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The Impact of Internalized, Anticipated, and Structural Stigma on Psychological and School Outcomes for High School Students with Learning Disabilities: A Pilot Study

A dissertation submitted in partial satisfaction of the
requirements for the degree Doctor of Philosophy
in Education

by

Bryan Everett Thornton

2020

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ABSTRACT OF THE DISSERTATION

The Impact of Internalized, Anticipated, and Structural Stigma on Psychological and School Outcomes for High School Students with Learning Disabilities: A Pilot Study

by

Bryan Everett Thornton

Doctor of Philosophy in Education

University of California, Los Angeles, 2020

Professor Sandra H. Graham, Co-Chair

Professor Lois A. Weinberg, Co-Chair

The negative effect of stigma on the psychological well-being and functioning of members of stigmatized groups has been well established across the social psychological, health, and sociology literatures. While definitions vary, most conceptualizations agree that stigma is a phenomenon in which some aspect of identity (e.g. race) is devalued on the basis of stereotypes. Visibility has been acknowledged as an important characteristic that can shape an individual's experiences of stigma. While a significant body of research has developed around nonvisible or concealable stigmatized identities (CSIs), few studies have considered stigmatization in relation to learning disabilities (LD). This study examined LD-related stigma within the context of U.S. public schools using survey research methods with high school students ($N = 40$) receiving special education services with an eligibility of specific learning disability (SLD). The survey

adapted existing measures of four intrapersonal stigma identity constructs (anticipated stigma, salience, centrality, and self-stigma) and secrecy as well as six measures of mental health and school-related outcomes. Data on least restrictive environment (LRE) (i.e. the percentage of time students spend in general versus special education) were collected in order to provide support for a proposed conceptual model in which differences in LRE were predicted to correlate with differences in student levels of stigma. Bivariate correlations and a series of linear regression models were used to examine predicted associations between LRE, stigma, depression, anxiety, self-esteem, school belonging, academic engagement, and perceived barriers to college. While no significant relationship was found between LRE and any of the outcome measures, internalized stigma, anticipated stigma, and secrecy were each associated with one or more of the mental health and/or school outcome variables. This pilot study raised several measurement issues to consider in future research – including the need to distinguish between stigma related to a disability label (such as LD) and stigma associated with receiving special education. Lastly, a number of participants indicated on the survey that they did not have a LD, though their eligibility had been confirmed by school personnel during the recruitment phase of the study. The implications of nonidentification, both for research and practice, are discussed.

The dissertation of Bryan Everett Thornton is approved.

Mary Falvey

Connie L. Kasari

Jaana Helena Juvonen

Sandra H. Graham, Committee Co-Chair

Lois A. Weinberg, Committee Co-Chair

University of California, Los Angeles

2020

DEDICATION

This dissertation is dedicated to Daniel Uribe...

Thank you for the meals cooked, the trips taken, the chores handled, the memories made, the laughter shared, the tears cried, the dreams both realized and unrealized...

Thank you for being there for me even when I couldn't see it...

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VITA

EDUCATION

University of California, Los Angeles, Los Angeles, CA 2013-Present
California State University, Los Angeles, Los Angeles, CA
Ph.D. Candidate in Special Education

California State University, Dominguez Hills, Carson, CA
Master of Arts in Special Education

University of Southern California, Los Angeles, CA
Bachelor of Arts in Cinema-Television

TEACHING & RESEARCH INTERESTS

Stigma, Inclusion, Disability Studies in Education, Learning Disabilities, Intellectual Disabilities, Transition Planning, Qualitative Research Methods, Educational Psychology, Psychological Anthropology

AWARDS & HONORS

Society for the Psychological Study of Social Issues Grant-in-Aid (2019)
Hoyt Foundation Scholarship (2017)
AERA Disability Studies in Education SIG Travel Grant (2017)
CSU Chancellor's Doctoral Incentive Program Awardee (2016-2019)
Merlin C. Wittrock Scholarship (2016)
UCLA Graduate Summer Research Mentorship Fellowship (2015, 2016)
Philip & Aida Siff Educational Foundation Fellowship (2015)

PUBLICATIONS

Solone, C. J., **Thornton, B. E.**, Chiappe, J. C., Perez, C., Rearick, M. K., & Falvey, M. A. (2020). Creating a collaborative culture: An essential ingredient of effective inclusive education. *International Electronic Journal of Elementary Education*, 12(3), 283-292.

Weinberg, L.A., Luelmo, P., Chiappe, J.C., & **Thornton, B.** (2019). How a Change in State Law Affected the Provision of Mental Health Related Services. *International Journal of Special Education*, 33(4), 910-924.

SELECTED CONFERENCE PRESENTATIONS

Thornton B., & Solone, C. (March 4, 2019). *The Myth of the "Normal" Child: An Introduction to Disability Studies in Education*. Workshop presented at Pacific Rim International Conference on Disability & Diversity, Honolulu, HI.

Thornton, B. (May 25, 2017). *A Phenomenological Consideration of the Lives of Transfer Students with Learning Disabilities*. Paper presented at the UCLA GSEIS Research & Inquiry Conference in Los Angeles, CA.

Weinberg, L., **Thornton, B.**, Luelmo, P., & Chiappe, J. (April 27, 2017). *The Challenges of Providing IDEA Mental Health Related Services to Children with Emotional/Behavioral Disorders*. Paper presented at the American Educational Research Association (AERA) Annual Meeting, San Antonio, TX.

Falvey, M., Chow, J., & **Thornton, B.** (December 2, 2016). *The Transition to Increased Inclusion at an Urban Elementary School*. Paper presented at TASH Conference, St. Louis, MO.

RESEARCH EXPERIENCE

School Police Focus Group Project 2019-present
University of California, Los Angeles
Position: Graduate Student Researcher

Inclusive Education Research Project 2015-2019
California State University, Los Angeles
Position: Co-Investigator w/ Dr. Mary Falvey & Jenny Chow

U.C.L.A. Middle School & High School Diversity Project 2014-2015
University of California, Los Angeles
Position: Graduate Research Assistant

TEACHING EXPERIENCE

Perspectives on Disability Studies (UCLA, 2019, 2020)
Typical/Atypical Development (California State University, Dominguez Hills, 2016-2018)
Theory, Policy, and Practice of Special Education (UCLA, 2016)
Psychological Foundations of Education (California State University, Los Angeles, 2015-2017)
Introduction to Special Education (California State University, Los Angeles, 2016)

PROFESSIONAL AND DEPARTMENTAL SERVICE

University of California at Los Angeles
Committee for Academic Degrees & Standards (CDAS), Student Representative, 2016-2018
Faculty Executive Committee (FEC), Student Representative, 2016-2017
Graduate Students Association in Education (GSAE), Co-Chair, 2016-2017
Graduate Students Association in Education (GSAE), Student Representative, 2015-2016

Mentor

UCLA Graduate-Undergraduate Mentorship Program, Spring 2015 & Spring 2018
The Laurel Foundation, Pasadena, CA, LEAF Program, 2011-2013

The Impact of Internalized, Anticipated, and Structural Stigma on Psychological and School Outcomes for High School Students with Learning Disabilities:

A Pilot Study

The negative effects of stigma on the psychological wellbeing, health, and functioning of targets of stigma has been well established across the social psychological, public health, and sociological literatures (Hatzenbuehler & Pachankis, 2016; Link & Phelan, 2001; Mak et al., 2007; Quinn & Earnshaw, 2011). Additional studies have considered stigma's potential impact on academic achievement and educational attainment as well (e.g. Brown & Lee, 2005). Beginning with Erving Goffman's (1963) influential theory of stigma, researchers have made a critical distinction between visible and nonvisible stigmas, with visible stigmatized identities being those that are, for the most part, immediately discernible or apparent to others, such as race or obesity; in contrast, identities that may not be immediately noticed by others or that can be covered up, such as mental illness or HIV-status, have traditionally been labeled invisible, nonvisible, or, more recently, concealable (Crocker et al., 1998; Quinn & Earnshaw, 2013).

While this has inspired a substantial body of research covering topics such as sexual orientation (Hatzenbuehler, 2014) and mental illness (Link et al., 2004), among other concealable stigmatized identities (CSIs) (Quinn & Chaudoir, 2009; Quinn et al., 2014), less attention has been devoted to stigma as it relates to nonvisible or concealable disabilities such as learning disabilities (LD). Furthermore, only a handful of studies have explicitly considered stigma and disability within the context of K-12 schools in the United States (Daley & Rappolt-Schlichtmann, 2018; Shifrer, 2013, 2016). This is surprising given that (a) stigmatization largely occurs in relation to specific identities (Quinn & Earnshaw, 2011) and (b) schools provide a social context, perhaps the formative context, in which youth struggle with identity and attempt

to define themselves in relation to their peers (Rich & Schachter, 2012); arguably, the distinction between visible and nonvisible identities may be especially important, even heightened, as students with concealable disabilities move throughout their school day. However, this question has been underexamined. While some research has investigated the fear of discovery of sexual orientation within the workplace (Ragins et al., 2007), no empirical research to my knowledge has explored the management of nonvisible or concealable stigmatized identities within schools specifically in relation to LD.

Specific Learning Disabilities (SLD)

It is estimated that one out of every five children in the United States has a learning disability (LD) or an attention issue affecting learning (Horowitz et al., 2017). Students with LD, then, easily constitute the largest percentage of children served in the United States under the Individuals with Disabilities Education Act (IDEA) (NCES, 2019). And yet, in spite of the nearly two and a half million children receiving special education services for a specific learning disability (SLD), some evidence suggests that troubling misconceptions and negative beliefs persist around LD – even within schools and among teachers (Cook & Cameron, 2010; Shapiro & Margolis, 1988). In the case of LD, the most common stereotypes are that individuals with LD have low intellectual ability as well as a chronically low potential for learning. Some research suggests that people with LD may also be stereotyped as being lazy and/or “working the system” (May & Stone, 2010).

While the last few decades have witnessed notable changes in identification and treatment of LD (e.g. Response-to-Intervention (RtI), advances in neuroscience, etc.) (Fletcher et al., 2018), students with LD continue to face less than optimal outcomes when compared to students without disabilities. In addition to lower graduation rates and underrepresentation in

postsecondary education (Garrison-Wade & Lehmann, 2009; Horowitz et al., 2017), there is evidence that the presence of a learning disability may be associated with higher rates of anxiety and depression in children (Mammarella et al., 2016). Even more distressing are indications that a disproportionate number of adolescents involved in the juvenile justice system have some sort of an emotional or learning impairment (Mallet, 2013).

