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Outgroup Homogeneity Effect: How Contact, Knowledge and Attitudes Affect Perceptions of Similarity Among Those with Disabilities

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Outgroup Homogeneity Effect: How Contact, Knowledge and Attitudes Affect
Perceptions of Similarity Among Those with Disabilities

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Abstract

The current research investigated how contact, knowledge, and attitudes affect individual's perceptions of warmth and competence traits in individuals with either intellectual or physical disabilities. We hypothesized that individuals with more quality and quantity of contact as well as more knowledge of individuals with disabilities would be less likely to perceive homogeneity in those with disabilities. Results indicated that participants perceived greater similarity of warmth and competence traits in individuals with physical disabilities and greater similarity of warmth traits in individuals with intellectual disabilities. We found that individuals with greater quality of contact were less likely to perceive similarity of competence traits in those with physical disabilities and that individuals who had greater quantity of contact were more likely to perceive similarity of warmth traits in individuals with intellectual disabilities. This research is important because of the correlation between contact and perceptions of similarity of those with disabilities. This research is supportive of integrating those with disabilities into several different social, educational and work settings that could lead to more positive and high-quality contact with those who do not have a disability.

Outgroup Homogeneity Effect: How Contact, Knowledge and Attitudes Affect Perceptions of Similarity Among Those with Disabilities

Having a disability can result in being stigmatized against (Goffman, 1963), and these stigmatizations are often negative, prejudicial and keep individuals with disabilities from gaining full social acceptance (Barg, Armstrong, Hetz & Latimer, 2010; Buljevac, Majdak & Leutar, 2012). Those with a disability are pitied and seen as less competent than their able-bodied counterparts (Abbott & McConkey, 2006; Buljevac, et al., 2012). These perceptions can lead to negative feelings, attitudes towards, and self-stigmatization within people who have a physical disability (Buljevac, et al., 2012; Louvet, 2007; Taleporos & McCabe, 2002; Wetervelt & Turnbull, 1980) as well as those with an intellectual disability (Abbott & McConkey, 2006; Akrami, Ekekammar, Claesson & Sonnander, 2006; Halperin & Merrick, 2006; Yazbeck, McVilly, & Parmenter, 2004). Research has found that these discriminations towards individuals with intellectual disabilities may have a large negative impact on their overall quality of life (Siperstein, Norins, & Corbin, 2003). The purpose of this research is to examine how individuals' contact with and knowledge about people with disabilities is correlated to their overall attitudes towards those with disabilities. Furthermore, this research will examine if these factors will predict people's likelihood to engage in the outgroup homogeneity effect, and perceive people with disabilities to be similar to one another.

The Outgroup Homogeneity Effect

The outgroup homogeneity effect states that individuals belonging to a certain group (e.g. race, religion, sexuality, etc.) perceive members of an outgroup to be similar

to each other with little variability in their traits and behaviors. However, individuals perceive ingroup members to be more varied and diverse on these traits and characteristics (Park & Rothbart, 1982). Research on the outgroup homogeneity effect found that members of perceived outgroups, racial minorities for example, are perceived to have similar characteristics and behaviors as one another, unlike ingroup members (Bartsch & Judd, 1993; Lorenzi-Cioldi, 1993; Ostrom & Sedikides, 1992; Park & Judd, 1990; Park & Rothbart, 1982; Simon & Brown, 1987; Simon & Pettigrew, 1990). Perceptions that members of a stigmatized group are all similar to each other leads to discrimination and stereotype formation (Park & Rothbart, 1982; Ostrom & Sedikides, 1992). The more likely people are to engage in the outgroup homogeneity effect, the more likely they are to discriminate against outgroup members by unfairly attributing traits of one individual in the outgroup to all other members of the outgroup (Ostrom & Sedikides, 1992). The outgroup homogeneity effect can be detrimental to individuals with disabilities and this research is interested in investigating the link between the outgroup homogeneity effect, perceptions of similarity, contact, knowledge and attitudes towards individuals who have intellectual or physical disabilities.

Discrimination towards Individuals with Intellectual Disabilities

It has been shown that individuals with intellectual disabilities are stigmatized against (Goffman, 1963) and are subject to negative prejudice and discrimination (Jahoda & Markova, 2004). Discrimination and prejudice can have an overall negative impact on the lives of individuals with intellectual disabilities in various areas such as education (Falvo, Vianello & Calo, 2016; Siperstein, Norins, & Corbin, 2003), occupations, social settings and overall quality of life (Jahoda & Markova, 2004; Siperstein, Norins, &

Corbin, 2003). For example, Siperstein, et al. (2003) found that individuals without an intellectual disability believed that individuals who have a disability could participate in non-academic classes but could not, or should not, participate in academic courses. Even worse, Mencap (2012) reported that the discrimination of individuals with intellectual disabilities in the healthcare field has led to many deaths that could have been prevented. These negative, prejudicial discriminations have an impact on the lives of individuals with intellectual disabilities and it is important to understand the root of these discriminations so as to help eradicate them. However, there has been no research to our knowledge that looks at the link between the outgroup homogeneity effect and prejudicial attitudes towards individuals with intellectual disabilities. This research seeks to investigate if there is a correlation between the outgroup homogeneity effect and prejudicial attitudes towards those with intellectual disabilities.

Discrimination towards Individuals with Physical Disabilities

Not only are individuals with intellectual disabilities discriminated against, but individuals with physical disabilities are as well (Goffman, 1963). According to Disabled World (2015), about 1 in 5 Americans have some sort of physical disability. Furthermore, Disabled World (2015) cites that people with physical disabilities make up the largest minority group in the United States. Therefore, it is important to understand how prejudices against this large minority group occur.

