6-2-2023

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Document Type
Undergraduate Thesis

Degree Name
Bachelor of Arts in Psychology

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Keywords
Person-first language, Controllability, Mental health stigma, Dimensions of stigma

Subject Categories
Mental and Social Health | Other Psychology | Psychology | Social and Behavioral Sciences

Comments
I would like to thank Dr. E Paige Lloyd, Kevin M. Summers, Gina A. Paganini and Dr. Max Weisbuch for their constant support, mentorship, and helpful feedback. I could not have asked for better mentors to start my journey as a researcher.

Publication Statement

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June 2, 2023

Abstract

Although past work consistently demonstrates perceivers stigmatize mental illness; which dimensions of stigma are relevant for specific conditions remains debated (Brohan et al., 2010). In the current work, we manipulated (between subjects) the controllability of fictitious mental illnesses and examined participants stigmatization across six dimensions (Fear, Help, Forcing Treatment, and Negative Emotions; Brown, 2008). We also examined whether effects of controllability were moderated by language (within subjects; person-first vs identity-first). We consistently found effects of controllability such that participants in the low (compared to high) condition responded with more fear, empathy, negative emotion, and intention to force treatment, but also attributed less responsibility and reported less tendency to help. Participants responded with more negative emotion toward a condition describe with person-first (relative to identity-first). We found no evidence that language moderated effects of controllability. This work highlights the multifaceted nature of mental health stigma, and suggests that controllability may be an important, but nuanced, factor in mental health stigma.

Keywords: Person-first language, controllability, mental health stigma, dimensions of stigma

Effects of Controllability and Language on Stigma Toward Mental Illness

All human societies have some form of group-based hierarchy (Sidanius et al., 2004; Sidanius & Pratto, 2003), whereby some people are devalued based on their social identity, appearance, or health. These individuals encounter far harsher social environments than their more privileged counterparts, with great harm to their mental and physical health (Angermeyer & Dietrich, 2006; Dietrich et al., 2004; The WHO World Mental Health Survey Consortium, 2004). This devaluation of certain individuals is often referred to as *stigma*. Stigma is a multidimensional construct including stereotypes, emotional responses, and behavior towards members of a group (Brohan et al., 2010). The negative effects of stigma are caused by how *other people* respond to a characteristic or identity—if most people value that characteristic or identity, then it is not stigmatized (Earnshaw & Karpyn, 2020; Lacey et al., 2015; Lau et al., 2016). Among the many different stigmatized identities that have been examined, mental health stigma is among the more prevalent forms of stigma—potentially experienced by as many as 53 million Americans who have a diagnosed psychological disorder (APA, 2021; Mental Health Foundation, 2021). For example, one study look directly at the prevalence of internalized stigma for people with serve mental illness and found that 36% of the sample had elevated stigma scores (West et al., 2011).

The widespread and complex societal issue of mental health stigma is multiply determined, likely reflecting the combination of many factors (Fox et al., 2018). For example, one well-examined antecedent to stigma is beliefs about how much control a person has over a characteristic that is stigmatized. Said another way, controllability – or the extent to which a person's mental illness is perceived as clinically controllable, personally controllable, and permanent – can influence the amount of stigma a perceiver has towards the individual with mental illness.

Generally, work examining the role of controllability in mental health stigma has found that conditions that are perceived or represented as more controllable are met with more stigma (Feldman & Crandall, 2007; Kvaale et al., 2013; Larkings & Brown, 2018). However, depending on the dimension of stigma being studied in each examination, the effects of controllability sometimes diverge. For example, some research found that conditions perceived as having low controllability predicted more pity, yet also predicted more sympathy, and desire to help (Angermeyer et al., 2015). The current works aims to expand our understanding of how perceived controllability influences mental health stigma by directly testing whether effects of controllability depend on the specific dimension of stigma examined.

Though controllability seems to importantly influence mental health stigma, there are numerous other theorized and evidence-based predictors of mental health stigma. For example, theorizing that the language used to describe a mental health condition may influence stigma has become prominent across fields (American Psychological Association, 2021; Baker et al., 2022; Granello & Gibbs, 2016). Researchers suggest that empathetic language may be one way to reduce stigma. Specifically, identity-first language (e.g., "mentally ill people," "depressed people," "addicts,") is theorized to propagate stigma relative to person-first language (e.g., "people with mental illness," "people with depression," "people experiencing addiction"). In an empirical examination of this theorizing, Granello & Gibbs (2016) found that individuals describe with the term "mentally ill" led to more stigmatization than "mentally ill person." However, other work has failed to find effects of language on stigma (e.g., Baker et al., 2022; Granello & Gibbs, 2016), and thus far relatively few studies have experimentally tested the effects of person-first versus identity-first language. Thus, the current work also aims to expand

our understanding of the effects of person-first versus identity-first language on stigma, as well as whether controllability and language interactively influence mental health stigma.

Importantly, the current work builds on past work that investigated independent effects of language or controllability on mental illness stigma to explore interactive effects between language and controllability. Given that little is currently known about the effects of language, considering language alongside other important predictors of stigma may provide valuable insights into when language may influence stigma. A second key innovation of the current work is our focus on stigma as a multidimensional construct – including dimensions such as perceived dangerousness and feelings of empathy.

In this way, we depart from prior work on controllability, which focused more generally on the effects of controllability on positive or negative judgments, to provide a more precise account of _which_ aspects of stigma are influenced by controllability. Likewise, this approach enables us to examine the precise dimensions of stigma that might be influenced by person-first language or where person-first language might moderate the effects of controllability on stigma. In sum, the current work is interested in experimentally documenting the independent and interactive effects of controllability and language on several important dimensions of stigma.

Stigma As a Multidimensional Construct

Previous work has encouraged researchers to explore what factors may play a critical role in how perceivers stigmatize people (see Cariello et al., 2021; Link, 2001; Link & Phelan, 2001). The effects of stigma have been examined for a wide variety of identities and across a wide range of contexts (Angermeyer & Dietrich, 2006), and although scientific definitions of stigma vary, effects on well-being are fairly uniform. To the extent that the characteristics a given person holds are stigmatized, they tend to have worse physical and mental well-being (Penn &

Martin, 1998). However, through research, stigma has been defined with different constructs, such as perceived dangerousness, anger, unwillingness to help, empathy, and many more (Dietrich et al., 2004). Past research on predictors of stigma may have different (though conceptually related) outcome variables. This may explain inconsistent results across studies of what factor increases stigma. (e.g., Brohan et al., 2010; Fox et al., 2018; Hayward & Bright, 1997; Herek et al., 2002; Livingston & Boyd, 2010).