Could stigmatizing attitudes be a contributing factor in terms of these outcomes? Given the paucity of research examining stigma and LD, it is impossible to say. While systematic reviews have recently addressed stigma in relation to both intellectual disabilities (Ali et al., 2012) and bipolar disorder (Hawke et al., 2013), no similar effort has been made regarding stigma and LD. Simply put, the need for more research is urgent. Furthermore, most definitions of stigma consider it to be situational – that is, a phenomenon based in relationships between social identities, social groups, and social structures (Goffman, 1963; Link & Phelan, 2001; Major & O’Brien, 2005). In other words, context matters. Thus, research that does examine LD-related stigma would benefit from considering the context in which LD is often first identified and addressed, namely schools.

Learning Disabilities in Context

The Individuals with Disabilities Education Act (2004), the federal law governing special education, defines specific learning disability (SLD) as follows:

...a disorder in 1 or more of the psychological processes involved in understanding or in using language, spoken or written, which may manifest itself in the imperfect ability to listen, think, speak, read, write, spell, or do mathematical calculations.

SLD serves as an umbrella term for conditions including perceptual disabilities, brain injury, minimal brain dysfunction, dysgraphia, dyscalculia, and dyslexia – of which dyslexia, a

reading disability, is one of the most common (Shaywitz & Shaywitz, 2014). To be eligible for special education services, it must be demonstrated that the disability impacts a child's learning in school so that the child does not adequately achieve for their age and/or does not meet State-approved grade-level standards. Eligibility may sometimes be established as a result of a discrepancy between ability and achievement or by a student's lack of response to evidence-based interventions. Should a child be eligible for special education services, they will receive an individualized education program (IEP) designed collaboratively by a team consisting of general and special education teachers, school administrators, parents and/or legal guardians, other professionals (e.g. occupational therapists), and, ideally, the student. In addition to determining eligibility, one function of the IEP meeting is to determine where and how special education services will be provided. This is referred to as least restrictive environment (LRE).

Least Restrictive Environment (LRE). IDEA mandates that all students with disabilities be served in their least restrictive environment (LRE), meaning they should be educated alongside peers without disabilities to the maximum extent possible. In reality, students can be served in a continuum of placements, ranging from self-contained classrooms on a comprehensive campus to spending the majority of the day in general education, while sometimes receiving additional services such as language and speech therapy as a pull-out service. Students with disabilities may also spend part of the school day in a resource room (i.e. a separate, remedial classroom where special education teachers provide students with specialized instruction and/or assistance with homework and related assignments). In the most extreme cases, students labeled with moderate/severe disabilities or with emotional and behavioral disorders may attend separate schools.

In the last few decades, there has been a continued push for inclusion of all students with disabilities in general education. In fact, most students with SLD do spend a majority of their school day alongside peers without disabilities (Horowitz et al., 2017). Nevertheless, variations in placement exist and so one question that arises is to what extent a student's LRE-placement might reveal their LD-status to classmates and teachers. In other words, if a student is seen walking into a known special education classroom or resource room, does their disability remain hidden?

Arguably, then, the school setting has the potential to perpetuate stigma for students with concealable disabilities – in part, by raising the possibility (or threat) of discovery for those students who possess them. In keeping with recent examinations of disclosure and secrecy in relation to possessing a CSI (Chaudoir et al., 2013; Pachankis, 2007; Smart & Wegner, 1999, 2000), I hypothesized that not only is stigma likely to impact a number of important psychological and school outcomes for students with LD, but LRE-placement, with its potential to “out” students in terms of their disability, may influence interactions among a constellation of variables associated with stigma. Building on prior research on stigma (Bos et al., 2013; Pachankis, 2007; Quinn and Earnshaw, 2011), I proposed that differences in mental health (self-esteem, depression, anxiety) and school adaptation (academic engagement, school belonging, perceived barriers to college) would be predicted by variations across a number of stigma identity processes: Salience, centrality, anticipated stigma, internalized stigma, and secrecy.

Conceptualizations of Stigma

In his classic work *Stigma: Notes on the Management of Spoiled Identity* (1963), sociologist Erving Goffman defined stigma as “an attribute that is deeply discrediting” (p.3), explaining that the stigmatized person faces the threat of losing status within society as a result

of the possession of such an attribute or “mark.” According to Goffman, these marks could take three forms: (a) abominations of the body (e.g. physical deformities), (b) blemishes of individual character (e.g. possessing a criminal record), and (c) tribal stigma (e.g. race or religion).

Crucially, Goffman also raised the issue of visibility. He theorized that individuals whose stigmas are visible enter social interactions facing the possibility of being instantly discredited by others who are not marked in a similar way; on the other hand, those who have the capacity to hide their mark maintain a *risk* of being discredited. They may pass as “normal” but the specter of their stigmatized identity being discovered potentially looms over them. Additionally, regardless of whether the mark is actually discovered, research has demonstrated that just the possibility of being discovered and discredited can take a toll on a stigmatized person’s psychological wellbeing (Pachankis, 2007).

Goffman’s work has been cited over 30,000 times, with a vigorous body of research evolving around the concept of stigma in the years since its publication. Pryor and Reeder (2011) have attempted to bridge many strands of stigma research via a conceptual model that poses four interrelated manifestations of stigma: *Public stigma*, *self-stigma*, *stigma by association*, and *structural stigma*. This study focused specifically on self-stigma and structural stigma.

Self-Stigma

Stigma begins with a perception of difference—specifically difference that has been labeled deviant in some way and, hence, socially devalued. While public stigma “comprises the cognitive, affective, and behavioral reactions of those who stigmatize (perceivers)” (Bos et al., 2013, p. 2), self-stigma arises as targets become aware of how their difference marks them for social devaluation. In other words, self-stigma develops as a response to public and/or cultural stigma. Conceivably, an individual could be a victim of discrimination or prejudice without

knowing it. However, in order for self-stigma to exist, some awareness of negative stereotypes of one's social group is a necessary precondition. This awareness, whether explicit or implicit, can impact an individual in two main ways. First, the individual may anticipate stigmatization – a phenomenon labeled by Bos et al. (2013) as *felt stigma* and referred to elsewhere as *anticipated stigma* (Quinn & Chaudoir, 2009). Secondly, the person with the stigmatized condition may internalize and/or endorse the existing negative stereotypes about the group to which they belong, resulting in a reduction in the person's self-worth (Herek et al., 2009; Quinn et al., 2015).

Structural stigma

Structural stigma expands on earlier conceptions of stigma by shifting focus to how societal structures, including ideologies, institutions, and policies, create and reinforce certain stigmatized identities in specific ways. Bos et al. (2013) invoke Foucault when they write:

Societal structures promoting stigmatization vary cross-culturally and historically. As a result the examination of structural stigma requires the examination of the social context in which that stigma occurs and local knowledge systems that contribute to structural stigma (p. 4).

Hatzenbuehler (2016) has identified institutional policies and community norms as examples of structural conditions that have the potential to stigmatize. Developing a true understanding of LD and stigma requires understanding the educational contexts and demands that shape them in the first place.

Concealable Stigmatized Identities (CSIs)

Expanding on Goffman's work (1963), Crocker et al. (1998) defined a CSI as an identity that is socially devalued but that can be hidden. CSI can be used as an umbrella term to refer to a wide range of identities such as sexual orientation, HIV/AIDS status, mental illness, or a history

of substance abuse. It can also include disabilities such as learning disabilities, emotional and/or behavioral disorders, ADD/ADHD, and autism spectrum disorder. While a robust body of research has developed around CSIs over the last two decades, disabilities and, in particular, LD, remain understudied. In recent years, both Pachankis (2007) and Quinn and Earnshaw (2011) have proposed conceptual models of CSIs that focus on psychological, behavioral, physical, and affective outcomes of stigma. Both of these models posit a link between the threat of potential discovery and negative health outcomes for persons possessing a hidden or concealable stigma.

Stigma Processes

In their model theorizing the relationship between CSIs and psychological and physical health outcomes, Quinn and Earnshaw (2011) focus on the construction of the CSI within the self, with identity-related variables falling into one of two categories: *Valenced content* or *magnitude*. Valenced content refers to an emotional or affective component of identity – meaning “the beliefs, experiences, and cognitions that a person has about the identity” (Quinn & Earnshaw, 2011, p. 163), whether positive or negative. Included within this category are identity-relevant beliefs such as anticipated stigma and internalized stigma, which constitute primarily negatively valenced content, as well as experienced (enacted) stigma and, relatedly, disclosure reactions (i.e. the responses an individual receives from other people upon disclosing the stigmatized identity). As noted by Quinn and Earnshaw (2011), however, not all people possessing a stigmatized identity may hold or endorse negative beliefs about their own stigmatized identity. Rather, some may feel positively about this aspect of the self and even maintain counterstereotypic beliefs.

Magnitude, on the other hand, refers to the importance of the identity to the individual’s self-concept and can be measured in terms of *centrality* and *salience*, both discussed below.

Quinn and Earnshaw (2011) suggest that magnitude plays an important role in determining or shaping the impact of the valenced content on a range of psychological, physical, and behavioral outcomes for the stigmatized person.

Enacted Stigma. Enacted stigma, sometimes referred to as experienced stigma, can be viewed as a consequence of both public stigma and structural stigma. Put another way, enacted stigma captures the stigmatized individual's experiences of discrimination, social devaluation, and social distancing. For enacted stigma to develop, the individual with the stigmatized condition must encounter other individuals or groups who know about their identity and whose attitudes and behaviors have been shaped by both cultural and media representations (i.e. public stigma) and/or institutional policies (i.e. structural stigma). Of course, people with visible stigmatized identities are also susceptible to experienced or enacted discrimination. However, individuals with CSIs often face decisions, varying across contexts, as to whether to disclose their stigmatized identity or not. In other situations, this decision may be made for them with their identity being disclosed for them regardless of their own intentions. The experience of revealing their identity or having it revealed could be positive or negative. The disclosure reactions they have received or anticipate receiving from others may result in them feeling the need to keep their identity concealed. The negative costs of such secrecy for the stigmatized individual, including psychological strain and cognitive depletion, have been documented (Smart & Wegner, 1999, 2000).

Anticipated Stigma. One of the primary reasons why an individual with a CSI may be reluctant to disclose is for fear of being discriminated against on the basis of the identity. Anticipated stigma captures the extent or degree to which the possessor of the stigmatized

identity believes discrimination and/or stereotyping will occur in the event that others find out about their stigmatized identity (Quinn & Chaudoir, 2009).

Self-stigma/Internalized Stigma. Internalized stigma is the extent to which an individual endorses the negative beliefs and stereotypes concerning members of their particular (stigmatized) social group. Relatedly, self-stigma focuses on the extent to which one believes these stereotypes apply to one's self (Corrigan & Watson, 2002; Quinn & Earnshaw, 2011). Self-stigma has three main components: (a) the individual must be aware of the stereotypes that have been applied to their social group, (b) the individual must agree with (at least some of) the negative stereotypes, and (c) the individual must feel that the stereotypes are applicable to them. There is some evidence that people high in self-stigma suffer reduced self-esteem and self-efficacy, resulting in what Corrigan et al. (2009) have labeled the "why try" effect. In this model, life goal achievement is mediated by low self-esteem and diminished self-efficacy resulting from self-stigma. Additional work has found that self-stigma may play a role in people's decisions not to seek psychological help or engage in therapy (Vogel et al., 2006).