Discrimination and prejudice against those with physical disabilities can have legitimate and damaging effects. Li and Moore (1998) found that social discrimination perceived by those with physical disabilities affects an individual's acceptance of their disability and that this leads to heightened disability conditions, the attainment of

additional disabilities, and chronic pain. Social discrimination starts early, as children are less likely to befriend someone with a permanent physical disability versus a child who has a temporary physical disability, and children are less likely to be willing to help a child with a permanent disability than one with a temporary disability (Weiserbs & Gottlieb, 2000). Furthermore, Westervelt and Turnbull (1980) found that able-body individuals had negative feelings toward individuals who have physical disabilities, and perceived them as less competent, productive, and independent. Negative perceptions were particularly showcased when disabled individuals applied for job positions that were typically male-oriented, or that required interpersonal contact (Louvet, 2007). People also showed a lack of confidence in the competence of those with disabilities which led to the self-stigmatization of people with disabilities, causing them to accept and internalize stigmas (Buljevac, Majdak, & Leutar, 2012). Thus, people with physical disabilities are viewed exclusively through their disability and not as holistic people. Furthermore, it shows that those with physical disabilities are discriminated against based on their competence traits (Buljevac, et al., 2012). Similar to the intellectual disabilities, these negative, prejudicial discriminations have an impact on the lives of individuals who have physical disabilities and it is important to understand the root of these discriminations so as to help eradicate them. However, there has been no research to our knowledge that looks at the link between the outgroup homogeneity effect and prejudicial attitudes towards individuals with physical disabilities. Therefore, just as stated above, this research seeks to investigate if there is a link between the outgroup homogeneity effect and prejudicial attitudes towards those with physical disabilities.

The Stereotype Content Model

The stereotype content model argues that two primary dimensions, warmth and competence, are used to assess various social groups (Fiske, Cuddy, Glick, and Xu, 2002). Social groups are perceived as warm when they are not competing with the ingroup for the same resources such as college admissions, housing and jobs and possess traits such as kind, affectionate and sociable. Social groups are perceived as competent when they are high in status, such as the CEO of a company, the Dean of a college or even the president of a club and possess traits such as competitive, educated, and intelligent. The varying combinations of warmth and competence can arouse predicted sets of feelings about and specific behaviors towards stereotyped individuals, such as those with a disability. For example, ingroup members are generally perceived to be high in warmth and competence, bringing about feelings of admiration and positive behavioral responses. Relevant to the current study, Fiske et al., (2002) found that those with a disability are perceived to be high in warmth and low in competence traits; which predicts that people will treat those with a disability with pity or a paternalistic prejudice. Using this model, we hypothesize that participants will express homogenous thoughts about those with either an intellectual or physical disability on both their warmth and competence traits, with warmth traits such as *kindness* inappropriately being extended from one individual with a disability to another and likewise on competence traits such as *naivety*. Furthermore, participants will perceive ingroup members to be unique and differing on a variety of warmth and competence traits.

Factors that Reduce the Outgroup Homogeneity Effect

While we expect that people will be more likely to apply the outgroup homogeneity effect to individuals with physical disabilities as well as individuals with

intellectual disabilities, we also expect that certain variables will reduce the likelihood of people engaging in the outgroup homogeneity effect. Specifically, individuals with more contact and knowledge of individuals with physical or intellectual disabilities will be less likely to see those with disabilities as similar.

Quantity of contact. Quantity of contact can have an impact on prejudicial attitudes and the outgroup homogeneity effect towards those with intellectual and physical disabilities. Those who have not had close personal contact with individuals with intellectual disabilities show a lack of knowledge about intellectual disabilities and have used the media, such as television, as a tool to supplement, further perpetuating negative stereotypes (Patel & Rose, 2013). Research has shown that those with limited contact with people with physical disabilities make quick and negative judgments and perceive them to be unattractive, have low intelligence, and receive governmental assistance (Taleporos & McCabe, 2002). This low quantity of contact shows how individuals use perceptions that they gained in first time encounters with those with disabilities and make unfair judgments about the group as a whole. Oddly enough, research has found that parents as well as professionals who have significant contact with individuals that have a disability are actually more likely to stigmatize the individuals with disabilities (Buljevac, Majdak, & Leutar, 2012). Because of these inconsistent findings regarding quantity of contact, we are interested in examining how this variable influences an individual's likelihood to perceive homogenous traits and behaviors in those with either intellectual or physical disabilities.

Quality of contact. While the research on quantity of contact on attitudes towards people with disabilities is mixed, perhaps research looking at how positive those

experiences are can explain the inconsistent results. Research has found that having greater quality of contact, not quantity, leads to less prejudicial attitudes towards those with intellectual disabilities (McManus, Feyes, and Saucier, 2010). Buljevac, et al. (2012), cited in the previous section, found that the people who had close contact with people who had disabilities had negative perceptions of them. Specifically, parents and professions that involved the caretaking of people with disabilities (e.g. paraprofessionals, caretakers, teachers) have negative attitudes about those with disabilities. One of the reasons why this happens is the likelihood of them having more negative interactions with individuals with disabilities (Buljevac, et al., 2012). Because greater quality of contact appears to affect more positive attitudes towards people with disabilities, we wanted to examine how quality of contact influences perceptions of similarity among those with disabilities.

Perceived knowledge. Patel and Rose (2013) found that participants reported greater knowledge of those with physical disabilities compared to those with intellectual disabilities. However, their knowledge was restricted to perceiving them only in regards to low or restrictive functioning. Patel and Rose (2013) study shows that knowledge about disabilities is limited which can affect their attitudes towards people with disabilities. Furthermore, Yazbeck, McVilly, and Parmenter (2004) found that greater knowledge of intellectual disabilities led to more positive attitudes towards those with disabilities in general. Both of these studies are important in regards to our study because we specifically want to show that lack of knowledge of those with a physical or intellectual disability correlates with greater likelihood of people perceiving those with disabilities to homogenous on a variety of traits and behaviors.