Therefore, with previous work demonstrating that antecedents of stigma might influence different dimensions differently, in this work we seek to reconcile the differences by considering stigma as a multidimension construct. We explored six dimensions of stigma to provide a more well-rounded explanation for how each predictor of stigma of interest (i.e., controllability and language) influences stigma across different dimensions.

Controllability Beliefs as Stigma Antecedents

Controllability beliefs, or the extent to which one believes a person can work to change the stigmatized characteristic or that a person causes the stigmatized characteristics through their own volitional behavior, seem to influence mental illness stigma (Knettel, 2019). One study found that perceived controllability predicted social rejection towards people with mental illness better than 16 other factors (e.g., dangerousness or rarity; Feldman & Crandall, 2007). Other work found that perceived controllability accounted for 24% of the variance in stigma towards people with mental illnesses (Towler & Schneider, 2005).

Given the effect of perceived controllability on mental illness stigma, researchers have explored controllability through operationalizing controllability with etiology. Such that genetic condition for mental illness (e.g., genetic dispositions that are linked to mental illnesses; Uher, 2014) represent low controllability and behavioral explications for mental illness (e.g., substance

use disorder is the person's "fault"; Corrigan et al., 2000) represent high controllability. This operationalization begins to demonstrate that controllability is a spectrum defined within multiple constructs. Such that the effects of controllability may differ based on the stigma of interest. For example, a meta-analysis found that biological explanations (linked to low controllability) are attributed with less blame, but more dangerousness and desire for distance (Kvaale et al., 2013). Lebowitz and Ahn (2014) found similar results in that biological explanations yielded lower empathy across four disorders (schizophrenia, social phobia, depression, and OCD). However, importantly, Goldstien and Rosselli (2003) found mixed results with each etiological model (genetic vs. behavioral) where each factor was associated with some positive and some negative consequences for the individual with mental illness.

Regardless, there is some mixed evidence regarding how controllability influences stigma. Some evidence suggests that high controllability leads to more stigma than low controllability but there is also evidence for the opposite conclusion. In hopes of reconciling competing findings and expanding our understanding of how controllability influences stigma, we 1) used fictitious mental health conditions to minimize participant-level variability in beliefs about controllability and to strengthen our manipulation, and 2) used a multi-dimensional measure of stigma to capture the nuanced influences of controllability on stigma. We aligned our predictions with previous work such that if a mental illness is perceived as highly controllable (compared to low controllability), participants would report greater stigma (i.e., greater perceived dangerousness) towards that individual; however, based on competing evidence, we acknowledge that this effect may emerge on some but not all dimensions of stigma, and that effects may even reverse on some dimensions of stigma.

Contextual Factors: Language in Communicating Stigma

Beliefs about controllability and linguistic choices about how to describe a condition may be related, despite being distinct constructs. In particular, identity-first language (e.g., "smoker") is consistent with an agent who does not have agency. This theorizing could indicate that when identity-first language is used in a controllability context that it leads to *less* stigma compared to person-first language (e.g., "person who smokes") which implies agency (controllable; Williamson et al., 2020). Indeed, this theorizing is constant with preference of language for some communities. The autistic and Deaf communities, explicitly advocate for identity-first language stating that it reduces the stigma they receive (American Psychological Association, 2021; Kenny et al., 2016).

Conversely, empirical evidence suggests that identity-first language reduces the person to "only" their identity, which prompts responses based on perceivers' stereotypes of the stigmatizing characteristic (rather than individualizing the person). For example, some studies found that identity-first language (i.e., "mentally ill people" and "schizophrenics") led to greater stigma than person-first language (i.e., "people with mental illness" and "people with schizophrenia;" Granello & Gibbs, 2016; Granello & Gorby, 2021). Thus, there are reasons to expect identity-first language to either (a) increase perceivers positive responses to a stigmatizing characteristic or (b) increase negative responses.

However, while several studies have found that language type informs stigma, others yielded nonsignificant effects (Baker et al., 2022; Granello & Gibbs, 2016). These conflicting effects could be attributed the difference of the operationalization of stigma (Chang et al., 2016). Within the previously mentioned studies, stigma was captured differently dependent on if the study wanted to capture beliefs, emotional responses, or behavior towards an individual with

mental illness. For example, Baker and colleagues (2022) examined stigma through different subscales (i.e., authoritarianism, benevolence, social restriction, and community attitudes) and found contradictory evidence across subscales. In the authoritarianism and social restrictiveness subscales, they found that identity-first (relative to person-first) yielded greater stigma, whereas in the benevolence and community health ideology subscale, identity-first (relative to person-first) yielded less stigma.

These findings suggest that the use of language when discussing mental illness could influence perceptions on *different dimensions* of stigma, though this hypothesis has yet to be tested. In this work we build off these findings by examining the effects of person-first and identity-first language across different dimensions of stigma. Since, theorizing and evidence about the effect of language is mixed and findings of the effects of language are varied and sometimes inconclusive, we expect that language is likely to influence stigma, but remained agnostic in our predictions of which language-type (person-first vs. identity-first) might reduce stigma or how these effects may differ across dimensions of stigma.

Interactive Effects of Language and Controllability on Stigma

As mentioned above, the effect of language may be dependent on the mental illness being described and the dimension of stigma examined (Benson et al., 2016; Granello & Gibbs, 2016; Kelly & Westerhoff, 2010). In addition, we argue that the effects of language may also depend on controllability. To explicate our reasoning, we discuss the example of tobacco dependence, which is often viewed as controllable (Lindgren et al., 2014). Williamson and colleagues (2020) found that labeling someone with their behavior in an identity-first manner ("smoker") led to more negative perceptions about tobacco dependence. Other work investigating language used to describe substance use disorders has found that if a mental illness is perceived as controllable,

person-first, relative to identity-first language often yields less stigma (Ashford et al., 2019; Baker et al., 2022; Goodyear et al., 2018; Kelly et al., 2010). Thus, it may be the case that person-first (compared to identity-first) language yields more positive perceptions of individuals with conditions that are perceived as highly controllable (Angeli et al., 2012; Brown, 2012; Ferrigon, 2019; Mitchell & Locke, 2015).