Positive Beliefs About Identity. Research suggests that the majority of people are invested in viewing themselves as good people, of value (Crocker & Major, 1989). Identity development often includes a self-protective factor. Individuals may reject the prevalent stereotypes associated with their stigmatized identity. Instead, they may endorse counterstereotypic and/or positive beliefs about the identity and may even have had positive experiences in relation to the identity.

Centrality. While people hold multiple social identities, it is improbable that they will value each of these identities equally. Some types of social identities, visible or nonvisible, may be deemed as being more important or relevant to one's sense of self than others. Centrality,

sometimes referred to as “identity importance,” is the extent to which an individual relates a particular social identity to their self-definition. There is some evidence that greater centrality of a CSI can be associated with increased psychological distress (Quinn et al. 2014).

Salience. Salience involves how often a person thinks about their social identity. The extent to which the identity crosses one’s mind is subject to variability, with some individuals more likely to exhibit preoccupation with the identity than others (Quinn et al. 2014). The frequency of thoughts may vary as a function of individual symptoms, behaviors, or of context. It is worth noting that salience is in and of itself neither positive nor negative.

Stigma and Psychological Outcomes

Stigma has been shown to contribute to mental health disparities experienced by members of stigmatized versus non-stigmatized social groups (see Mak et al., 2007, for a meta-analysis). Much of the work to date has highlighted the association between internalized stigma and decreased psychological well-being, with the relationship between internalized stigma and depression being particularly well studied. This has especially been the case in regard to people living with mental illness, of sexual minority status, or who are HIV-positive.

Quinn and Chaudoir (2009) expanded on these findings and found that “people with CSIs who anticipate greater stigma, and whose stigmatized identity is more central and salient experience greater psychological distress” (Quinn & Earnshaw, 2011, p. 174). Although Quinn and Chaudoir (2009) operationalized psychological distress as a composite of depression and anxiety, stigma has also been correlated with a decrease in other variables related to mental well-being, including self-esteem and self-efficacy (Link et al., 2001).

Stigma and the School Context

Bos et al. (2013) noted the value of examining stigma within the social context in which it occurs, including a consideration of institutional policies that might perpetuate it. However, even as research on structural stigma has proliferated (Hatzenbuehler, 2016), school contextual factors, including LRE, have not been analyzed in a rigorous or systematic way as potentially contributing to stigma for youth with disabilities.

The LRE Principle

Beginning in the 1960s, as advocates pushed for a range of educational placements for students with disabilities, the LRE principle emerged as a conceptual framework for the provision of special education services (Taylor, 1988). This resulted in several important “right to education” legal decisions, including *Pennsylvania Association for Retarded Children (PARC) v. Commonwealth of Pennsylvania* (1971, 1972), a consent decree approved by the courts. In the PARC case, it was decided that placement “in a regular school class is preferable to placement in a special school class is preferable to placement in any other type of program of education and training (Weintraub et al., 1976, p. 64).” Around the same time, Deno (1970), in a now classic article, extended these notions into the idea of a “cascade” of educational placement possibilities for students with disabilities (SWD). ‘The LRE continuum,’ as it is now generally referred to, is often depicted as a straight line running from the most to the least restrictive setting options, with the most restrictive and segregated being hospitals, institutions, and special schools and the least restrictive being regular classes with a resource room or full-time inclusion in general classes.

At its core, LRE was intended to ensure that SWD receive effective educational programs that provide access to both the general curriculum as well as to appropriate individualized instruction. Nevertheless, LRE has remained a heavily contested issue among stakeholders.

While the trend for the last few decades has been toward greater integration of SWD, academics, advocates, educators, policy makers, individuals with disabilities, and their families continue to debate the relative merits of mainstreaming (i.e. the temporal, instructional, and social integration of eligible children with disabilities alongside nondisabled peers based on ongoing planning and assessment) versus full inclusion of SWD in general education (Brantlinger, 1997; Connor & Ferri, 2007; Kaufman et al., 1975; Kavale, 2002).

Kavale (2002) points out that the inclusion debate has been framed in terms of both ideological or moral concerns (i.e. what is right) and empirical evidence (i.e. what works), though the two are, of course, not mutually exclusive. The issue of stigmatization is inherent within the ongoing debate surrounding inclusion. Zigmond and Baker (1994) conducted a study of full-time integration in order to investigate whether “the regular education class can provide an environment in which students with LDs have more opportunities to learn, to make greater educational progress in academic skills, and to avoid the stigma associated with being less capable in academic achievement” (p. 108). Though explicitly acknowledged there, stigma, as a social psychological phenomenon, has remained largely absent from the empirical research on mainstreaming, inclusion, and LRE. Rather, the focus has more often been on instructional strategies as well as academic achievement outcomes for SWD. Interestingly, some research has indicated that a substantial number of students with LD actually express a preference for receiving specialized instruction outside of the general education classroom for at least part of the school day (Vaughn & Klingner, 1998). However, the ways in which stigma may or may not contribute to such preferences have gone unnoticed. For example, might a SWD desire to receive special education services in a separate location in order to conceal their disability or avoid anticipated stigma?

LRE and Stigma. Pachankis (2007) proposed a cognitive–affective–behavioral process model for understanding the psychological implications of concealing a stigma. A core feature of his model is its emphasis on *disclosure decisions* for individuals with concealable stigmatized identities (CSIs) – meaning the challenges people with CSIs face in choosing whether, when, how, and to whom to disclose their stigmatized identity. Pachankis (2007) posits that specific features of stigma-relevant situations may trigger a set of cognitive and affective responses (e.g. preoccupation or shame) that have the potential to mediate behavioral consequences (e.g. withdrawal) for an individual with a CSI. For instance, if an individual feels shame within a particular social context, then the individual may choose to avoid that particular context or situation in the future. Pachankis (2007) uses the term situational dependency to refer to this relationship and suggests that “to understand the psychological consequences of concealing a stigma, one must understand the potential situational triggers of these consequences” (p. 331). People with CSIs have the potential to be triggered in situations in which their stigma is made salient or in which there exists the threat of discovery. Accordingly, if the consequences of being discovered are perceived to be costly, then their affective and cognitive responses, and hence their behavioral responses, are more likely to be impacted. A cycle of low self-esteem, avoidance, and distress may ensue.

Zhao and Zhang (2008) offered one of the few investigations into the cognitive effects of concealing a disability on adolescents with LD. Participants instructed to conceal their disability demonstrated greater suppression of learning-relevant thoughts during a stroop color and word task, a neuropsychological test used to “assess the ability to inhibit cognitive interference” (Scarpina & Tagini, 2017, p. 1). To the researchers’ surprise, however, LD participants in the concealed condition did not report more thought intrusion than participants in the other

conditions, offering only partial evidence to support Lane and Wegner's preoccupation model of secrecy, which focuses on the of cognitive costs of *stigma hiding* (i.e. the process of keeping the stigma secret). One limitation of this study was the lack of consideration given to the role of context or of location.

Stigmatized identities present considerable variation in terms of the level of their concealability, falling along what Pachankis (2007) calls a *concealability continuum*. However, concealability can shift according to context. The issue of LRE arguably complicates the concealability of a student's disability and alters other factors related to the stigma-relevant situation – namely the salience of the relevant identity and the likelihood of being discovered.

An identity may be particularly salient when it is shared by many people or by none within a given context. This raises an important question: Will different educational settings elicit differences in terms of the salience of a student's disability? In other words, are SWD more likely to spend time thinking about their disability if they believe they are the only students with LD in a general class or will they think about it more when they are surrounded by other students with the same disability? This also raises the issue of centrality. Does the percentage of time spent exclusively with other SWD influence how important the identity is to a student? Lastly, might transitioning between educational settings throughout the school day increase a SWD's fear of being discovered? Ultimately, these questions are aimed at uncovering whether the provision of LRE might contribute to the self-stigma or anticipated stigma of students with LD and, in turn, impact student outcomes such as sense of school belonging and academic engagement. If the answer is yes, then LRE, as a policy directive, can be read as structural stigma, at least as currently practiced.

Background on School Outcomes

An understanding of a number of important student outcomes such as psychological distress, self-esteem, school belonging, and academic engagement, all discussed below, would benefit from a consideration of the relationship between the school context and stigma. Additionally, because of the lower graduation and college completion rates of students with LD (Horowitz et al., 2017), it is important to examine student attitudes regarding their educational aspirations. Might these be impacted by anticipated or internalized stigma as well? For this reason, a measure capturing students' perceived barriers to attending college was included as an outcome in this study.

Psychological Distress and School Outcomes

A number of researchers have examined the effects of schooling on mental health (e.g., Anderman, 2002; Roeser et al., 1998). While not specifically examining issues surrounding students with disabilities, Anderman (2002) found that not only do mental health variables (e.g. depression) differ between schools but that they appear to be related to school-structure variables (e.g. the use of busing practices). This raises the issue of what other types of school practices (such as LRE) might be correlated with mental health outcomes such as depression, anxiety, and self-esteem.

School Belonging

School connectedness or belonging has been defined as the extent to which students feel accepted, valued, respected, and included in their schools (Goodenow & Grady, 1993). School belonging has been widely studied in terms its relationship to markers of school success (Anderman & Freeman, 2004). For instance, research has identified school belonging as being a critical factor in terms of school retention and dropout rates (Wehlage et al., 1989). Additionally,

a more complete picture of the relationship between mental health functioning (e.g. self-esteem) and school connectedness has become increasingly evident over the last two decades of research. For example, Anderman (2002) found school belonging to be positively associated with adaptive outcomes (e.g. optimism and GPA) but also offered evidence that low school belonging is related to maladaptive outcomes (e.g. depression, social rejection, and school problems).

School Engagement/Disengagement

School engagement, broadly defined, is the degree to which students participate in school activities, feel connected at school, and value the goals of education (Skinner et al., 2009).

School engagement has been conceptualized as occurring at the level of the school community and the classroom level (e.g. student interactions with teachers) as well as in terms of specific learning activities within each classroom (Li & Lerner, 2011; Wang & Degol, 2014). Several prominent models of student engagement break it into two main elements, a *behavioral* construct and an *emotional* construct. The behavioral component focuses on active participation by the student within the school and classroom and on learning tasks while the emotional component captures their affective responses to these experiences (Skinner et al., 2009). Most researchers agree that student engagement is shaped by context, including structural features such as class size or school location (see Wang & Degol, 2014, for a review).