Attitudes towards those with disabilities. Additionally, we are interested in how attitudes about individuals with intellectual or physical disabilities influence their perceptions of similarity among those with disabilities. In general people have negative attitudes in society and low levels of comfort towards those with physical disabilities (Baker & Pinder, 1989; Esses & Beaufoy, 1988), and these prejudicial attitudes are based on pitying the individual with the disability (Buljevac, et al., 2012). These attitudes reflect a paternalistic view that is shown in the stereotype content model (Fiske, Glick, and Xu, 2002). We predict that participants will perceive similarities of paternalistic traits in individuals with intellectual or physical disabilities.

Hypotheses

Our hypothesis for this study is twofold. First, we hypothesize that participants will be more likely to perceive more homogenous competence and warmth traits in those with intellectual or physical disabilities compared to individuals without disabilities. Second, we predict that participants with greater contact, knowledge, and more positive attitudes towards those with disabilities will be less likely to engage in the outgroup homogeneity effect. Overall, this study is important for investigating the perceptions of stigmatized groups and how the outgroup homogeneity effect is related to negative perceptions of outgroup members. We hope to demonstrate that positive contact and greater knowledge about individuals with disabilities can lead to more positive attitudes, less stigmatization, and perceptions of diversity among those with disabilities.

Method

Participants

There were originally 129 participants in this study but after excluding participants who indicated they had either a physical or intellectual disability, there were 114 participants whose data was used for analysis. The quantity of contact section asked participants about their overall quantity of contact that they have had with people with either a physical or intellectual disability in the past. Within this measure we embedded the question: *I have learned about intellectual/physical disabilities because I have a physical/intellectual disability*. Participants then rated this question on a 9 point Likert scale which ranged from 1 (*Disagree Very Strongly*) to 9 (*Agree Very Strongly*). Those who indicated a three or higher were excluded from further data analysis. There were 27 males (24%) and 87 females (76 %). A majority of the participants were White (90%). There was a varied range of year in school reported (first-year = 50.9%, sophomore = 22.8%, junior = 12.3%, senior = 14.0%) and age ($M = 19.43$, $SD = 2.28$)

Procedure

The participants began by reading and signing an informed consent form. Participants were then randomly assigned into either the intellectual or physical disability group condition. Then they completed the questionnaire with the measures examining the perceptions of warmth and competence traits, attitudes, contact and knowledge towards individuals with intellectual or physical disabilities. They also filled out demographic items and a social desirability scale. The participants were then debriefed and thanked for their time. On average, the questionnaire took around 20 minutes to complete.

Measures

Outgroup homogeneity effect. The participants reported how similar they believe outgroups members (those with intellectual or physical disabilities) and ingroup members (those without disabilities) are on certain characteristics. This section of the questionnaire asks the participant to indicate how similar individuals with intellectual, physical, or no disabilities are on a variety of personality traits using a nine-point scale: 1 (*descriptive of all members*) to 9 (*descriptive of some members*). Questions were based on various traits that are either considered warm or competent (Conway et al., 1996; Eagly & Steffen, 1984; Jost et al., 2005). Warm traits included: *Affectionate, Cheerful, Helpful and Reliable* (19 items, $\alpha = .971$). Competent traits included: *Aggressive, Educated, Selfish, and Serious* (19 items, $\alpha = .827$). A copy of the questionnaire can be found in Appendix A. Lower scores indicated greater perceptions of homogeneity in warmth or competence traits towards individuals with physical or intellectual disabilities.

Attitudes towards those with a disability. The Mental Retardation Attitude Inventory-Revised (Antonak & Harth, 1994) was used to measure attitudes towards those with intellectual disabilities and a revised version was used to measure attitudes towards those with physical disabilities. There were 29 items ($\alpha = .890$). Participants responded to each statement using a nine point Likert scale from 1 (*Disagree Very Strongly*) to 9 (*Agree Very Strongly*) (e.g., *Integrating children who have intellectual disabilities and who do not have intellectual disabilities into the same preschool classes should not be attempted because of the turmoil it would cause.*) A full copy can be found in Appendix B. Higher scores indicated more positive attitudes towards individuals with intellectual disabilities or physical disabilities.

Quantity of contact. Ten items ($\alpha = .714$) were used to assess the amount of previous experiences or quantity of contact the participant had had with individuals with intellectual or physical disabilities (McManus, Feyes, & Saucier, 2010). A Likert scale was used to assess quantity of contact and participants responded from 1 (*Strongly Disagree*) to 9 (*Strongly Agree*) (e.g. *In the past, I have interacted with individuals with physical disabilities in many areas of my life (e.g., school, friends, work, club).*) A full copy of this questionnaire can be found in Appendix C. Higher scores indicated a higher level of contact with individuals with intellectual or physical disabilities.

Quality of contact. Six items ($\alpha = .787$) were used to assess the quality of the contact and interactions that participants have had with individuals with intellectual or physical disabilities (McManus et al., 2010). A Likert scale was used and participants responded from 1 (*Strongly Disagree*) to 9 (*Strongly Agree*) (e.g., *Overall I have had positive experiences with people with intellectual disabilities*). A full copy of this questionnaire can be found in Appendix C. Higher scores indicated a higher level of quality of contact with individuals with intellectual or physical disabilities.

Previous knowledge. Thirteen items ($\alpha = .827$) were used to assess participants self-perceived knowledge about individuals with intellectual or physical disabilities (McManus et al., 2010). A Likert scale was used and participants responded from 1 (*Strongly Disagree*) to 9 (*Strongly Agree*) (e.g., *I think I know more about intellectual disabilities than other people*). A full copy of this questionnaire can be found in Appendix C. Higher scores indicated a higher level of perceived knowledge of those individuals with intellectual or physical disabilities.

Social desirability scale. Thirty-three items were used to assess the participants level of social desirability ($\alpha = .827$) (Crowne & Marlowe, 1964). Participants either indicated True or False for the statements (*e.g., I have never deliberately said something that hurt someone's feelings*). A full copy of this questionnaire can be found in Appendix D. Higher scores indicated a higher level of social desirable responding.