Conversely, the Deaf community are more likely to argue that identity-first language is less stigmatizing, because this language values their disorder as a part their identity (Brown, 2012; Kenny et al., 2016). Deafness is a condition that is generally viewed as low on controllability and attributable to genetics. Thus, this real-world example suggests that identity-first might be preferable than person-first when the condition is not perceived as controllable. Such anecdotal evidence suggests that the effects of language type might be different dependent on the controllability of the condition being discussed. Leake and colleagues (2022) tested this theorizing in their study examining how controllability and language interactively influence stigma and found a marginally significant effect of language-type and perceived controllability on stigma. When decomposing this interaction, they found that in the behavioral attributions (i.e., high controllability) condition identity-first language yielded greater stigma than the person-first language, but within the biological attributions (i.e., low controllability) condition the effects reversed.

Therefore, we hypothesize that the controllability of a condition may moderate whether identity-first or person-first language yields more stigma. In line with Leake and colleagues' (2022) findings, we predicted that a mental illness that is depicted as highly controllable may be more stigmatized described with identity-first (relative to person-first) language, but that

disorders perceived as relatively uncontrollable will be less stigmatized when described with identity-first (relative to person-first) language.

Overview of Current Work

There is a dearth of work on potential interactive effects between controllability and language-type on mental illness stigma (c.f., Leake et al., 2022). The current work bridges this gap by considering both predictors in the same study enabling examination of an interactive effect. Importantly, this study also produces a more robust examination of how these predictors influence stigma by examining multiple dimensions of stigma. In this work, we not only expand the empirical evidence surrounding how controllability (low vs. high) of a mental illness influences stigma, but also contribute to the on-going debate of how language (person-first vs. identity-first) may influence dimensions of stigma.

We assessed perceivers' stigma towards hypothetical mental illnesses, which were manipulated to be described with different languages (i.e., person-first vs. identity-first language) and levels of controllability (i.e., low vs. high). We used a mixed-model design with language type as a within-subjects variable and controllability as a between-subjects variable. To this end, participants read two vignettes about fictitious mental illnesses – one described with person-first language, and one described with identity-first language, and participants were randomly assigned to learn about two conditions that either both had high or both had low controllability. Upon reading each vignette, participants rated their stigmatization of the fictitious conditions across six dimensions (fear/dangerousness, help/interact, responsibility, forcing treatment, empathy, and negative emotions; Brown, 2008).

We predicted a significant main effect of controllability on stigma, such that high controllability would result in greater stigma than low controllability. We remained agnostic

regarding if person-first (compared to identity-first) would lead to less or more stigma. Further, we predicted an interaction between language type and controllability on stigma. Within the high controllability condition, we predicted participants would exhibit greater stigma toward conditions described with identity-first, compared to person-first, language. Within the low controllability condition, we predicted participants would report less stigma toward conditions described with identity-first, compared to person-first, language. Additionally, we also explored how the effects described above might be moderated by dimensions of stigma. We expected differences across dimensions but did not have specific predictions about each dimension since there is not enough extant evidence to make specific predictions.

Method

Participants

We aimed to recruit the largest sample possible given available funding allotted to the project. In actuality, we recruited 438 participants via CloudResearch (an online recruitment platform; Litman et al., 2017). A sensitivity analysis conducted in G*Power (V3.1; Faul et al., 2007) indicated that 438 participants enabled us to detect a small ($n_p{}^2$ = 0.07) effect with 80% power in a 2 × 2 mixed model factorial ANOVA. All participants that provided data were included in relevant analyses[1].

Our sample (M_{age} = 39.86, SD_{age} = 11.67) was predominantly White (79.4% White, 9.9% Black/African American, 4.8% East Asian, 0.2% Native Hawaiian/Pacific Islander, 1.4% South Asian, 2.1%, bi- or multiracial, 0.7% other, and 1.4% did not disclose). Over half of participants were men (47% men, 45.5% women, 0.9% as nonbinary, 0.2% as agender, 0.2% as other and 0.2% did not disclose; participants could select more than one gender category), and most did not identify as Hispanic or Latinx (82.0% not Hispanic/Latinx, 9.3% Hispanic/Latinx, and 3.0% did not disclose). Participants were compensated $1.00 for their participation in the ten-minute survey.

Materials

Vignettes

Vignettes were employed to describe hypothetical mental illnesses in a way that allowed us to systematically vary both the type of language used to describe the conditions (person-first vs. identity-first) and the controllability of the conditions (low vs. high). The names of the hypothetical mental illnesses (Grespar; Munder) were selected based on pre-testing indicating

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[1] Degrees of freedom or *n* maybe fluctuate because some participants did not complete all items.

they were the two most negative names and were similarly negative to one another from a set of 21 hypothetical condition names (50 participants recruited from CloudResearch; Paganini et al., 2022). Participants viewed two vignettes describing hypothetical mental illnesses named Grespar and Munder. The participants were randomly assigned to one controllability level (i.e., each participant read about two low controllable conditions or two high controllable conditions) and saw one vignette for each language type (i.e., each participant read about one condition described with identity-first language and one described with person-first language). Which name was paired with which language type was counterbalanced between participants.

To illustrate how the vignettes manipulated each of these variables, one sentence of the person-first, low controllability Munder vignette read, "For people with Munder, their symptoms cannot be easily controlled, and their symptoms are often unresponsive to drug or psychotherapies and lifestyle changes (e.g., sleep, diet)." The same sentence from the identity-first, high controllability Grespar vignette read, "For Grespar people, their symptoms can be easily controlled, and their symptoms are often responsive to drug or psychotherapies and lifestyle changes (e.g., sleep, diet)." The full vignettes for each condition are in the Appendix.

Controllability Manipulation Check

Controllability is multifaced, so our manipulation included statements that may have tapped into multiple dimensions of controllability – personal controllability, clinical controllability, and permeance. Thus, we employed three manipulation check questions that participants responded to on nine-point Likert scales ranging from 1 "*Strongly disagree*" to 9 "*Strongly agree*" to assess whether we successfully manipulated controllability. Each question was adapted to the condition name. The questions were: "How clinically controllable (i.e., drug therapy and psychotherapies) is *[Grespar/Munder]?"*, "How personally controllable (i.e.,

individual can take action to address and treat symptoms) is *[Grespar/Munder]*?", and "How

permanent (i.e., lasting or remaining unchanged indefinitely) is *[Grespar/Munder]*?". The three

questions had good internal reliability (α = .93); therefore we computed a controllability

manipulation check composite by averaging the three items together. Participants in the low

controllability condition categorized the mental illness as less controllable than participants in

the high controllability condition (*M* = 4.745, *SD* = 2.55). Higher numbers indicate that

participants attribute more controllability towards the hypothetical individual.