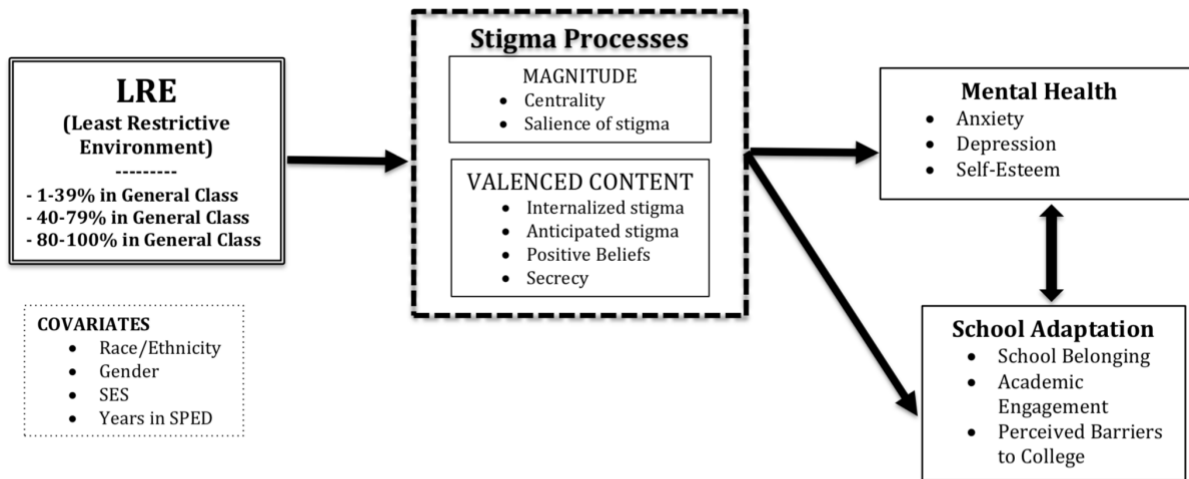
CSIs, Mental Health, School Outcomes, and LRE

As discussed above, the expanding literature on CSIs has consistently demonstrated an association between stigma-related processes and psychological distress, while other lines of school-based research have offered growing evidence of a correlation between negative mental health outcomes and lower levels of school belonging and academic engagement. However, research connecting these literatures is missing. Furthermore, the role school practices might

play in fostering stigma is unclear. The categorization of students according to their disability label and their subsequent LRE-placement offer ways of thinking about or analyzing structural stigma within a school context.

Current Study

The current study consisted of creating, piloting, and conducting a survey of high school students with LD with the aim of providing evidence in support of a conceptual model examining hypothesized relationships between LRE, CSIs, and mental health and school outcomes (See Figure 1).



*LRE is being examined as a potential contributor to *structural stigma*

Figure 1: Conceptual Model of Impact of Least Restrictive Environment (LRE) on Psychological and School Outcomes for Students with Concealable Stigmatized Disabilities

The study addressed the following research questions:

RQ (1): Are there correlations between LRE and variations across five stigma identity constructs: (a) *centrality*, (b) *saliency*, (c) *internalized stigma*, (d) *anticipated stigma*, and (e) *secrecy*?

RQ (2): What is the relationship between the five stigma processes and psychological wellbeing (i.e. anxiety, depression, and self-esteem), school adaptation (i.e. school belonging and academic engagement) and perceived barriers to college?

RQ (3): Does LRE-placement (i.e. percentage of time in special vs. general education) predict levels of psychological distress, self-esteem, school belonging, academic engagement and perceptions of barriers to college for students with LD?

And, if so, are these relationships mediated by stigma processes?

Hypotheses

For research question 1, it was hypothesized that LRE would be associated with variations in stigma processes for students with LD. I intended to examine LRE as both a continuous and categorical variable with the belief that the relationship between LRE and each stigma variable might differ and would not necessarily be linear. Specifically, I expected centrality to be greater for students who spent less time in general classes and more time in special education specific settings (i.e. students with lower percentages of LRE). I predicted this relationship to be linear in nature with centrality decreasing as LRE increased, because I hypothesized that being around similar others would increase centrality of the LD identity. However, I anticipated that students closer to the middle of LRE (40-79% in general classes) would spend more time thinking about their disability, in part, due to repeated exposure to situational cues in the environment such as entering the special education classroom and due to opportunities for social comparison with peers without disabilities. I also believed that, due to fear of disclosure, secrecy would be greatest in the high LRE category. Although I did not have a specific hypothesis regarding the other stigma variables, I did expect that internalized and anticipated stigma would correlate with LRE in some way.

For research question 2, I hypothesized that increased internalized and anticipated stigma and secrecy would be associated with greater anxiety and depression in addition to lower self-esteem. Likewise, I believed that high levels of internalized and anticipated stigma would also predict low school belonging and academic engagement but an increase in perceived barriers to attending college. Furthermore, I anticipated interactions between the stigma variables – that centrality and salience might influence the extent to which students anticipated or internalized LD-related stigma.

Lastly, for research question 3, I expected stigma processes to mediate any relationship that was found between LRE and the outcome variables. In terms of the school specific variables, I expected this relationship to be strongest for school belonging. Although not specifically mentioned in the research questions, I also expected all of the outcome variables, including both those related to mental health and school adaptation, to be highly correlated.

Methods

I intended to design, pilot, and conduct a large-scale survey with over 100 high school students with SLD in order to answer the research questions related to my proposed conceptual model. Due to the Covid-19 pandemic, in March 2020, the school campuses were closed in the middle of data collection and the school district transitioned to remote learning and placed restrictions on research activities. At the time of the school closures, I had collected data on 40 of my planned 100 students with LD. As a result of these events, this dissertation was reconceptualized as a pilot study and consisted of two phases. *Phase 1* of the study focused on survey development. *Phase 2* consisted of two parts: expert review and pilot survey.

Phase 1: Survey development

The purpose of the survey was to test a proposed model of the relationships among LRE, stigma identity processes, student mental health outcomes, and student school adaptation. The survey consisted of questions related to student demographics, stigma processes, depression, anxiety, self-esteem, school belonging, school/academic engagement, and perceived barriers to college.

To develop the survey, I conducted a literature review of studies pertaining to CSIs and collected existing instruments that addressed the following stigma processes: anticipated stigma, internalized stigma, identity centrality, identity salience, and secrecy. A number of the scales were drawn from research on mental illness (MI), and had to be adapted to pertain to students with LDs. Furthermore, the majority of previous work on CSIs had been conducted with adults, so to better fit my target population of adolescents, some of the measures were modified in the process of developing this survey.

Unlike stigma, the topics of depression, anxiety, self-esteem, school belonging, and school/academic engagement are well researched with adolescents. Survey questions pertaining to these topics were generally drawn from existing instruments used with adolescents, though the number of questions was reduced in some cases in order to accommodate time constraints on students taking the survey.

With the exception of secrecy, all of the stigma measures were drawn from studies conducted on a variety of CSIs by Quinn et al. (2014) and Quinn and Chaudoir (2009) with the goal of replicating some of their key findings. Additionally, I used the same measures for depression and anxiety that were used by Quinn et al. (2014) and Quinn and Chaudoir (2009), although I did not combine depression and anxiety into one variable (i.e. psychological distress) as was done in those studies.

The format of the survey consisted of open- and closed-ended questions and included demographic questions such as age, gender, and race/ethnicity. Based on my background as a special education teacher, I also developed questions specific to the schooling experiences of students with LD. These questions covered topics such as individualized education programs (IEPs) and resource rooms. Lastly, students were asked to list their classes and teachers so that it would be possible to measure LRE in the absence of the availability of student schedules. See Appendix A for a draft of the full survey.

Phase 2: Expert review and pilot survey

Eight students with special education eligibility for SLD and two special education teachers were recruited to participate in the expert review. Students received \$20 for their participation in expert review. I conducted phone interviews with both teachers, sending the survey to them in advance so that they could review it prior to the interviews. I had the eight students complete the survey, noting any questions they found confusing as they took it. I timed them to get a sense of how long the survey took to complete and briefly interviewed each student after they completed the survey. Expert review resulted in a few minor adjustments to the survey discussed in the section on measures. Additionally, I moved the questions about the names of classes and teachers to the end of the survey. Following expert review, an additional 32 students with SLD eligibility were recruited to participate in the pilot survey. These students also received \$20 for their participation.

Participants

In total, 40 high school students (67.5% male) receiving special education services for an eligibility of SLD participated in the study. Participants were recruited from two comprehensive public high schools located within a large, urban school district in the Southern California

region. Both schools are designated as Title 1 schools, meaning they receive federal funds due to a high concentration of low-income students.

School 1, from which 32 students were recruited, had a total enrollment of 2,381 students, of whom approximately 10% were students with disabilities. Of the total population of students, 2.4% identified as Black or African American, 13.4% identified as Asian, 9% identified as Filipino, 16.3% identified as White, and nearly 58% were Hispanic or Latinx. According to the district website, 75% of the students' families served are disadvantaged socioeconomically, while 6.6% of the students were classified as English learners. The reported graduation rate for the 2017-18 school year was nearly 88%, higher than both the district and state averages.

Only eight students were recruited from the second school site, which had a total enrollment of 1,044 students for the 2018-2019 school year. Just under 98% of the students at school 2 identified as Hispanic or Latino. The second largest group of students, under one percent, was White. The school reported that 94% of the families served by the school were socioeconomically disadvantaged. 17.3% of the student population for the 2018-2019 school year were students with disabilities while almost 14.5% were English learners. The graduation rate for school two approached 90% for 2017-2018. As with the first school, this was above both the district and state averages.

The overall sample for the current study was 82.5% Hispanic/Latino, 2.5% Black or African American, 7.5% multiethnic/biracial, and 7.5% other. The age of the participants ranged from 15 to 19 ($M = 16.7$; $SD = .92$).

Although all participants were recruited because they met the inclusion criteria (i.e. receiving special education services for a SLD), only 26 out of 40 students indicated that they received special education services and only 23 students confirmed that they had a learning

disability or learning difference. In addition, only 17 of the 40 students in the sample responded yes to both the question asking about special education and the question inquiring about LD-status. Eight students reported that they were Resource students. Of these eight, seven knew they received special education services. Thirty-one students confirmed that they had an individualized education program (IEP) in the last year.

Of the 23 students who indicated that they had a LD or learning difference, 13 specified that their LD was related to reading, six specified writing, six selected math, six selected ADD/ADHD, and three selected other, writing in “Attention” and “where my brain takes in things slower than usual.” Students were allowed to check more than one response. Twelve students answered a question about the age at which they received their LD diagnosis. The mean age was 9.92, which typically corresponds to 4th or 5th grade. Some participants ($n = 18$) also responded to a question about what grade they first received special education. The responses ranged from Kindergarten to 8th grade with the most common response being 6th grade ($n = 5$) and the second most common being 3rd grade ($n = 4$).