Results

Data Analytic Strategy for Hypothesis 1

We ran paired samples t-tests to test the hypothesis that participants would perceive greater homogeneity in both warmth and competence traits in those with either an intellectual or physical disability compared to those without disabilities. Higher scores indicated less perceived homogeneity and lower scores indicated higher perceived homogeneity.

Perceptions of Homogeneity among Individuals with Physical Disabilities

Warmth traits. Participants rated more homogeneity of warmth traits in people with physical disabilities ($M = 5.58, SD = 2.08$) compared to people without physical disabilities ($M = 6.16, SD = 2.01$) $t(56) = 2.56, p = .013$. These findings are consistent with our first hypothesis. See figure 1.

Competence traits. Participants also rated more homogeneity of competence traits in people with physical disabilities ($M = 6.72, SD = 1.60$) compared to people without physical disabilities ($M = 7.19, SD = 1.42$), $t(56) = 3.71, p < .001$. These findings are consistent with our first hypothesis. See Figure 2.

Perceptions of Homogeneity among Individuals with Intellectual Disabilities

Warmth traits. There was not a significant difference in participants' perceptions of homogeneity of warmth traits in people with intellectual disabilities ($M = 4.76$, $SD = .20$) compared to those without intellectual disabilities ($M = 5.0$, $SD = .21$), $t(53) = 1.09$, $p = .278$. See Figure 3.

Competence traits. However, consistent with our hypothesis, participants rated greater homogeneity of competence traits in those with an intellectual disability ($M = 5.68$, $SD = 1.29$) compared to those without an intellectual disability ($M = 6.74$, $SD = 1.05$), $t(56) = 7.185$, $p < .001$. See figure 4.

Data Analytic Strategy for Hypothesis 2

To test the hypothesis that participants with greater contact, knowledge and more positive attitudes towards those with disabilities will be less likely to engage in the outgroup homogeneity we ran hierarchical multiple regressions where we controlled for social desirability, sex and year in school in the first step of the regression. Attitudes, knowledge, quantity, and quality of contact were entered into the second step of the regression. The dependent measure for each analysis represents the difference between individuals with and without disabilities on a set of traits; the difference scores were calculated by subtracting participants' perceptions of homogeneity among those with disabilities from their perceptions of homogeneity among those without disabilities. Positive values represent greater perceived homogeneity among individuals with disabilities whereas negative values represent greater perceived homogeneity among individuals without disabilities. All results are displayed in Table 1.

Factors Decreasing Perceptions of Homogeneity among Individuals with Physical Disabilities

Warmth traits. Greater perceptions of homogeneity towards those with physical disabilities in warmth traits was not affected by attitudes ($\beta = -.057, p = .720$), quantity of contact ($\beta = -.151, p = .471$), quality of contact ($\beta = -.064, p = .743$), or previous knowledge ($\beta = .121, p = .551$).

Competence traits. Participants who had greater quality of contact with those who had a physical disability were less likely to perceive greater homogeneity on competence traits ($\beta = -.143, p = .029$) this is consistent with our second hypothesis. Perceptions of homogeneity towards those with physical disabilities in competence traits was not affected by attitudes ($\beta = -.084, p = .575$), quantity of contact ($\beta = .147, p = .454$), or previous knowledge ($\beta = .207, p = .277$).

Factors Decreasing Perceptions of Homogeneity among Individuals with Intellectual Disabilities

Warmth traits. Participants who had a greater quantity of contact with those with intellectual disabilities reported a greater perception of homogeneity in warmth traits in those with disabilities ($\beta = .408, p = .002$); this is consistent with our second hypothesis. However, perceptions of homogeneity towards those with intellectual disabilities in warmth traits was not affected by attitudes ($\beta = -.073, p = .675$), quality of contact ($\beta = -.140, p = .433$), or previous knowledge ($\beta = .049, p = .774$).

Competence traits. Finally, perceptions of homogeneity towards those with intellectual disabilities in competence traits was not affected by attitudes ($\beta = -.157, p = .419$), quantity of contact ($\beta = .071, p = .715$), quality of contact ($\beta = -.202, p = .323$), or previous knowledge ($\beta = .139, p = .469$).

Discussion

This study examined knowledge, attitudes and contact as predictors of perceived homogeneity of warmth and competence traits in those with intellectual or physical disabilities. Consistent with our first hypothesis, results showed that individuals perceived more homogeneity of both warmth and competence traits in those with physical disabilities compared to those without and also perceived more homogeneity of competence traits in those with intellectual disabilities compared to those without. These results were found after controlling for participants' sex, year in school, and social desirability. Results for hypothesis two are consistent in that participants who had greater quality of contact were less likely to perceive homogeneity of competence traits in individuals who have physical disabilities. However, inconsistent with hypothesis two, participants who reported greater quantity of contact with individuals who have intellectual disabilities were more likely to perceive homogeneity in warmth traits of those with the disability.

Perceptions of Similarity among Individuals with Physical Disabilities

Results are consistent with findings that individuals perceive those with physical disabilities to be low on competence traits (Buljevac, et al., 2012). Our study found that participants rated greater similarity of competence traits in individuals with physical disabilities compared to those without physical disabilities. These findings are also consistent with the outgroup homogeneity effect (Bartsch & Judd, 1993; Lorenzi-Cioldi, 1993; Ostrom & Sedikides, 1992; Park & Judd, 1990; Park & Rothbart, 1982; Simon & Brown, 1987; Simon & Pettigrew, 1990) that predicts that individuals in outgroups will be perceived as homogeneous on a variety of traits and characteristics. Results also

showed that participants perceived more homogeneity of warmth traits in individuals with physical disabilities. Both of these findings show support for the stereotype content model (Fiske, et al. 2002) which states that those with a disability are clumped into the paternalistic and pitying trait group as they are perceived to be high in warmth and low on competence traits. For example, participants perceived those with physical disabilities to be all warm, kind and generous but not educated, driven or dedicated.