Stigma

Stigma was assessed using a modified version of the 26-item Factors and Mental Illness

of Stigma Attribution Questionnaire (Brown, 2008). This scale consists of six subscales: fear (7

items), help (6 items), responsibility (3 items), forcing treatment (4 items), empathy (3 items),

and negative emotions (3 items). This scale further examines attribution theory from Corrigan et

al. (2004). Brown's goal was to further elaborate the measures used to collect perceptions of

people with mental illness. Exploratory factor analysis of the 27-item scale yielded a six-factor

solution that accounted for 65.29% of the variance. Brown also found good test-retest reliability

(r > .75).

Participants rated each of the 26 items in a random order on a nine-point Likert scale

from 1 "*Strongly disagree*" to 9 "*Strongly agree.*" All items were modified to incorporate the

language type manipulation (person-first vs. identity-first) and condition name (Grespar vs.

Munder). An example of an original item is "How scared of Harry would you feel?" versus a

modified version is "How scared of a *[Grespar/Munder person **or** person with Grespar/Munder]*

would you feel?". See Table 1 for example items for each subscale. We computed composite

stigma scores for each dimension by averaging all items in that subscale (following the

procedure from Brown, 2008). We reserved coded the help and empathy dimensions so that across all dimensions higher scores indicate greater amounts of stigma. See Table 2 for mean, standard deviation, and reliability for each subscale.

Procedure

After providing informed consent, participants viewed two vignettes - one describing a fictitious mental illness named Grespar and one describing a fictitious mental illness named Munder – in a random order. One vignette used identity-first language and the other vignette used person-first language (see Appendix). Which name was paired with which language type was counterbalanced between participants. Each participant was randomly assigned to read vignettes about two conditions that were either high or low in controllability. After reading each vignette, participants completed measures of perceived controllability (manipulation check) and stigma (dependent variable). Participants then completed a demographic questionnaire that included age, gender, race, ethnicity, education, and political orientation items. Lastly, participants were debriefed, thanked, and compensated.

Results

Manipulation Check

We conducted an independent samples *t*-test to assess the effects of controllability on the manipulation check. This demonstrated that participants did rate the hypothetical conditions as less controllable than those in the high controllability condition ($M = 6.70$, $SD = 1.12$).

Primary Analysis

To examine the independent and interactive effects of controllability and language we conducted our primary analysis: a 2 (controllability: high vs. low) by 2 (language: person-first vs. identity-first) by 6 (dimension of stigma: fear, vs. help vs. responsibility, vs. forcing treatment, vs. empathy, vs. negative emotions) mixed model ANOVA on stigma. We manipulated language and dimension of stigma as repeated factors and controllability as between subjects.

We predicted a significant main effect of controllability on stigma, such that participants in the high controllability condition would report greater stigma than participants in the low controllability condition. Counter to our hypothesis, there was no main effect of controllability on stigma, $F(1,436) = .004$, $p = .95$, $\eta_p^2 = .00$

We predicted a significant main effect of language but remained agnostic regarding whether person-first (compared to identity-first) would lead to less or more stigma. The analysis yielded a significant main effect of language on stigma, $F(1,436) = 3.89$, $p = .049$, $\eta_p^2 = .01$. Identify-first language ($M = 2.88$, $SD = 1.13$) yielded less stigma than person-first language ($M = 2.83$, $SD = 1.13$).

Additionally, we predicted a significant main effect of stigma dimension. However, since there is not enough extant evidence, we did not make specific predictions. The analysis yielded a

significant result, $F(1,5) = 53.28$, $p = <.001$, $\eta_p^2 = .11$. Participants reported more stigma in the empathy, help, responsibility dimensions than the fear, forcing of treatment, and negative emotions dimensions. All dimensions were coded such that higher numbers indicated more stigma. See Table 2 for simple effects statistics.

We remained agonistic for the interaction between stigma dimension and controllability as the current research was limited and conflicting. We observed a significant interaction between dimension of stigma and controllability on stigma $F(1,5) = 85.52$, $p <.001$, $\eta_p^2 = .16$.

Particularly, within the fear, force treatment, negative emotions, and help dimensions the low controllability condition (compared to high) yielded more stigma. For the empathy and responsibility dimensions, high controllability yielded more stigma than low controllability. For example, participants in the high controllability condition (compared to low) were more unemphatic but more willing to help. See Table 3 and Figure 1 for simple effects statistics.

We predicted a significant interaction of stigma dimension and language. However, since there is not enough extant evidence on the interactive effects, we did not make specific prediction. $F(1,1) = .11$, $p = .74$ $\eta_p^2 = .00$.

We predicted an interaction between language type and controllability on stigma. Within the high controllability condition, we predicted participants would exhibit greater stigma toward conditions described with identity-first, compared to person-first, language. Within the low controllability condition, we predicted participants would report less stigma toward conditions described with identity-first, compared to person-first, language. The analysis yielded a non-significant effect counter to our prediction, $F(1,436) = .11$, $p = .74$, $\eta_p^2 = .74$.

Finally, we had no specific prediction for a 3-way interaction between controllability, language-type, and dimension of stigma since previous research has yet to explore the variables

independent and interactive effects. We found non-significant results, $F(5,2180) = 1.79$, $p = .39$,

$\eta_p^2 = .002$.

Discussion

Overall, we also found that people were more willing to report stigma on some dimensions than others. Importantly, we found the effects of controllability differ by dimension of stigma. Within the fear, force treatment, negative emotion, and help dimensions the low controllability condition (compared to high) yielded more stigma. While in the empathy and responsibility dimensions, high controllability (compared to low) yielded more stigma. These effects differ by dimension of stigma. This suggests that stigma should not be explored as monolith construct, but instead a multidimensional one.

Importantly, we also found that language influenced stigma with person-first language producing more stigma than identity-first language, contrary to previous theorizing (Kenny et al., 2016)and empirical findings (Baker et al., 2022; Granello & Gibbs, 2016) suggesting that person-first language is de-stigmatizing. This finding could be due that identify first-language is more fluid within the English language, but ultimately suggests that emphasis should be placed on the individual's preference of language, because the effects of language are not as straightforward as previously theorized (i.e., person-first language does not always lead to less stigma).

Another possible explanation of this finding could be if language is tied to the attributed responsibility (e.g., more responsibility means the individual had greater control over their mental illness). To test this, we looked at the effect sizes for each dimension of stigma. While non-significant, we found that a pairwise comparison of person-first and identity-first language for responsibility has the lowest mean difference of all dimensions. This could indicate that attributed responsibility is *not* tied to language use; however, we did see a similar effect in that person-first language yielded more stigma than identity-first language. Future research could

explore if person-first compared to identity-first language attempts to remove control from the individual and thus makes the mental illness stigmatized when using different language.