The survey included a definition of “accommodations” as well as a checklist of common accommodations students sometimes receive through special education. Participants were asked to indicate which accommodations, if any, they received. All but one student ($n = 39$) indicated that they did receive accommodations, with “extra time to take a test” being the most frequently indicated answer ($n = 32$). This was followed by “use of calculator on a test” ($n = 25$) and “teacher provided notes” ($n = 21$). The remaining options included: “Taking a test in a quiet or private area” ($n = 16$), “having part of test read to you” ($n = 10$), “use of spellcheck during a test” ($n = 6$), “color coded notes” ($n = 6$), “organizer or checklist created with teacher” ($n = 6$),

“textbooks converted to audio” ($n = 3$), and “given the choice to give a verbal presentation in place of written one” ($n = 3$).

The U.S. Department of Education reports LRE by percentage of distributions across eight different educational environments (e.g. separate schools, self-contained classrooms, etc.). Although LRE is generally conceptualized as the percentage of time a student with a disability spends in general classes, it is sometimes reported categorically; that is, as aligning with three categories of placement: (a) less than 40% inside general classes, (b) 40-79% of time inside general classes, and (c) 80% or more of time inside general classes. According to the National Center for Education Statistics, approximately 71% of students with SLD spend most of their school day inside general classes (NCES, 2019), although in California, where this study took place, the average is considerably lower at 58%.

On average, students with SLD in this sample spend less than half of their school day in general classes ($M = 47\%$, $SD = .21$). Broken into the categories used by NCES, this translates to 14 students included in general classes less than 40% of the school day, 22 students in the middle category spending 40 to 79% of the day in general classes, and only two students attending general classes for 80% or more of the school day. This represents a notable divergence from estimates of LRE across the United States (NCES, 2019). However, it is important to note that LRE is generally calculated by dividing the number of minutes a student spends in general education settings by the total number of minutes in the school day and often includes lunch, recess, and noninstructional times. For this study, LRE was calculated by dividing the number of general education classes by the total number of class periods and did not include lunch or recess, which presumably explains the lower percentages of inclusion in this sample. Co-teaching, in which a special education and general education teacher jointly provide instruction

to students in a shared space, would complicate the conceptualization and calculation of LRE here. However, it was confirmed by the school administrator at School 2 and the contact person at School 1 that no co-teaching was implemented during the 2019-2020 school year.

Measures

The survey was created based on previous literature and constructs related to CSIs. The choice of measures was guided by the practical constraints of conducting research within the context of schools. Due to the ages of the participants as well as the nature of their disabilities, the number of items was reduced and the wording for some measures was refined through the process of expert review in order to maximize clarity and minimize the amount of time needed for participants to complete the assessments. In cases in which a measure or scale was modified, the reduction of items and types of word changes are described under the description of that particular measure. When possible, I aimed to maximize content coverage by including at least one item from each subscale.

Participant demographics.

The survey included questions about age, gender, and race/ethnicity. As a proxy for SES, the Subjective Social Status Ladder measure (Goodman et al., 2001) was included in conjunction with “mother’s highest level of education” (taken from the parent consent form). For the Subjective Social Status Ladder measure, participants were presented with an illustration of a ladder and the following prompt: “Imagine this ladder pictures how American Society is set up. At the top are the people that have the *most money* and at the bottom are the people who have the *least money*. Where do you think your family would be on this ladder?” Students clicked on the rung they perceived to correspond to their family’s wealth. Ultimately, SES was dropped from

the analysis due to missing data since “mother’s highest level of education” was left blank on more than half of the consent forms.

Nature of the disability.

Label. Student eligibility for special education was determined during recruitment via referral from the special education offices at each school, though the survey itself included questions in which students self-reported their disability and special education status. If they indicated that they did have a learning disability or learning difference, they were provided with a list of types of LD and asked to check all that apply.

Age of Diagnosis. As part of the survey, students self-reported the age that they recalled receiving their disability diagnosis and/or the grade they first began receiving special education services. Due to low response rates for these questions, they were included in the descriptions of the participants but were not used as covariates or utilized for any other analyses.

School Practices: LRE. Least Restrictive Environment was operationalized as percentage of school time spent inside general education classes. As part of the survey, students were asked to list the subject and teacher for every class period in their school day. The names of the teachers were compared to a list of the special education teachers at each school. I initially used the school websites to create these lists, but subsequently had the accuracy of the lists checked and confirmed by the contact person at each school (e.g. the chair of the special education department). LRE was calculated by dividing the number of classes with a general education teacher by the total number of classes in order to determine a percentage of time spent in general classes.

A student’s IEP should indicate the amount of time the student spends in general classes alongside peers without disabilities. This data is also tracked by the schools and school districts.

While I intended to use this information in combination with student course schedules and the self-report of classes and teachers from the survey, school closures due to the pandemic resulted in the IEPs and course schedules being inaccessible.

Measures of Stigma Identity Processes

Anticipated Stigma. In order to measure participants' levels of anticipated stigma (i.e. the degree to which they have concerns about mistreatment and/or devaluation from other people should their concealed identity become known), I adapted a scale utilized by Quinn and Chaudoir (2009) in a study examining CSIs and psychological distress. The original scale consisted of 15 items, nine of which were drawn from Kessler et al.'s (1999, p. 214) "Day-to-Day" Discrimination scale. I reduced the number of items to seven and limited the response scale to five rather than seven choices. My adapted version of the scale presented participants with the following prompt: "If other students knew about your learning disability or difference, how likely do you think it is that these things would happen?" Participants responded on a 1 (*not at all likely*) to 5 (*very likely*) Likert-like scale.

I retained items from the original measure such as: "People not wanting to date you" and "People acting as if they are better than you." However, some items were deemed not relevant to a high school population (e.g. "Roommates wanting to move out of apartment or dorm room") and were, thus, excluded. In a few instances, wording was changed to increase the likelihood of respondents comprehending the prompt while at the same time remaining as close to the original item as possible ($\alpha = .88$).

Centrality. Following Quinn and Chaudoir (2009), I used a measure consisting of items drawn from the Identity Subscale of the Collective Self Esteem Scale (Luhtanen & Crocker, 1992). The original measure asked participants to respond to four statements using a 7-point

response scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). I modified the scale by using only three statements and reducing the response scale to 5-points. This was done to ensure better fit with this study's population of interest (adolescents with LD). The original items included: (a) "In general, my {CSI} is an important part of the way I see myself." (b) "It is impossible to understand me without knowing about my {CSI}." And (c) "I would be a different person without my {CSI}." For this survey, the phrase "learning disability/difference" was substituted for CSI ($\alpha = .84$).

Saliency. In one study, Quinn et al. (2014) used a 3-item scale to capture the frequency with which participants thought about their CSIs, while in another study only one item was used (Quinn & Chaudoir, 2009). The original measure included two statements to which participants used a 7-point response scale to indicate level of agreement. These two items were: (a) "I spend a lot of time thinking about my {CSI}" and (b) "My {CSI} often crosses my mind for no reason." The measure also included one question in which participants were asked how often they think about their concealed identity. Response options for this item were *almost never*, *several times a year*, *once a month*, *once a week*, *a few times a week*, *once a day*, and *many times each day*. For the current study, I substituted "learning difference or disability" in place of the phrase "CSIs". For the first two items, I reduced the scale to five responses whereas with the last item, I retained the 7-point response scale that Quinn et al. (2014) utilized. Taken together, this measure had exceptionally low reliability with a Cronbach's alpha of .14. As the survey was administered, several students expressed confusion regarding the statement "My learning disability or difference crosses my mind for no reason." When this item was excluded, the Cronbach's alpha for the remaining two items was .49. While all three items were included on the survey, only the scale consisting of two items was used for data analysis.

Self-Stigma/Internalized Stigma. Internalized stigma was measured using two items adapted from Link et al.'s (2015) Internalized Stigma Scale. In the original version, respondents were asked to indicate how often in the past month they felt different or embarrassed due to their "condition" using a 5-point scale. Originally, I included only one measure of internalized stigma, which referred to LD. However, a substantial number of students ($n = 17$) answered *No or Not sure* to the question about whether they had a LD and, therefore, did not receive any of the items addressing LD-related stigma. Recognizing that some students receiving special education might not know they have a LD but still might experience stigma, I included a measure of internalized stigma of special education on the second version of the survey. Although the wording was almost identical, the reliability of the two scales varied, with the special education scale ($\alpha = .84$) exhibiting greater reliability than the scale related to internalized LD stigma ($\alpha = .57$).

Self-Stigma of Seeking Help. Vogel et al. (2006) developed a 10-item measure intended to capture self-stigma in relation to seeking psychological help (e.g. seeing a therapist). The measure used a Likert-type scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). The original 5-point response scale was retained, but the number of items was reduced from 10 to 2 due to concern about time constraints for taking the survey and out of consideration for the target population of this study. Most significantly, the language was modified to reflect the participants seeking academic rather than therapeutic help within the context of a classroom. For example, "It would make me feel inferior to ask a therapist for help" was changed to "It would make me feel bad to ask a teacher for extra help." The other item read: "Asking to use my accommodations (listed above) makes me feel worse about myself" ($\alpha = .80$).

Positive beliefs about Learning Disabilities. Forgeard et al. (2016) developed a 6-item measure utilizing a 4-point response scale in order to identify the presence of positive beliefs

among participants regarding their mental illness. Specifically, the scale identifies six different aspects of positive beliefs: Perceptions of uniqueness, positive consequences, personal strength, meaning in life, and enhanced cognition and creativity resulting from mental illness. I modified the measure to capture positive beliefs about the stigmatized identities of interest in this study by substituting the words “learning disability/difference” in place of “mental illness.” A sample item is “My learning disability/difference allows me to be more creative.” I also modified the response scale to include five levels of agreement in order to match the response scales of the majority of stigma-related measures used in the survey ($\alpha = 0.86$).

Secrecy. Secrecy measures the degree to which a person feels the need to hide their problems from others. I used one item adapted from Moses’s (2009) Secrecy Scale which was developed for use with adolescents receiving mental health treatment. The scale consists of 7 items designed to measure the extent to which adolescents feel it necessary to conceal their mental health treatment from others. With the original scale, participants responded using a 4-point scale indicating how much they agreed with each item. I changed this to a 5-point response scale to match the majority of scales used in the survey. The original scale had a Cronbach’s alpha of .84. I used only one item and modified the language to be more aligned with a school setting and to refer to special education. The item is: “I often feel the need to hide the fact that I am in special education.”

Mental Health Outcomes

Depression. The Center for Epidemiological Studies-Depression Scale (CES-D) (Radloff, 1977) is a self-report depression scale consisting of 20 items that has been well validated with adult samples drawn from the general population (Shafer, 2006). Using a 4-point scale, the CES-D assesses frequency of depressive symptoms over the course of a week.