Results for hypothesis two revealed that participants who had greater quality of contact were less likely to perceive greater homogeneity of competence traits in those with physical disabilities. This is consistent with previous findings that quality of contact is related to less prejudicial attitudes towards those with disabilities (McManus et al. 2010). The previous research suggests that these findings reveal that it is how positive the interactions are, not how many, that predicts positive attitudes towards those with disabilities (McManus et al. 2010). These past findings and our current research results then support integrations of those with disabilities into school, work and various social settings in order to help achieve this high quality of contact between individuals without and individuals with disabilities.

Perceptions of Similarity among Individuals with Intellectual Disabilities

Results indicated that participants perceived individuals with intellectual disabilities to be more homogeneous in competence traits compared to those without intellectual disabilities. This finding is consistent with the outgroup homogeneity effect that members of an outgroup are perceived to be similar on various traits and characteristics (Bartsch & Judd, 1993; Lorenzi-Cioldi, 1993; Ostrom & Sedikides, 1992; Park & Judd, 1990; Park & Rothbart, 1982; Simon & Brown, 1987; Simon & Pettigrew,

1990). In accordance with the stereotype content model (Fisk et al. 2002) participants are perceiving individuals with intellectual disabilities to be similar and low on competence traits. For example, all individuals with intellectual disabilities are not educated, driven or dedicated.

Results for hypothesis two showed that participants who had greater quantity of contact were more likely to perceive homogeneity of warmth traits in those with intellectual disabilities. Our findings are inconsistent with research that has found greater contact with those with disabilities leads to less prejudicial attitudes (Taleporos, & McCabe, 2002). However, our results are consistent with previous research such that more contact with individuals with disabilities actually leads to more prejudicial attitudes (Buljevac, Majdak, & Leutar, 2012). Buljevac et al., (2012) interpreted their results to be indicative of prejudicial attitudes of pity toward individuals with disabilities. These findings reinforce the concept that not all contact is high quality or positive contact. The relationships between quality of contact, quantity of contact, and perceptions of similarity among those with disabilities were also found in our study.

Perceived Knowledge and Attitudes about Individuals with disabilities

Our results showed that knowledge and attitudes were not related to perceptions of similarity in warmth and competence traits in those with intellectual or physical disabilities. This is an interesting finding considering past research found that individuals often use media, such as television, to supplement their knowledge of disabilities, further perpetuating stereotypes (Patel & Rose, 2013) and may create more negative attitudes toward people with disabilities. On the other hand, Yazbeck et al., (2004) found that more knowledge of intellectual disabilities led to more positive attitudes towards disabilities in

general. Our findings are not consistent with either finding as knowledge was unrelated to the perceptions that individuals with disabilities are similar to one another. There could be several explanations as to why our research did not reveal the same results as previous research. Our research participants were college students and we did not take their majors into consideration. There might have been participants who were education majors with a concentration in special education, therefore their knowledge of individuals who have disabilities is vaster than the majority of the other participants which may decrease their chances of perceiving homogeneity of various in individuals with disabilities. Another limitation to take into consideration is the limited age range in which our participants fell ($M = 19.43$). Perhaps, the more knowledge and life experiences one has could lead to greater contact with individuals that have disabilities, therefore influencing their perceptions of homogeneity. Further research should consider greatly expanding the age range and overall demographics of participants.

Limitations and Future Directions

There are limitations to this study that should be taken into consideration. Participants' actual knowledge about what constitutes an intellectual or physical disability was not measured. Therefore, individual's definitions and understanding of what each disability means could greatly differ and influence responses or perceptions. Further research should look at the connection between actual knowledge and perception of homogeneity along with attitudes towards those with various disabilities.

An additional future direction would be to examine if perceptions of homogeneity lead to actual discrimination in real life situations. Park and Rothbart (1982) and Ostrom and Sedikides (1992) found that perceptions of homogeneity does in fact lead to

discrimination towards outgroup members, therefore it would be important to test this finding using people with disabilities as an outgroup.

Conclusions

The results of this study demonstrated that individuals without disabilities generally perceive other individuals with physical or intellectual disabilities to be more similar to one another than those without disabilities. Additionally, quantity and quality of contact can influence perceptions of homogeneity towards those with various disabilities. Therefore, one cannot assume that a large quantity of contact necessarily means good quality contact, particularly when contact involves individuals with intellectual disabilities. However, the upside to this is that quality of contact can help reduce perceptions of similarity among those with physical disabilities, which may lead to less prejudicial attitudes. This research is supportive of integrating those with disabilities into several different social, educational and work settings that could lead to more positive and high quality contact with those who do not have a disability. It is important that individuals with disabilities are able to have good quality contact with individuals who do not have a disability so as to show their variability in traits as well as help lessen prejudicial attitudes towards them.

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Appendix A

Outgroup Homogeneity Measure

Rate the extent to which individuals with (or without) intellectual (or physical) disabilities can be described using the following characteristics.