We did not find evidence for a language by controllability interaction on stigma. Which could be due to the vignettes we used to manipulate controllability and language; however, with limited studies exploring language and controllability in tandem, it is unknown why we did not see an interaction. We also found non-significant results for a main effect of controllability, counter to our predictions.

Our manipulation of controllability through hypothetical mental illness was successful. This contributes to the growing, but limited, research on the effects of controllability on mental illness stigma (Angermeyer et al., 2011; Leake et al., 2023). Our vignettes and manipulation check could serve as a model for future research investigating the effects of perceived controllability.

Limitations & Future Directions

The current work employed hypothetical mental health illnesses and did not include actual symptoms of psychopathology which allowed us to control for participants' pre-existing beliefs about different conditions. Thus, this strengthened our internal validity. However, using hypothetical conditions also reduced our external validity, because it is yet unknown whether our results would generalize to real mental illnesses. Future research should explore the effects of controllability and language-type on a specific mental illness (e.g., depression). For example, when someone thinks about depression they automatically have a pre-convinced notion on whether the mental illness is controllable or not (Anderson & Riger, 1991). In addition, often it is more common to refer to an individual with a depression diagnosis as a "depressed person" compared to a "person with depression" (Bucci & Freedman, 1981). This means that if one

believes depression is a controllable condition and tends to use identity-first language when discussing depression that we will see the *most* stigma in these conditions. Compared to if depression was described as a low controllable condition using person-first language it could propagate *less* stigma. This could replicate interactive effects as seen by Leake and colleagues (2022). Such future work could capture more complexity with the effects of controllability since real world conditions have both low and high controllability aspects.

Notably, our sample was composed of lay participants that likely have many friends and family members who have mental illness. Given that friends and family are crucial members of support for those with mental illness, understanding lay participant's perspective and stimulation toward mental health is paramount. Leake and colleagues (2022) ran an exploratory analysis where they found no interaction between self-identification with mental illness and stigma towards mental illness. Future research should explore more in depth how exposure to mental illness affects how to respond to controllability and/or language interventions.

Nonetheless, future work should investigate other relevant populations (i.e., mental health clinicians or doctors) to understand if the results we found is replicated. Expanding and testing our findings on other populations will inform the generalizability of our results.

Conclusion

Research regarding stigma of mental illness demonstrates that stigma and discrimination not only raise the cost of health services and leisure costs, but also can impact treatment seeking, dimmish self-esteem, and limit employment opportunities (Corrigan, 2004; Evans-Lacko et al., 2015; Henderson et al., 2013). Gaining better understanding regarding the predictors around why there is an inability to accept mental health problems and/or inadequate recognition to mental health needs within society (Memon et al., 2016), could contribute to an overall systemic change

within the healthcare system and promote greater mental health literacy. By understanding *how* controllability and language interact with mental illness stigma could allow for policy makers, mental health clinicians, and general society to make informed decisions about how to seek mental healthcare or how to adapt the system for reduction of barriers.

In sum, the current work found that perceivers responded to conditions described using identity-first language with less stigma than to conditions described using person-first language. Further, we also found that participants who read about conditions that were low (vs. high) on controllability reported more fear, empathy, negative emotion, and intention to force treatment, but attributed less responsibility and reported less willingness to help. Importantly, this research contributes to our understanding of the antecedents of stigma towards people living with mental illness. These findings contribute to the discussion around the predictors of stigma and how controllability and language may interact with dimensions of stigma to inform mental illness stigma.

Acknowledgements

References

American Psychological Association. (2021). *Inclusive Language Guidelines*. 27.

Anderson, C. A., & Riger, A. L. (1991). A Controllability Attributional Model of Problems in Living: Dimensional and Situational Interactions in the Prediction of Depression and Loneliness. *Social Cognition*, *9*(2), 149–181. https://doi.org/10.1521/soco.1991.9.2.149

Angeli, S,, Lin X., & Liu, X. Z (2012). Genetics of Hearing and Deafness. *Anatomical Record (Hoboken, N.J. : 2007)*, *295*(11), 1812–1829. https://doi.org/10.1002/ar.22579

Angermeyer, M. C., Daubmann, A., Wegscheider, K., Mnich, E., Schomerus, G., & Knesebeck, O. v d. (2015). The relationship between biogenetic attributions and desire for social distance from persons with schizophrenia and major depression revisited. *Epidemiology and Psychiatric Sciences*, *24*(4), 335–341. https://doi.org/10.1017/S2045796014000262

Angermeyer, M. C., & Dietrich, S. (2006). Public beliefs about and attitudes towards people with mental illness: A review of population studies. *Acta Psychiatrica Scandinavica*, *113*(3), 163–179. https://doi.org/10.1111/j.1600-0447.2005.00699.x

Angermeyer, M. C., Holzinger, A., Carta, M. G., & Schomerus, G. (2011). Biogenetic explanations and public acceptance of mental illness: Systematic review of population studies. *The British Journal of Psychiatry*, *199*(5), 367–372. https://doi.org/10.1192/bjp.bp.110.085563

Ashford, R. D., Brown, A. M., & Curtis, B. (2019). "Abusing addiction": Our language still isn't good enough. *Alcoholism Treatment Quarterly*, *37*(2), 257–272. https://doi.org/10.1080/07347324.2018.1513777

Baker, E. A., Hamilton, M., Culpepper, D., McCune, G., & Silone, G. (2022). The effect of person-first language on attitudes toward people with addiction. *Journal of Addictions & Offender Counseling*, *n/a*(n/a). https://doi.org/10.1002/jaoc.12102

Benson, A., O'Toole, S., Lambert, V., Gallagher, P., Shahwan, A., & Austin, J. K. (2016). The stigma experiences and perceptions of families living with epilepsy: Implications for epilepsy-related communication within and external to the family unit. *Patient Education and Counseling*, *99*(9), 1473–1481. https://doi.org/10.1016/j.pec.2016.06.009

Brohan, E., Slade, M., Clement, S., & Thornicroft, G. (2010). Experiences of mental illness stigma, prejudice and discrimination: A review of measures. *BMC Health Services Research*, *10*(1), 80. https://doi.org/10.1186/1472-6963-10-80

Brown. (2012, March 2). Identity-First Language—Autistic Self Advocacy Network. *Https://Autisticadvocacy.Org/*. https://autisticadvocacy.org/about-asan/identity-first-language/

Brown, S. A. (2008). Factors and measurement of mental illness stigma: A psychometric examination of the Attribution Questionnaire. *Psychiatric Rehabilitation Journal*, *32*(2), 89–94. https://doi.org/10.2975/32.2.2008.89.94

Bucci, W., & Freedman, N. (1981). The Language of Depression. *Bulletin of the Menninger Clinic*, *45*(4), 334.