Responses ranged from “Rarely or None of the Time (less than 1 day)” to “Almost all the time (5-7 days).” I used 10 items from the original measure, including “How often have you had trouble sleeping?” and “How often have you felt sad?” ($\alpha = 0.84$).

Anxiety. Spielberger’s (1977) Trait Anxiety Inventory for Adults asks participants to report the frequency of symptoms based on how they “generally feel.” It consists of 20 items and uses a 4-point Likert-like response scale ranging from 1 (*almost never*) to 4 (*all the time*). I reduced the number of items to eight ($\alpha=0.65$).

Self-esteem. Self-esteem was assessed with a modified version of the Rosenberg Self Esteem Scale (Rosenberg, 1965). The survey also included questions from the Coopersmith Self-Esteem Instrument (Coopersmith & Gilberts, 1982), but these items were not included in analysis due to their low reliability with this sample. The Rosenberg Self-Esteem Scale asks participants to respond to 10 items using a 4-point scale ranging from 1 (*strongly agree*) to 4 (*strongly disagree*). I changed the responses so that they ranged from “FOR SURE YES!” to “NO WAY!” I selected 7 items from the Rosenberg Self-Esteem Scale. One item was dropped from analysis after several students expressed confusion due to the use of a double negative statement concerning teachers. A sample item from the remaining scale is: “On the whole, I am satisfied with myself.” ($\alpha=0.82$).

School-Related Outcomes

School Belonging. Goodenow’s (1993) Psychological Sense of School Membership (PSSM) Scale was developed with the intention of capturing the “extent to which students feel personally accepted, rejected, included, and supported by others in the school environment” (p. 80). It consists of an 18-item measure with a 5-point Likert-type response scale. You et al. (2011) offered evidence supporting the use of the PSSM scale to assess or measure specific

aspects of school membership, these being: perceptions of caring adult relationships, acceptance of belongingness at school, and disrespect or rejection. Respondents are asked to indicate the extent to which each item is true of them. Sample items include: “I feel like a real part of ‘name of school’” and “Sometimes I feel as if I don’t belong here.” I reduced the number of items from 18 to 8 in order to make the survey more accessible for this study’s sample and altered the response scale to range from “FOR SURE YES!” to “NO WAY!” ($\alpha=0.75$).

School Engagement/Disaffection. In order to examine school engagement, I used a modified version of a 20-item Engagement Versus Disaffection with Learning Questionnaire (Skinner et al., 2009). This instrument recognizes four dimensions or indicators of engagement: Emotional engagement, behavioral engagement, emotional disaffection, and behavioral disaffection. Disaffection includes core behaviors of disengagement such as passivity and lack of initiation as well as reports of sadness, frustration, and anxiety related to performance. While I limited the number of questions to 10, I utilized questions from all four of the dimensions of engagement included in Skinner et al.’s (2009) conceptual model. However, I did adjust the 4-point Likert-type scale ranging from 1 (*not at all true*) to 4 (*very true*) to include five possible responses in order to make the survey more consistent across measures. As with school belonging, I altered the possible response to range from “FOR SURE YES!” to “NO WAY!” Sample questions are from each of the four categories: “In class, I work as hard as I can” (behavioral engagement), “I enjoy learning new things in class” (emotional engagement), “When in class, I just act like I’m working” (behavioral disaffection), and “When I get stuck on a problem, I feel worried” (emotional disaffection).

I analyzed the reliability of each of the subscales. The emotional disaffection and behavioral disaffection subscales demonstrated low reliability ($\alpha = .18$ and $\alpha = 0.32$) and were dropped. Emotional engagement and behavioral engagement were used in combination ($\alpha = 0.84$).

Perceived Barriers to College. Due to the general underrepresentation of students with LD in postsecondary education, I included a scale aimed at measuring the extent to which students perceive barriers that would make it difficult for them to attend college. The original measure was developed by Cook et al. (1996). The adapted version on this survey consisted of ten items, with five items focused on internal attributions and five on external attributions as to why a student might feel hindered from attending college. For this study, students responded to each item using a 5-point scale with responses ranging from “YES! Definitely a reason” to “NO! Definitely NOT a reason.” A sample item that captured an internal attribution is “I’m not smart enough,” while an item capturing an external attribution is “I would need a scholarship and they are hard to get” ($\alpha = 0.87$).

Survey deployment

Upon receiving IRB approval from a large, urban school district in Southern California, I contacted administrators at two school sites in Los Angeles County. School administrators were informed of the purpose of the survey and its significance. A contact person at each school referred eligible 9th, 10th, 11th, and 12th grade students to the study. The next step was attaining approval from parents for their child to participate in the study. Recruitment packets were sent home with parent permission and student consent forms explaining the general purposes of the study (See Appendices B thru E for documents related to Recruitment, Consent, and IRB approval). In order to maintain privacy and avoid disclosing a student’s LD status to themselves or other students, the survey was described as examining “how kids think and feel about

important aspects of themselves.” Being in special education was only one of several identities mentioned in the recruitment letters. This was also done in order to reduce the possibility of making their disability more salient as they took the survey.

Once approval was granted, students received a scheduled time during their lunch period to take the survey. I successfully recruited 59 students, 40 of whom completed the survey before the school closures. I was in the process of recruiting more at the time that data collection was suspended. Only one student was denied permission by a parent to participate. At the start of the survey, students were informed that they had the option of skipping any question. The survey took approximately 20-25 minutes for students to complete. Students received a \$20 honorarium for completing the survey.

Ethics statement

All recruitment materials, study procedures, measures, and consent and debriefing forms were approved by the institutional review board of the University of California, Los Angeles as well as the research review board of the school district.

This study involved a vulnerable population (students with disabilities) so extra care was taken in order to ensure the safety of participants. Because the study addresses identities that are both stigmatizing and concealable, it was necessary to minimize the risk of unintended disclosure of the identity. For this reason, and in order to avoid potentially skewing the results, the purpose of the study was concealed to participants and skip logic was employed so that students unaware of their identity would not be exposed to questions related to LD, special education, or stigma but would still receive questions related to school belonging, academic engagement, self-esteem, depression, anxiety, and perceived barriers to college. Students took the survey on iPads and laptops in a private location (i.e. office or closed classroom) in small groups (2 to 8 students)

during non-instructional time (i.e. lunch). Participants were advised in advance that they could skip any question as well as withdraw from the study at any time. Students were assigned an ID number that they entered twice in order to begin the survey. Only the principal investigator had access to the list of names and corresponding ID numbers. The survey data was uploaded to a secure server located in a locked office on the UCLA campus.

Analytic Plan

The survey data was downloaded from Snap Surveys and transferred to IBM SPSS Statistics. A first step was to run descriptive statistics on the data, specifically the mean levels and standard deviations for each of the variables. Next, I examined bivariate correlations between the variables in order to determine if there was evidence of the predicted relationships among LRE, stigma, mental health, and school related variables.

Given the constraints of sample size and power, I considered the first and second halves of the overall framework model (see Figure 1) separately. In addition to examining the correlations, I conducted a series of regression models in which regression was first used to determine whether stigma processes (anticipated stigma, internalized stigma of special education, and secrecy) each accounted for unique variance in the mental health outcomes. Another series of regression models was used to examine whether stigma processes (anticipated stigma, internalized stigma of special education, and secrecy) predicted levels of school belonging, academic engagement, and perceived barriers to college. Only stigma variables that demonstrated significant correlations with at least one of the key outcome variables were used in the regression models. Gender, age, and LRE were used as covariates. SES was excluded due to missing data.

There was no evidence of a significant correlation between LRE and any of the other variables; therefore, no regression models were used to specifically examine LRE as a predictor of stigma processes. However, since LRE was a primary variable of interest, it was included as a covariate in all of the regression models.

Results

In total, 23 students responded to at least 90% of the items related to stigma and LD, while 18 completed the measure of internalized stigma of special education. Table 1 depicts the bivariate correlations between all of the study variables as well as the means and standard deviations for each. No statistically significant gender differences were detected for any of the variables (all $ps > .08$). Given the small sample size, the measures demonstrated good variability. However, interpretations based on the data must be made with caution. For one, the sample may be underpowered. Hence, type II errors are one consideration. Furthermore, as Brysbaert (2019) discusses, underpowered studies may inflate the effect sizes when true effects are detected or, in some cases, result in false positives.

Relationships Among Stigma Variables

As would be expected, several of the stigma variables were correlated, although this was not the case across all of the stigma variables (see Table 2). In fact, in comparison to prior work on CSIs (Quinn et al., 2014; Quinn & Chaudoir, 2009), the stigma and identity processes included here were not as highly correlated as expected. For instance, centrality was not correlated with a single other stigma variable in the study. Salience, on the other hand, was positively correlated with both internalized stigma of special education ($r = .64, p < .05$) and stigma of seeking help ($r = -.50, p < .05$), although the latter two were themselves not correlated. Of the stigma variables, anticipated stigma was only correlated with secrecy ($r = .52, p < .05$).

Internalized stigma of special education was also correlated with secrecy, so highly ($r = .82, p < .01$) that it raises a potential issue with discriminant validity. Lastly, the two most conceptually related stigma variables, internalized stigma of special education and internalized stigma of LD were also strongly correlated ($r = .77, p < .01$), though, as mentioned previously, the reliability was noticeably lower for the scale measuring internalized stigma of LD. Other than internalized stigma of special education, internalized stigma of LD was not correlated with any other stigma identity variables.

Of particular interest, internalized stigma of special education was correlated with positive beliefs about LD with an effect size in the large range ($r = .66, p < .05$). The same relationship was not found to be statistically significant between internalized stigma of LD and positive beliefs about LD. Positive beliefs was also significantly correlated with salience ($r = .47, p < .05$). That salience is significantly correlated with both positive beliefs regarding LD and internalized stigma of special education but not with internalized stigma of LD raises some interesting possibilities: In contemplating their LD, students may be thinking about having a disability and being in special education in notably different ways, particularly in regard to stigma.

Overall, the 23 participants in this study who identified as having a LD or learning difference showed a fair amount of variability in the extent to which they deemed their LD as being central to their self. The mean fell slightly above the middle of the scale at 2.88 with a 1.1 standard deviation. The results for salience were similar ($M = 2.82, SD = 1.24$). However, the sample was somewhat high in secrecy, or the extent to which they agreed with the statement “I often feel the need to hide the fact that I am in special education” ($M = 3.19, SD = 1.36$). The sample was low on anticipated stigma of LD ($M = 2.35, SD = .80$), actually scoring higher in

their positive beliefs about their LD identity ($M = 3.31$, $SD = .77$). Lastly, the means for internalized stigma of special education and special education of LD were similar ($M = 2.81$, $M = 2.90$), though the standard deviation for special education ($SD = 1.28$) was greater than that of LD ($SD = .96$), indicating slightly higher variability.

