
	Separated	-0.422 (0.000)***	-0.420 (0.000)***	-0.167 (0.552)	-0.402 (0.013)*	-0.118 (0749)
	Divorced	-0.359 (0.000)***	-0.381 (0.000)***	-0.412 (0.000)***	-0.314 (0.000)***	-0.394 (0.000)***
	Widowed	0.326 (0.000)***	-0.320 (0.000)***	-0.386 (0.000)***	-0.280 (0.000)***	-0.404 (0.000)***
	Never married	-0.206 (0.000)***	-0.270 (0.000)***	-0.128 (0.103)	-0.166 (0.001)***	-0.050 (0.627)
	Employment status: ref. employed					
	Self-employed	0.047 (0.012)*	0.084 (0.000)***	-0.148 (0.161)	0.127 (0.007)**	-0.066 (0.740)
	Working for own family business	0.088 (0.179)	0.115 (0.129)	0.058 (0.765)	0.185 (0.063)	-0.302 (0.437)
	Ever unemployed	0.153 (0.000)***	0.123 (0.004)**	0.194 (0.000)***	0.173 (0.001)***	0.186 (0.009)**
	Feeling about household's income: ref. coping on present income					
	Living comfortably	0.334 (0.000)***	0.284 (0.000)***	0.444 (0.000)***	0.283 (0.000)***	0.502 (0.000)***
	Difficult	-0.526 (0.000)***	-0.465 (0.000)***	-0.476 (0.000)***	-0.486 (0.000)***	-0.364 (0.000)***
	Very difficult income	-1.078 (0.000)***	-0.932 (0.000)***	-0.981 (0.000)***	-0.928 (0.000)***	-0.880 (0.000)***
	Socially meet	0.097 (0.000)***	0.080 (0.000)***	0.075 (0.000)***	0.088 (0.000)***	0.076 (0.000)***
	Take part in social activities	0.213 (0.000)***	0.209 (0.000)***	0.218 (0.000)***	0.207 (0.000)***	0.256 (0.000)***
	State of education	0.066 (0.000)***	0.070 (0.000)***	0.063 (0.000)***	0.072 (0.000)***	0.077 (0.000)***
	State of health services	0.096 (0.000)***	0.102 (0.000)***	0.116 (0.000)***	0.104 (0.000)***	0.116 (0.000)***
Unexplained variance		1.593 (0.000)***	1.492 (0.000)***	1.882 (0.000)***	1.530 (0.000)***	1.910 (0.000)***

Table 5 (cont.)

		Health & Well-being				
	Variables	Disabled women	Disabled over 65 years	Disabled of minority ethnic group	Disabled women over 65 years	Disabled women of minority ethnic group
Between level coefficients (control variables)	Wave	0.010 (0.710)	-0.016 (0.532)	0.090 (0.045)*	-0.036 (0.229)	0.089 (0.103)
	GDP (average)	0.897 (0.009)**	1.156 (0.007)**	0.566 (0.201)	1.210 (0.004)**	0.693 (0.150)
	GDP (change)	-0.390 (0.169)	-0.280 (0.273)	-0.080 (0.868)	-0.106 (0.733)	0.006 (0.992)
	Equality (average)	1.481 (0.016)*	2.030 (0.003)**	1.105 (0.077)	2.613 (0.000)***	0.582 (0.508)
	Equality (change)	-0.231 (0.787)	0.116 (0.849)	3.770 (0.157)	-0.037 (0.970)	3.684(0.320)
	Life expect. rate (average)	0.027 (0.147)	0.033 (0.125)	0.024 (0.326)	0.029 (0.194)	0.023 (0.495)
	Life expect. rate (change)	0.033 (0.333)	0.046 (0.131)	-0.103 (0.118)	0.080 (0.035)*	-0.134 (0.098)
Unexplained variance		0.062 (0.000)***	0.065 (0.001)***	0.109 (0.000)***	0.079 (0.001)***	0.121 (0.001)***
Fit indicators	Loglikelihood	-64759.504	-41708.230	-6477.596	-24938.668	-3639.702
	Akaike information criterion (AIC)	129581.008	83478.460	13017.192	49939.335	7341.404
	Bayesian inform. criterion (BIC)	129846.791	83731.192	13209.882	50175.834	7516.023
Sample size	Countries; country-waves;	32;166	32; 166	32; 166	32; 166	32; 166
	Respondents	39091	25659	3699	15199	2065

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

Table 6

Comparison of Fit Indicators between the Proposed Model and an Alternative Model

Fit indicators		Proposed model	Alternative model
Unexplained variance at within level		1.678 (0.000)***	3.224(0.000)***
Unexplained variance at between-level		0.070 (0.004)**	0.124(0.000)***
Fit indicators	Loglikelihood	-31439.821	-37479.945
	Akaike information criterion (AIC)	62959.643	75042.890
	Bayesian inform. criterion (BIC)	63273.008	75363.037

Note. The proposed model is the model of analysis 1 and the alternative model tests the same variables on well-being, controlling for health.