Cariello, A. N., Tyler, C. M., Perrin, P. B., Jackson, B., Librandi, H., Sutter, M., Maher, K. E., Goldberg, L. D., & Feldman, M. J. (2021). Influence of social support on the relation between stigma and mental health in individuals with burn injuries. *Stigma and Health*, *6*, 209–215. https://doi.org/10.1037/sah0000250

Chang, J., Dubbin, L., & Shim, J. (2016). Negotiating substance use stigma: The role of cultural health capital in provider–patient interactions. *Sociology of Health & Illness*, *38*(1), 90–108. https://doi.org/10.1111/1467-9566.12351

Corrigan, P. (2004). How stigma interferes with mental health care. *American Psychologist*, *59*(7), 614–625. https://doi.org/10.1037/0003-066X.59.7.614

Corrigan, P. W., River, L. P., Lundin, R. K., Wasowski, K. U., Campion, J., Mathisen, J., Goldstein, H., Bergman, M., Gagnon, C., & Kubiak, M. A. (2000). Stigmatizing attributions about mental illness. *Journal of Community Psychology*, *28*(1), 91–102. https://doi.org/10.1002/(SICI)1520-6629(200001)28:1<91::AID-JCOP9>3.0.CO;2-M

Dietrich, S., Beck, M., Bujantugs, B., Kenzine, D., Matschinger, H., & Angermeyer, M. C. (2004). The Relationship Between Public Causal Beliefs and Social Distance Toward Mentally Ill People. *Australian & New Zealand Journal of Psychiatry*, *38*(5), 348–354. https://doi.org/10.1080/j.1440-1614.2004.01363.x

Earnshaw, V. A., & Karpyn, A. (2020). Understanding stigma and food inequity: A conceptual framework to inform research, intervention, and policy. *Translational Behavioral Medicine*, *10*(6), 1350–1357. https://doi.org/10.1093/tbm/ibaa087

Evans-Lacko, S., Clement, S., Corker, E., Brohan, E., Dockery, L., Farrelly, S., Hamilton, S., Pinfold, V., Rose, D., Henderson, C., Thornicroft, G., & McCrone, P. (2015). How much does mental health discrimination cost: Valuing experienced discrimination in relation to healthcare care costs and community participation. *Epidemiology and Psychiatric Sciences*, *24*(5), 423–434. https://doi.org/10.1017/S2045796014000377

Faul, F., Erdfelder, E., Lang, A.-G., & Buchner, A. (2007). G*Power 3: A flexible statistical

    power analysis program for the social, behavioral, and biomedical sciences. *Behavior*

    Research Methods, *39*(2), 175–191. https://doi.org/10.3758/bf03193146

Feldman, D. B., & Crandall, C. S. (2007). Dimensions of Mental Illness Stigma: What About

    Mental Illness Causes Social Rejection? *Journal of Social and Clinical Psychology*,

    26(2), 137–154. https://doi.org/10.1521/jscp.2007.26.2.137

Ferrigon, P. (2019, January 3). *Person-First Language vs. Identity-First Language: An*

    examination of the gains and drawbacks of Disability Language in society | Journal of

    Teaching Disability Studies. https://jtds.commons.gc.cuny.edu/person-first-language-vs-

    identity-first-language-an-examination-of-the-gains-and-drawbacks-of-disability-

    language-in-society/

Fox, A. B., Earnshaw, V. A., Taverna, E. C., & Vogt, D. (2018). Conceptualizing and Measuring

    Mental Illness Stigma: The Mental Illness Stigma Framework and Critical Review of

    Measures. *Stigma and Health*, *3*(4), 348–376. https://doi.org/10.1037/sah0000104

Goldstein, B., & Rosselli, F. (2003). Etiological paradigms of depression: The relationship

    between perceived causes, empowerment, treatment preferences, and stigma. *Journal of*

    Mental Health, *12*(6), 551–563. https://doi.org/10.1080/09638230310001627919

Goodyear, K., Haass-Koffler, C. L., & Chavanne, D. (2018). Opioid use and stigma: The role of

    gender, language and precipitating events. *Drug and Alcohol Dependence*, *185*, 339–346.

    https://doi.org/10.1016/j.drugalcdep.2017.12.037

Granello, D. H., & Gibbs, T. A. (2016). The Power of Language and Labels: "The Mentally Ill"

    Versus "People With Mental Illnesses." *Journal of Counseling & Development*, *94*(1),

    31–40. https://doi.org/10.1002/jcad.12059

Granello, D. H., & Gorby, S. R. (2021). It's Time for Counselors to Modify Our Language: It

    Matters When We Call Our Clients Schizophrenics Versus People With Schizophrenia.

    Journal of Counseling & Development, *99*(4), 452–461.

    https://doi.org/10.1002/jcad.12397

Hayward, P., & Bright, J. A. (1997). Stigma and mental illness: A review and critique. *Journal of*

    Mental Health, *6*(4), 345–354. https://doi.org/10.1080/09638239718671

Henderson, C., Evans-Lacko, S., & Thornicroft, G. (2013). Mental Illness Stigma, Help Seeking,

    and Public Health Programs. *American Journal of Public Health*, *103*(5), 777–780.

    https://doi.org/10.2105/AJPH.2012.301056

Herek, G. M., Capitanio, J. P., & Widaman, K. F. (2002). HIV-Related Stigma and Knowledge

    in the United States: Prevalence and Trends, 1991-1999. *American Journal of Public*

    Health, *92*(3), 371–377. https://doi.org/10.2105/AJPH.92.3.371

Kelly, J. F., Dow, S. J., & Westerhoff, C. (2010). Does Our Choice of Substance-Related Terms

    Influence Perceptions of Treatment Need? An Empirical Investigation with Two

    Commonly Used Terms. *Journal of Drug Issues*, *40*(4), 805–818.

Kelly, J. F., & Westerhoff, C. M. (2010). Does it matter how we refer to individuals with

    substance-related conditions? A randomized study of two commonly used terms.

    International Journal of Drug Policy, *21*(3), 202–207.

    https://doi.org/10.1016/j.drugpo.2009.10.010

Kenny, L., Hattersley, C., Molins, B., Buckley, C., Povey, C., & Pellicano, E. (2016). Which

    terms should be used to describe autism? Perspectives from the UK autism community.