Findings Regarding LRE

Research Question 1 addressed whether LRE was correlated with variations in stigma identity processes for high school students with LD. As seen in Table 1, no significant correlations were found between LRE and any of the stigma variables (i.e. internalized stigma, anticipated stigma, centrality, salience, or secrecy). Therefore, the data acquired from this sample offered no evidence to support the first part of the proposed conceptual model, on which my hypotheses was based.

LRE was also relevant to Research Question 3. RQ3 asked (1) whether LRE predicted levels of depression, anxiety, self-esteem, school belonging, academic engagement or perceptions of barriers to college, and (2) assuming any relationships were found, did stigma processes mediate them. As with RQ1, LRE (as a continuous variable) was not correlated with any of the outcome variables related to mental health, school adaptation, or educational aspirations. Hence, in this study, there were no relationships to mediate.

Predicting Mental Health and School Outcomes

Mental Health

Overall, depression was not high in the sample. The mean was 1.73 on a 4-point scale with a standard deviation of .54. In fact, only six students (15% of the sample) averaged a score greater than two, meaning that the majority of students indicated that they felt depressed “Rarely or none of the time (less than 1 day)” or “A little (1 to 2 days)” over a seven day time period.

The participants averaged higher on the measure of anxiety ($M = 2.25$, $SD = .44$). In terms of self-esteem, the mean was 3.79 ($SD = .63$) on a 5-point scale, with a larger score indicating higher self-esteem.

In terms of mental health outcomes, anxiety was positively correlated with internalized stigma of special education ($r = .59$, $p < .01$), anticipated stigma of LD ($r = .50$, $p < .05$), and secrecy ($r = .48$, $p < .05$), while depression was only significant with anticipated stigma ($r = .43$, $p < .05$). The effect sizes of these relationships fell in the range from medium (depression) to large (anxiety). Self-esteem was negatively correlated with both secrecy ($r = -.41$, $p < .05$), and internalized stigma of special education ($r = -.52$, $p < .05$) (See Table 3).

Given that anxiety, depression, and self-esteem were correlated with different aspects of stigma, I used a series of linear regressions in order to further examine the relationships between the associated variables – specifically, internalized stigma of special education, anticipated stigma of LD, and secrecy and the mental health variables with which each was correlated (See Tables 4-6). Due to the limited sample size, I was not able to enter all the predictors into the model simultaneously, although I did control for gender, age, and LRE. Missing data prohibited the inclusion of SES. None of the covariates were significant in any of the regression model.

First, I looked at anxiety. For the first model, I entered internalized stigma of special education in a linear regression predicting anxiety. As seen in Table 4, this model accounted for 39.4% of the total variation in anxiety and internalization of special education stigma was, indeed, significant ($b = .24$, $p < .05$). Next, I regressed anxiety on LRE, age, gender, and anticipated stigma (See Table 5). This model accounted for 38% of the variance, with anticipated stigma of LD significantly predicting anxiety ($b = .29$, $p < .05$). I repeated this with anxiety and secrecy, which again turned out significant ($b = .19$, $p < .05$).

Of the stigma variables, depression was only correlated with anticipated stigma, so that was the only relationship I examined in regression. As predicted, anticipated stigma turned out to be significant ($b = .30, p < .05$), as depicted in Table 5. In the last two regression models related to mental health, secrecy did predict lower self-esteem ($b = -.23, p < .05$) while internalized stigma of special education was not significant ($b = -.28, p > .05$) (See Tables 4 & 6).

The results of these regression analyses largely align with findings from previous research on anxiety, depression, and stigma conducted with participants with a range of CSIs. Taken together with the bivariate correlations, this suggests that stigma, both anticipated and internalized, has an impact on the mental health of students with LD and that secrecy may play a part in this.

School Outcomes and Educational Aspirations

Three measures of school related outcomes were included in the survey: School belonging, academic engagement, and perceived barriers to college. The means for school belonging and academic engagement fell above the middle of their 5-point scales at 3.66 ($SD = .516$) and 4.05 ($SD = .612$) respectively. The mean levels of perceived barriers to college fell approximately in the middle of the scale ($M = 2.54, SD = .75$).

Table 7 specifically depicts intercorrelations among the stigma variables and school outcomes. Out of all of the stigma identity variables, school belonging was only (negatively) correlated with secrecy ($r = -.49, p < .05$). Academic engagement was negatively correlated with internalized stigma of special education ($r = -.50, p < .05$), with some evidence that behavioral engagement exerted a stronger influence than emotional engagement (which was not significant on its own). The measure of perceived barriers to college was positively correlated with both internalized stigma of special education ($r = .58, p < .05$) and anticipated stigma of LD ($r = .63,$

$p < .01$), with large effect sizes for both. The subscale of perceived barriers measuring internal attributions turned out to be the only outcome variable in this study that demonstrated any significance with centrality of LD identity ($r = .43, p < .05$). Of note, many of the outcome variables, for instance, school belonging and self-esteem, were highly correlated with one another as well as with the mental health outcomes, as can be seen in Table 1.

I estimated a series of linear regressions that further examined the associations between stigma and the school outcome variables. To start, I regressed school belonging on secrecy and the covariates (see Table 8). This model was significant ($r = -.18, p < .01$). Subsequently, I examined the effect of internalized stigma of special education on academic engagement and perceived barriers to college as well as the effect of anticipated stigma on perceived barriers to college. Of these, internalized stigma of special education predicted both academic engagement ($b = -.18, p < .05$), with gender demonstrating an effect ($b = .57, p < .05$), and perceived barriers to college, as seen in Table 9. Likewise, anticipated stigma significantly predicted perceived barriers to college as well ($b = .60, p < .01$) (see Table 10).

Overall, the results of these analyses offer no evidence that stigma mediates a relationship between LRE and school outcomes or LRE and mental health (RQ3). However, they do offer compelling, if preliminary, support for the second half of the conceptual model (Figure 1). In other words, there was evidence that stigma, related to both having a LD and being in special education, impacts student mental health, school adaptation, and the educational aspirations of students with LD in harmful ways.

Discussion

This study extends social psychological research on concealable stigmatized identities (CSIs) to a population that is arguably underrepresented in the literature – adolescents with

learning disabilities (LD). Specifically, I initially aimed to replicate and build on findings from Quinn & Chaudoir (2009) and Quinn et al. (2014) that demonstrated both direct and indirect effects of intraindividual stigma identity variables, including anticipated stigma, internalization, centrality, and salience on psychological distress (i.e. depression and anxiety). Ultimately, the main goal behind the current study was to provide preliminary support for a proposed conceptual model in which intraindividual stigma identity variables mediated a relationship between LRE (% of time in general classes) and psychosocial outcomes related to mental health and school adaptation for students with LD. In addition to depression and anxiety, I added self-esteem as one of the mental health outcomes and included three measures related to school outcomes: Academic engagement, school belonging, and a variable associated with educational aspirations (i.e. perceived barriers to college). Put simply, I hypothesized that student levels of disability-related stigma would vary as a function of the percentage of time students spent in general classes (versus special education settings) which, in turn, would affect their mental health, how they felt about their current educational contexts, and their future educational prospects.

Unfortunately, due to an interruption in data collection stemming from Covid-19, I was unable to attain a sample size adequate enough to test a full mediation model. Instead, I considered this as a pilot study and examined elements of the proposed model in isolation. First, I examined correlations between all of the predictor and outcome variables in my model to determine if there was emerging evidence of the hypothesized relationships – which indeed there was. Anticipated stigma, internalized stigma of special education, and secrecy were all correlated with several of the outcome variables, most clearly anxiety and perceptions of barriers to college. Next, I ran regression models between the predictor variables (internalized stigma of special education, anticipated stigma, and secrecy) and the key outcome variables with which each was

correlated. The findings did offer support for many of the hypothesized relationships, though again, due to the small sample size, the results of my analysis must be interpreted tentatively.

That internalized stigma of special education, secrecy, and anticipated stigma due to LD were all associated to some extent with increased levels of anxiety was one of the clearer and least surprising findings. This, as well as the association between anticipated stigma and depression, aligns with prior research by Quinn & Chaudoir (2009) and Quinn et al. (2014). More recent work by Chaudoir & Quinn (2016) has highlighted that the negative effects of stigma can follow individuals with CSIs into adulthood leading to poorer trajectories of depressive symptoms over time. That students with LD are particularly susceptible to depression and anxiety has been established (Maag & Reid, 2006; Sideridis, 2007). The extent to which stigma contributes to this remains unknown. Nevertheless, since depression has been linked to impaired functioning in relationships (e.g. Davila et al., 2003) and work (Kessler et al., 2006) as well as decreased health (Wulsin & Singal, 2003) over the lifespan, the relationship between experiences of LD-related stigma and depression remains an area in critical need of investigation.

Furthermore, according to the vulnerability model, low self-esteem may play a role in fostering depression. According to this model, based within a diathesis-stress framework, “negative evaluations of the self...constitute a causal risk factor of depression” (Sowislo & Orth, 2013, p. 216). Until more is known about the potential relationships among anxiety, depression, and low self-esteem for students with LD, it will likely be hard to know how to intervene effectively.

As predicted, lower academic engagement and greater perceived barriers to college (specifically internal attributions) were related to stigma. In this study, however, school

belonging was only associated with student secrecy in relation to receiving special education. It may be that the current study was simply too underpowered to capture potential relationships between school belonging and any of the other stigma variables. Nevertheless, a substantial body of research has developed around school belonging demonstrating its connection to the psychological functioning, academic motivation and achievement of adolescents (Pittman & Richmond, 2007; Neel & Fuligni, 2013; Fong et al., 2015). This association has been shown to be particularly relevant to minoritized youth (Goodenow & Grady, 1993; Uwah et al., 2008). Surprisingly, then, little research has explicitly considered the ways in which stigma processes such as anticipated stigma might impair school belonging, though some studies have approached the issue, albeit indirectly, with regards to mental illness (Kranke & Floersch, 2009) and sexual attraction status (Galliher et al., 2004). School belonging, in general, is understudied in relation to students with LD – a gap in the literature that future studies should address.

Disappointing school outcomes remain a concern for students with LD (though see Seo et al., 2008, for conflicting findings). Low academic engagement has been identified as one of several factors associated with academic failure (e.g. low GPA) across all students (Lucio et al., 2012). In contrast to school belonging, a number of studies have examined academic engagement and students with mild disabilities such as LD and evidence does suggest a connection between decreased school engagement and dropout rates (Reschly & Christenson, 2006). Academic engagement has also been investigated as one factor related to academic persistence and success of college students with LD (DaDeppo, 2009). These studies, among others, offer compelling evidence as to why it is critical to determine the impact stigma might have on academic engagement. This pilot study offered a small step in that direction.