1	2	3	4	5	6	7	8	9
Descriptive of ALL members					Descriptive of			
some members								
39.	_____	Affectionate				58.	_____	Honest
40.	_____	Aggressive				59.	_____	Humorous
41.	_____	Ambitious				60.	_____	Independent
42.	_____	Aware of other's feelings				61.	_____	Intelligent
43.	_____	Cheerful				62.	_____	Kind
44.	_____	Competent				63.	_____	Naïve
45.	_____	Competitive				64.	_____	Patient
46.	_____	Considerate				65.	_____	Pleasant
47.	_____	Determined				66.	_____	Popular
48.	_____	Dominant				67.	_____	Productive
49.	_____	Educated				68.	_____	Reliable
50.	_____	Emotional				69.	_____	Responsible
51.	_____	Extraverted				70.	_____	Self-confident
52.	_____	Friendly				71.	_____	Selfish
53.	_____	Good natured				72.	_____	Serious
54.	_____	Happy				73.	_____	Sociable
55.	_____	Hard-working				74.	_____	Strong personality
56.	_____	Has leadership abilities				75.	_____	Valuing education
57.	_____	Helpful				76.	_____	Warm

Your sex (please circle one): Male Female Other
 Your race (e.g., Caucasian, etc.): _____
 Your class year (e.g., sophomore, etc.): _____ Your age: _____

Appendix B

Attitudes toward Individuals with Intellectual or Physical Disabilities

1. _____ School officials should not place children who have intellectual disabilities and children who do not have intellectual disabilities in the same classes.
2. _____ We should integrate people who have intellectual disabilities and who do not have intellectual disabilities into the same neighborhoods.
3. _____ It is a good idea to have separate after-school programs for children who have intellectual disabilities and children who do not have intellectual disabilities.
4. _____ Integrating children who have intellectual disabilities and who do not have intellectual disabilities into the same preschool classes should not be attempted because of the turmoil it would cause.
5. _____ Having people who have intellectual disabilities and do not have intellectual disabilities work at the same jobsites will be beneficial to both.
6. _____ Assigning high school students who have intellectual disabilities and who do not have intellectual disabilities to the same classes is more trouble than it is worth.
7. _____ The child who has an intellectual disability should be integrated into regular classes in school.
8. _____ I would allow my child to accept an invitation to a birthday party given for a child with an intellectual disability.
9. _____ I am willing for my child to have children who have intellectual disabilities as close personal friends.
10. _____ I have no objection to attending the movies or a play in the company of people who have intellectual disabilities.
11. _____ I would rather not have people with intellectual disabilities as dinner guests with my friends who do not have intellectual disabilities.
12. _____ I would rather not have a person who has an intellectual disability swim in the same pool that I swim in.
13. _____ I would be willing to introduce a person who has an intellectual disability to friends and neighbors in my home town.
14. _____ I would be willing to go to a competent barber or hairdresser who has an intellectual disability.
15. _____ I would rather not have people who have intellectual disabilities live in the same apartment building I live in.
16. _____ If I were a landlord, I would want to pick my tenants even if this meant only renting to people who do not have intellectual disabilities.
17. _____ Regardless of his or her own views, a private nursery school director should be required to admit children with intellectual disabilities.
18. _____ Laws requiring employers not to discriminate against people with intellectual disabilities violate the rights of the individual who does not want to associate with people who have intellectual disabilities.
19. _____ Real estate agents should be required to show homes to families with children who have intellectual disabilities regardless of the desires of the homeowners.

20. _____ Campground and amusement park owners have the right to refuse to serve anyone who they please, even if it means refusing people who have intellectual disabilities.
21. _____ If I were a barber or beauty shop owner I would not resent it if I were told that I had to serve people with intellectual disabilities.
22. _____ A person should not be permitted to run a day care center if he or she will not serve children who have intellectual disabilities.
23. _____ People who have intellectual disabilities are not yet ready to practice the self-control that goes with social equality with people who do not have intellectual disabilities.
24. _____ Even though children with intellectual disabilities are in public school, it is doubtful whether they will gain much from it.
25. _____ Although social mixing of people who have intellectual disabilities and people who do not have intellectual disabilities may be right, it is impractical until people with intellectual disabilities learn to accept limits in their relations with the opposite sex.
26. _____ Children who have intellectual disabilities waste time playing in class instead of trying to do better.
27. _____ The problem of prejudice toward people with intellectual disabilities has been exaggerated.
28. _____ Even with equality of social opportunity, people who have intellectual disabilities could not show themselves equal in social situations to people who do not have intellectual disabilities.
29. _____ Even though people with intellectual disabilities have some cause for complaint, they would get what they want if they were more patient.

Appendix C

Quantity of Contact with Individuals with Intellectual or Physical Disabilities

1. _____ In the past, I have interacted with individuals with intellectual disabilities in many areas of my life (e.g., school, friends, work, clubs).
2. _____ The neighborhood(s) I grew up in had mostly people who do not have intellectual disabilities.
3. _____ The high school I attended had mostly students without intellectual disabilities.
4. _____ In the past, I have rarely interacted with individuals with intellectual disabilities.
5. _____ In elementary school, I had frequent interactions with people with intellectual disabilities.
6. _____ In high school, I had frequent interactions with people with intellectual disabilities.
7. _____ In college I have frequent interactions with people with intellectual disabilities.
8. _____ I have learned about intellectual disabilities because I have an intellectual disability.
9. _____ I have a close family member with an intellectual disability.
10. _____ I have a close friend with an intellectual disability.

Quality of Contact with Individuals with Intellectual or Physical Disabilities

1. _____ In the past, my experiences with individuals with intellectual disabilities have been pleasant.
2. _____ I have had many positive experiences with individuals with intellectual disabilities.
3. _____ Over the course of my life, I have had many friends who have intellectual disabilities.
4. _____ Overall I have had positive experiences with people with intellectual disabilities.
5. _____ I have enjoyed the experiences I have had with people with intellectual disabilities.
6. _____ The experiences I have had with people with intellectual disabilities have been fun.

Knowledge about Individuals with Physical or Intellectual Disabilities

1. _____ I have read about intellectual disabilities on the internet.
2. _____ I think I know a lot about intellectual disabilities.
3. _____ I learned about intellectual disabilities through a close family member with an intellectual disability.
4. _____ I learned about intellectual disabilities through a student in school who has an intellectual disability.
5. _____ I learned about intellectual disabilities through a friend who has an intellectual disability.
6. _____ I learned about intellectual disabilities through a co-worker who has an intellectual disability.
7. _____ I learned about intellectual disabilities through providing direct care to someone who has an intellectual disability
8. _____ I think I know more about intellectual disabilities than other people.
9. _____ I would consider myself an expert on intellectual disabilities.
10. _____ I think I know less than the average person does about intellectual disabilities.