    Autism: The International Journal of Research and Practice, *20*(4), 442–462.

    https://doi.org/10.1177/1362361315588200

Kvaale, E. P., Gottdiener, W. H., & Haslam, N. (2013). Biogenetic explanations and stigma: A meta-analytic review of associations among laypeople. *Social Science & Medicine*, *96*, 95–103. https://doi.org/10.1016/j.socscimed.2013.07.017

Lacey, M., Paolini, S., Hanlon, M.-C., Melville, J., Galletly, C., & Campbell, L. E. (2015). Parents with serious mental illness: Differences in internalised and externalised mental illness stigma and gender stigma between mothers and fathers. *Psychiatry Research*, *225*(3), 723–733. https://doi.org/10.1016/j.psychres.2014.09.010

Larkings, J. S., & Brown, P. M. (2018). Do biogenetic causal beliefs reduce mental illness stigma in people with mental illness and in mental health professionals? A systematic review. *International Journal of Mental Health Nursing*, *27*(3), 928–941. https://doi.org/10.1111/inm.12390

Lau, A. S., Guo, S., Tsai, W., Nguyen, D. J., Nguyen, H. T., Ngo, V., & Weiss, B. (2016). Adolescents' Stigma Attitudes Toward Internalizing and Externalizing Disorders: Cultural Influences and Implications for Distress Manifestations. *Clinical Psychological Science*, *4*(4), 704–717. https://doi.org/10.1177/2167702616646314

Leake, M., McGrath, C., Mickel, T., & Shaver, C. (2022). The Effect of Language Type and Perceived Controllability on Stigma and Compassion. *University of Denver Undergrate Research Journal*, *4*(1), 18–28.

Lebowitz, M. S., & Ahn, W. (2014). Effects of biological explanations for mental disorders on clinicians' empathy. *Proceedings of the National Academy of Sciences*, *111*(50), 17786–17790. https://doi.org/10.1073/pnas.1414058111

Lindgren, S., Storli, S. L., & Wiklund-Gustin, L. (2014). Living in negotiation: Patients’experiences of being in the diagnostic process of COPD. *International*

Journal of Chronic Obstructive Pulmonary Disease, *9*(1), 441–451.

https://doi.org/10.2147/COPD.S60182

Litman, L., Robinson, J., & Abberbock, T. (2017). TurkPrime.com: A versatile crowdsourcing

data acquisition platform for the behavioral sciences. *Behavior Research Methods*, *49*(2),

433–442. https://doi.org/10.3758/s13428-016-0727-z

Livingston, J. D., & Boyd, J. E. (2010). Correlates and consequences of internalized stigma for

people living with mental illness: A systematic review and meta-analysis. *Social Science*

& Medicine, *71*(12), 2150–2161. https://doi.org/10.1016/j.socscimed.2010.09.030

Memon, A., Taylor, K., Mohebati, L. M., Sundin, J., Cooper, M., Scanlon, T., & Visser, R. de.

(2016). Perceived barriers to accessing mental health services among black and minority

ethnic (BME) communities: A qualitative study in Southeast England. *BMJ Open*, *6*(11),

e012337. https://doi.org/10.1136/bmjopen-2016-012337

Mitchell, G. E., & Locke, K. D. (2015). Lay beliefs about autism spectrum disorder among the

general public and childcare providers. *Autism*, *19*(5), 553–561.

https://doi.org/10.1177/1362361314533839

Paganini, G. A., et al. (2022). [Experimental test of how the language (i.e., person-first or

identity-first) used to describe individuals with a hypothetical mental illness influences

dehumanization of and prejudice towards those individuals]. Unpublished raw data.

Penn, D. L., & Martin, J. (1998). The Stigma of Severe Mental Illness: Some Potential Solutions

for a Recalcitrant Problem. *Psychiatric Quarterly*, *69*(3), 235–247.

https://doi.org/10.1023/A:1022153327316

Sidanius, J., & Pratto, F. (2003). Social dominance theory and the dynamics of inequality: A reply to Schmitt, Branscombe, & Kappen and Wilson & Liu. *The British Journal of Social Psychology*, *42*, 207–213, discussion 215-23.

Sidanius, J., Pratto, F., Van Laar, C., & Levin, S. (2004). Social Dominance Theory: Its Agenda and Method. *Political Psychology*, *25*(6), 845–880. https://doi.org/10.1111/j.1467-9221.2004.00401.x

Stigma and discrimination. (2015, August 7). Mental Health Foundation. https://www.mentalhealth.org.uk/a-to-z/s/stigma-and-discrimination

The WHO World Mental Health Survey Consortium. (2004). Prevalence, Severity, and Unmet Need for Treatment of Mental Disorders in the World Health Organization World Mental Health Surveys. *JAMA*, *291*(21), 2581–2590. https://doi.org/10.1001/jama.291.21.2581

Towler, A. J., & Schneider, D. J. (2005). Distinctions Among Stigmatized Groups1. *Journal of Applied Social Psychology*, *35*(1), 1–14. https://doi.org/10.1111/j.1559-1816.2005.tb02090.x

Uher, R. (2014). Gene–Environment Interactions in Severe Mental Illness. *Frontiers in Psychiatry*, *5*. https://www.frontiersin.org/articles/10.3389/fpsyt.2014.00048

West, M. L., Yanos, P. T., Smith, S. M., Roe, D., & Lysaker, P. H. (2011). Prevalence of Internalized Stigma among Persons with Severe Mental Illness. *Stigma Research and Action*, *1*(1), 3–10. https://doi.org/10.5463/sra.v1i1.9

Williamson, T. J., Riley, K. E., Carter-Harris, L., & Ostroff, J. S. (2020). Changing the language of how we measure and report smoking status: Implications for reducing stigma, restoring dignity, and improving the precision of scientific communication. *Nicotine & Tobacco Research*, *22*(12), 2280–2282. https://doi.org/10.1093/ntr/ntaa141

Table 1.

Descriptive Statistics and Cronbach's alpha for Stigma.

Subscale	Example Item	*M*	*SD*	α
Fear	"How scared of a *[Grespar/Munder person **or** person with Grespar/Munder]* would you feel?"	2.64	1.81	.98
Help	"I would be willing to talk to a *[Grespar/Munder person **or** person with Grespar/Munder]* about their problems."	6.66	1.62	.92
Responsibility	"I would think that it is a *[Grespar/Munder person **or** person with Grespar/Munder]* own fault that they are in the present condition."	2.93	1.85	.77
Forcing Treatment	"I think it would be best for *[Grespar/Munder person **or** person with Grespar/Munder]* community if they were put away in a psychiatric hospital."	2.42	1.70	.93
Empathy	"How much sympathy would you feel for a *[Grespar/Munder person **or** person with Grespar/Munder]*."	6.62	1.59	.79
Negative Emotions	"How irritated would you feel by a *[Grespar/Munder person **or** person with Grespar/Munder]*."	2.41	1.68	.92

Note. M, SD, and α represent mean, standard deviation, and Cronbach's alpha, respectively.

Table 2.

Simple Effects of Stigma Dimension Main Effect

Stigma Dimension	M	SD
Fear	2.64	1.81
Forcing Treatment	2.42	1.70
Negative Emotions	2.41	1.67
Help	3.34	1.62
Responsibility	2.93	1.85
Empathy	3.37	1.59

Table 3.

Simple Effects of Stigma Dimension x Controllability Interaction.

Stigma Dimension	Low Controllability M (SD)	High Controllability M (SD)	F	p	η_p^2
Fear	3.12 (1.93)	2.18 (1.55)	34.38	<.001	.07
Forcing Treatment	2.73 (1.84)	2.14 (1.50)	12.30	<.001	.03
Negative Emotions	2.62 (1.79)	2.22 (1.54)	6.61	.010	.02
Help	3.71 (1.73)	2.99 (1.42)	24.53	<.001	.05
Responsibility	2.04 (1.57)	3.83 (1.68)	131.48	<.001	.23
Empathy	2.93 (1.34)	3.82 (1.69)	37.57	<.001	.08

Figure 1

Simple Effects of Stigma Dimension x Controllability Interaction.

* *p* <.05
*** *p* <.001

■ Low Controllability   ■ High Controllability
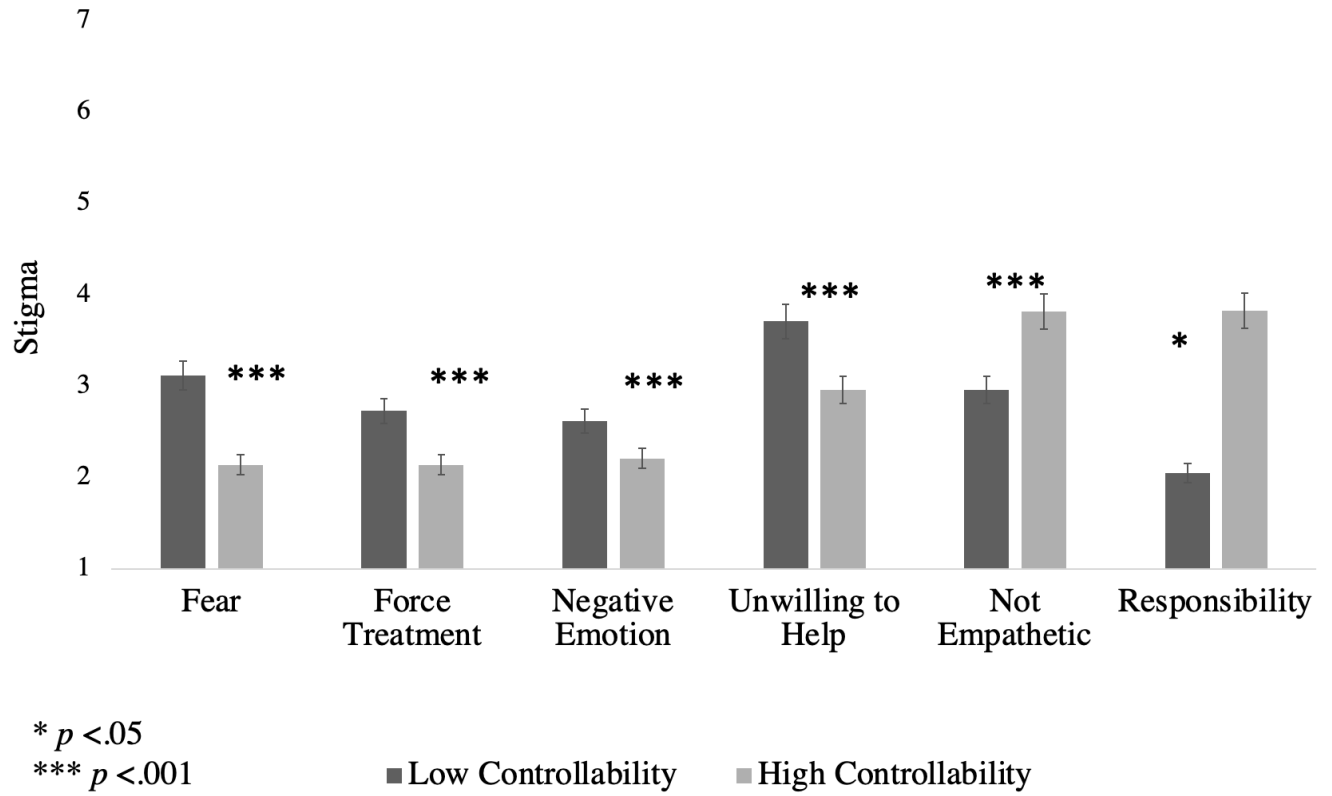
Appendix

Low Controllability, Person-first Vignette. "In this society a subset of individuals have been diagnosed with a mental health disorder called Munder. ***People with Munder*** were born with this mental health condition and it tends to persist over time. People with Munder usually inherit risk from biological parents. For people with Munder, their symptoms cannot be easily controlled, and their symptoms are often unresponsive to drug or psychotherapies and lifestyle changes (e.g., sleep, diet)."

Low Controllability, Identity-first Vignette. "In this society a subset of individuals have been diagnosed with a mental health disorder called Grespar. ***Grespar people*** were born with this mental health condition and it tends to persist over time. Grespar people usually inherit risk from biological parents. For Grespar people, their symptoms cannot be easily controlled, and their symptoms are often unresponsive to drug or psychotherapies and lifestyle changes changes (e.g., sleep, diet)."

High Controllability, Person-First Vignette. "In this society a subset of individuals have been diagnosed with a mental health disorder called Munder. ***People with Munder*** were not born with this mental health condition instead it tends to develop over time. People with Munder usually do not inherit risk from biological parents. For people with Munder, their symptoms can be easily controlled and their symptoms are often responsive to drug or psychotherapies and lifestyle changes (e.g., sleep, diet)."

High Controllability, Identity-First Vignette. "In this society a subset of individuals have been diagnosed with a mental health disorder called Grespar. ***Grespar people*** were not born with this mental health condition instead it tends to develop over time. Grespar people usually do not inherit risk from biological parents. For Grespar people, their symptoms can be easily controlled and their symptoms are often responsive to drug or psychotherapies and lifestyle changes (e.g., sleep, diet)."