11. _____ I have learned a great deal about intellectual disabilities.
12. _____ I have learned very little about intellectual disabilities.

Appendix D

Social Desirability Scale

Listed below are a number of statements concerning personal attitudes and traits. Read each item and decide whether the statement is true or false as it pertains to you personally.

Circle either T or F for each of the following items.

T = True F = False

1. T F Before voting I thoroughly investigate the qualifications of all the candidates.
2. T F I never hesitate to go out of my way to help someone in trouble.
3. T F It is sometimes hard for me to go on with my work if I am not encouraged.
4. T F I have never intensely disliked anyone.
5. T F On occasions I have had doubts about my ability to succeed in life.
6. T F I sometimes feel resentful when I don't get my way.
7. T F I am always careful about my manner of dress.
8. T F My table manners at home are as good as when I eat out in a restaurant.
9. T F If I could get into a movie without paying and be sure I was not seen I would probably do it.
10. T F On a few occasions, I have given up something because I thought too little of my ability.
11. T F I like to gossip at times.
12. T F There have been times when I felt like rebelling against people in authority even though I knew they were right.
13. T F No matter who I'm talking to, I'm always a good listener.
14. T F I can remember "playing sick" to get out of something.
15. T F There have been occasions when I have taken advantage of someone.
16. T F I'm always willing to admit it when I make a mistake.
17. T F I always try to practice what I preach.
18. T F I don't find it particularly difficult to get along with loudmouthed, obnoxious people.
19. T F I sometimes try to get even rather than forgive and forget.
20. T F When I don't know something I don't mind at all admitting it.
21. T F I am always courteous, even to people who are disagreeable.
22. T F At times I have really insisted on having things my own way.
23. T F There have been occasions when I felt like smashing things.
24. T F I would never think of letting someone else be punished for my wrong-doings.
25. T F I never resent being asked to return a favor.
26. T F I have never been irked when people expressed ideas very different from my own.
27. T F I never make a long trip without checking the safety of my car.
28. T F There have been times when I was quite jealous of the good fortune of others.
29. T F I have almost never felt the urge to tell someone off.
30. T F I am sometimes irritated by people who ask favors of me.
31. T F I have never felt that I was punished without cause.
32. T F I sometimes think when people have a misfortune they only got what they deserved.
33. T F I have never deliberately said something that hurt someone's feelings.

Table 1

Perceptions of Similarity of Warmth and Competence Traits among Individuals with Intellectual/Physical Disabilities

Scale	Step	Predictor variable	β	p
Perceptions of similarity of warmth traits towards those with physical disabilities	Step 1	Social Desirability	.245	.084
		Participant sex	.130	.385
		Class (year in school)	.218	.155
	Step 2	Attitudes Scale	-.057	.720
		Quantity Contact	-.151	.471
		Quality Contact	-.064	.743
		Previous Knowledge	.121	.551
Perceptions of similarity of competence traits towards those with physical disabilities	Step 1	Social Desirability	.206	.150
		Participant sex	.235	.125
		Class (year in school)	.023	.881
	Step 2	Attitudes Scale	-.084	.575
		Quantity Contact	.147	.454
		Quality Contact	-.413	.029

		Previous Knowledge	.207	.277
Perceptions of similarity of warmth traits towards those with intellectual disabilities	Step 1	Social Desirability	-.288	.040
		Participant sex	-.078	.573
		Class (year in school)	.359	.011
	Step 2	Attitudes Scale	-.073	.675
		Quantity Contact	.408	.022
		Quality Contact	-.140	.433
		Previous Knowledge	.049	.774
Perceptions of similarity of competence traits towards those with intellectual disabilities	Step 1	Social Desirability	.036	.804
		Participant sex	-.012	.936
		Class (year in school)	-.204	.160
	Step 2	Attitudes Scale	-.157	.419
		Quantity Contact	.071	.715
		Quality Contact	-.202	.323
		Previous Knowledge	.139	.469

Figure Captions

Figure 1. Perceived Homogeneity of Warmth Traits in Individuals with Physical Disabilities

Figure 2. Perceived Homogeneity of Competence Traits in Individuals with Physical Disabilities

Figure 3. Perceived Homogeneity of Warmth Traits in Individuals with Intellectual Disabilities

Figure 4. Perceived Homogeneity of Competence Traits in Individuals with Intellectual

Disabilities

Figure 1

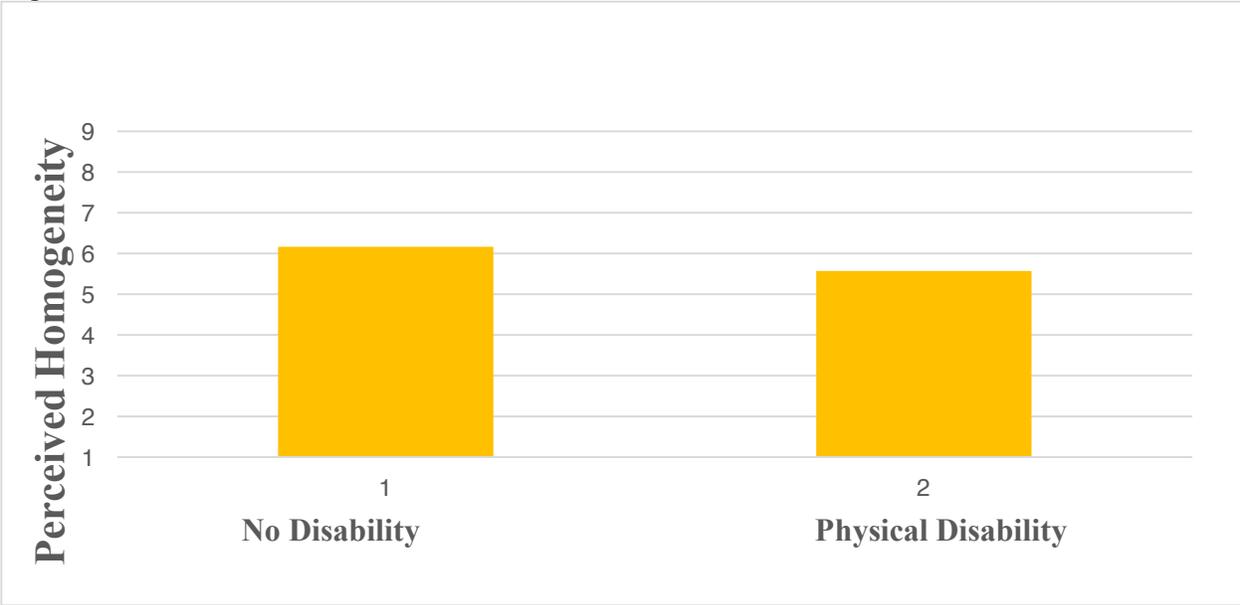


Figure 2

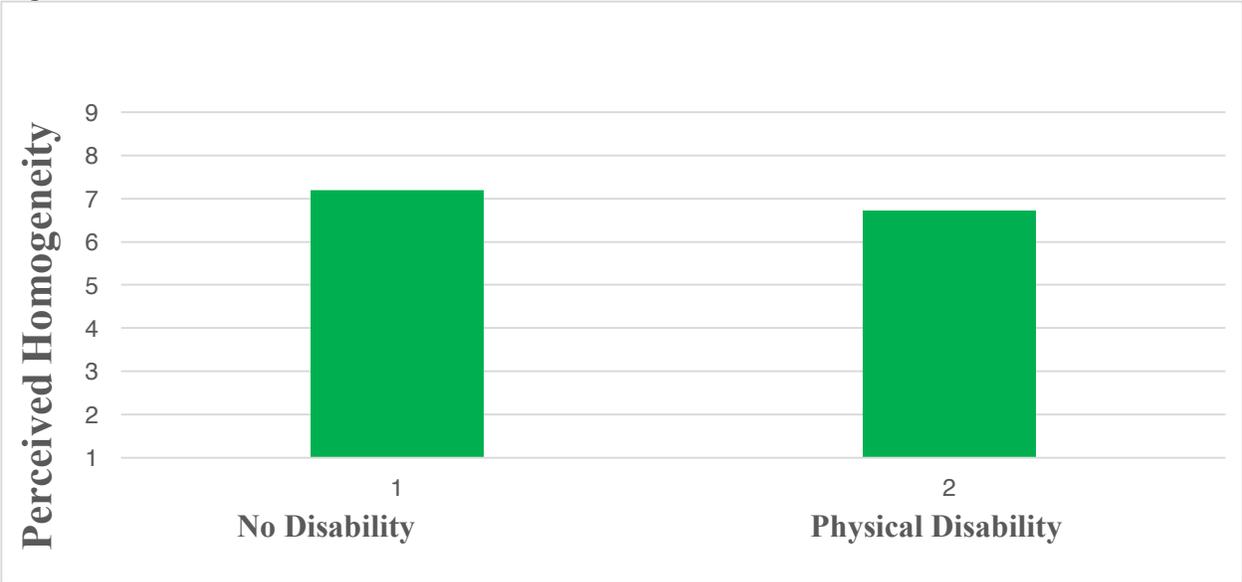


Figure 3

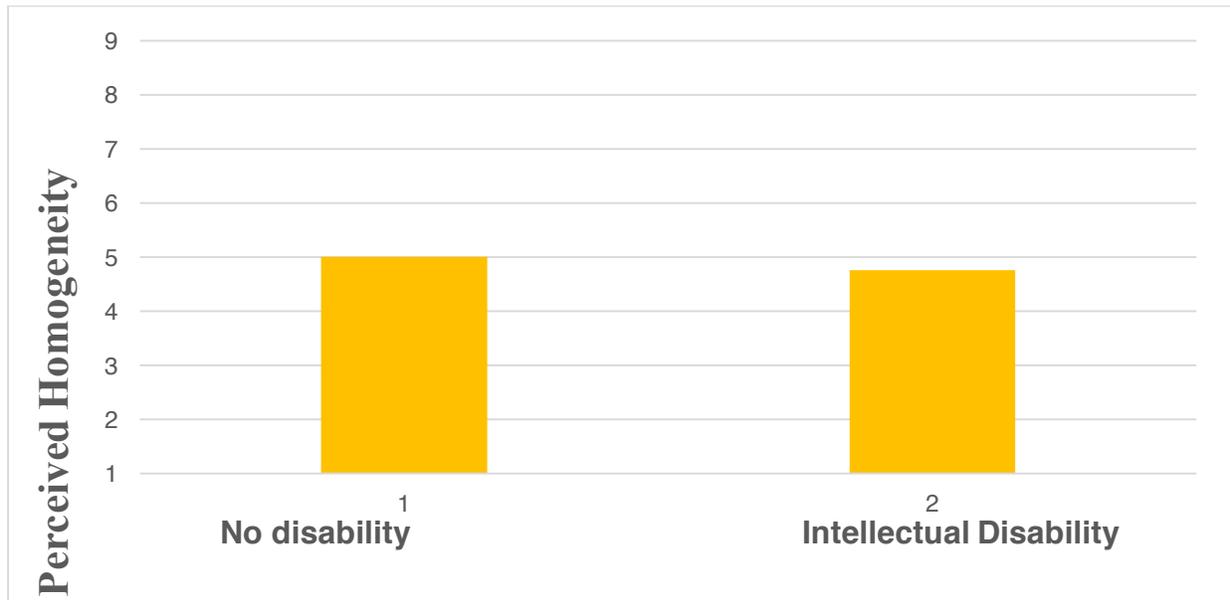


Figure 4