While the adapted measure of perceived barriers to college was not associated with either academic engagement or school belonging, it was highly correlated not only with anxiety, depression, and self-esteem, but also internalized and anticipated stigma. This adapted measure (Cook et al., 1996) has, to my knowledge, never been used with students with disabilities. However, in this study, it illuminates a potential reason for some of the disappointing postsecondary outcomes for students with LD – if a student believes they are not smart enough to attend and succeed at college, then perhaps they will exert less effort or disengage, resulting in a self-fulfilling prophecy.

Taken together, that the expected correlations between anxiety, depression, self-esteem, academic engagement, and school belonging manifested in this data suggests that the findings regarding stigma should also be considered seriously. If so, then it becomes clear that this nexus of mental health, school outcomes, and stigma variables merits ongoing and sustained inquiry in regard to youth with LD.

Limitations and Future Directions

There are a number of significant limitations to the current study – primary among these the small and homogenous sample. The 40 students who participated were recruited exclusively from two schools with similar demographic profiles. Reflecting this, more than 80% of the sample in this study identified as Latino/Hispanic. Additionally, both schools reported enrolling a majority of socioeconomically disadvantaged students. This raises questions of generalizability and precludes cross-cultural examination of sociocultural factors that have the potential to shape students' understandings of what it means to have a LD. For example, whether a student identifies with the LD label could be impacted by their own or their family members'

interpretations of information provided to them by teachers or school psychologists. Varying cultural understandings of disability, language differences, and inconsistent use of terminology related to special education and disability all have the potential to complicate interactions among students, families, teachers, and other school personnel. On another note, immigration status represents another identity which is both concealable and which has been stigmatized within the U.S., both historically and currently. It is possible that secrecy surrounding immigration status within families could interact with secrecy surrounding disability status.

While some research on early childhood and K-12 education over the last few decades has examined how understandings of disability within the United States may vary as a function of cultural and linguistic differences (Poplin & Phillips, 1993; Keogh et al., 1997; García et al., 2000), social psychological research on stigma has rarely explicitly addressed potential differences. Future research should recognize and address limitations such as these. The field would benefit from an increase in cross-cultural examinations of disability-related stigma, its causes, and its effects.

Undoubtedly, conducting social psychological research on disability-related stigma in schools presents unique challenges, particularly when the disability is concealable – challenges both conceptual and methodological in nature. Confidentiality issues involving disability status and special education eligibility are one issue. The limited number of stigma measures validated with adolescents represents another concern, though recent research has begun to address this limitation (Daley & Rappolt-Schlichtmann, 2018). However, the most significant challenge encountered in this pilot study was the unexpected number of students who did not identify as having a LD or as receiving special education services at all. Potential explanations for students'

nonidentification are discussed below as are the implications for future school-based research on LD-related stigma.

Nonidentification of LD and/or Special Education Status

In total, 40 students participated in the current study. However, as a result of skip and display logic, only students who indicated on the survey that they had a learning disability or learning difference received the measures of LD-related stigma. This yielded a sample of 23 participants who responded to measures of centrality, salience, anticipated stigma, and internalization of LD-stigma. Similarly, only 26 students out of 40 indicated on the survey that they received special education services. Four marked *No*, while 10 marked *Not sure*.

The decision to employ skip logic was rooted in ethical considerations. Based on expert review with special education teachers, it was expected that some participants might be unaware of their disability. Therefore, the decision was made that to disclose their LD status to students who were potentially unaware of their disability would be a violation of the principal of beneficence. Nevertheless, I did not expect 17 students (over 42% of the sample) to answer *No* or *Not Sure* to the question “Do you have a learning disability or a learning difference?” That only 26 students indicated definitively that they received special education services was also surprising. Arguably, this lack of identification presents one of the most intriguing findings of this study and raises several important questions. First and foremost, among these is: Who are these students and what are the reasons for their nonidentification? While it is impossible to fully address this question using the data from this study, the potential answers to this question hold varying implications for future research on LD-related stigma, including the development of stigma interventions, as well as for educational practices at the K-12 and postsecondary levels.

Negotiating the Label

One potential reason for respondents' lack of identification with the LD label is that they do not actually perceive themselves as having a LD and/or have a different understanding of what their obstacles in school entail. Conceivably, parents or guardians might have opted not to disclose the LD diagnosis to their child as a result of their own internalized stigma in relation to the condition – a phenomenon which has been labeled *courtesy stigma* or *affiliate stigma* (Goffman, 1963; Mak & Cheung, 2008). A substantial amount of research has been devoted to the topic of affiliate stigma in relation to family members of people with developmental disabilities (e.g. Werner & Shulman, 2013). Far less has looked at affiliate stigma and LD. This is an area future research should consider.

Although 31 of the participants in the current study indicated that they had an IEP meeting within the last year, it is also possible that some students were unfamiliar with special education terminology or jargon. As may be the case with family members, teachers and other professionals may avoid using the words disability or special education, again out of an awareness of the stigma attached to the labels. It was due, in part, to this possibility that the phrase “learning difference” was included as part of the stigma measures in addition to “learning disability.” However, it may be that the addition of this alternative phrasing is too simple or reductive to fully capture the wide array of experiences and understandings that students have in relation to LD. Some research has, in fact, examined the complexities involved in negotiating the LD label.

In a longitudinal study conducted with 41 students with LD, Higgins et al. (2002) outlined five stages students may undergo in coming to terms with a LD diagnosis. The stages of acceptance include: (a) an initial awareness of difference, (b) experiencing a labeling event, (c)

understanding and negotiating the label, (d) compartmentalization of the identity, and, lastly, (c) a transformation of their attitude toward their disability.

The labeling event, as described by Higgins et al. (2002), is not a one-time occurrence, but rather an ongoing and interactive process through which multiple stakeholders, including parents, doctors, teachers, and other professionals, attempt to identify and name the difficulties they perceive a child to be experiencing. Informants in this study described having numerous labels applied to them throughout this process, including “nearsighted,” “hard of hearing,” “auditory sequencing deficit,” “underachiever,” “slow,” “troublemaker,” “remedial reader,” “speech/language delayed,” “dyslexic,” and “attention-deficit disorder,” among others, with some of the labels being more clearly aligned with academic difficulties than others. Some informants also described “the actual experience of ‘having’ an LD (qualifying) in one setting or at one point in time and ‘not having’ an LD (not qualifying) in another” (Higgins et al., 2002, p. 11). Relatedly, some of the participants in this study did not even believe that they had a LD, holding a variety of beliefs as to how to label or describe their difficulties. Higgins et al. (2002) elaborated:

“The finding that some of our informants concluded that their difficulties were not academic, that the etiology of their difference in the classroom was due to other causes (e.g. behavior, emotional issue), and that they do not possess the critical ‘symptoms’ that we now use to define ‘learning disabilities,’ reflects that the definition was in a period of flux when their age cohort proceeded through educational institutions where they were most likely to be referred. This process of identifying members of the class ‘learning disabilities’ has differed across time as well as across state and national geopolitical boundaries. The fact that some of our participants could, and did, ‘choose’ to not be

members of the LD subgroup as adults, preferring another designation (emotionally disturbed, behavior problems, etc.) or no designation at all, regardless of the loss of potential social services, speaks volumes to the power of the label in itself” (p. 15).

Although Higgins et al. (2002) refer here to a specific “period of flux” in the 1980s and 1990s with regard to the definition of LD, arguably, the LD label, both definitionally and diagnostically, has always shifted and presumably continues to do so as referral processes, interventions, and neuroscience evolve. If “shifting” is, indeed, the norm when it comes to the definition of LD, then students are likely to continue to comprehend and name their “difficulties” in different ways.

Following the labeling event, students engage in a psychological process of negotiating the label they will adopt. This involves sifting through inadequate and/or conflicting explanations of LD they have received from professionals or family members in order to identify which labels they feel most accurately reflect their difficulties while, simultaneously, rejecting the labels perceived to be the most negative or stigmatizing. Higgins et al. (2002) assert that when “discussing the degree of acceptance (or denial) of one’s LD, the question arises of whose definition of LD to accept” (p. 11). Ultimately, students may elect to use their own “folk” categories (sometimes consisting of descriptive terms), that better capture their “condition” as they experience it, rather than the labels of the educational establishment – for example, referring to their experiences as “problems in reading and writing” as opposed to “learning disability” or even “learning problems.” In sum, students may not indicate that they have a learning disability or learning difference on a survey, in conversation, or in other contexts, because that is simply not how they would define, conceptualize, or categorize their academic and educational experiences. Nevertheless, Higgins et al. (2002) suggest that, either way, whether they accept the

LD label or not, individuals who meet the criteria for a LD diagnosis remain vulnerable to confused and negative self-images. Furthermore, research suggests that youth with LD do tend to sense that something is “the matter with them” long before they receive an official diagnosis of any kind (Hellendoorn, & Ruijsenaars, 1998; Higgins et al., 2002).

If students sense that something is “the matter,” it still renders them vulnerable to the negative effects of stigma and discrimination and may strip them of some of the potential benefits that come with having and acknowledging a label (e.g. self-advocacy, access to services, self-protective attributional biases). As Osterholm et al. (2011) note, informal labeling can impact a labeled individual as well. Put another way, students identified as LD may feel stigmatized “from the cumulative impact of experiences germinated by the symptoms of the *disorder*” (Osterholm et al., 2011, p. 3) and not just from the label itself. In an unpublished dissertation, Cohen (1977) found that, when presented with a vignette describing atypical behavior associated with LD, teachers actually rated the featured student in the vignette more negatively when they were told that the student had a LD.

Regardless of whether they know that they have been assigned an LD label, some students may be conscious that they receive different or “special” treatment (e.g. smaller classes, attending separate classrooms, different textbooks) and find it stigmatizing. Presumably, the differences might be made more salient for those students who spend a greater amount of time moving between general and special education settings, hence heightening their sense of potentially stigmatizing differences. The current study examined salience specifically in relation to LRE and the LD-label. While the data from this pilot did not support that hypothesized relationship, it could be that the small sample size was not adequate to pick up on any

relationship between LRE, salience, and LD as a stigmatized identity. On the other hand, it could be that the wrong stigma was being examined.

A final possibility is that some nonidentifying students may, in fact, know that they have a learning disability and/or receive special education services but choose not to disclose these aspects of their identity, even on a supposedly anonymous survey. Assuming a student is aware on some level of the attendant stigma attached to the label, denying or concealing the identity may serve a self-protective function. In a study that investigated the relationship between identity concealment and self-esteem in stigmatized minority group members, Plante, Roberts, Reysen, and Gerbasi (2014) highlighted the function of identity management strategies:

“Given the problems associated with being identified as a member of a stigmatized group, members of stigmatized minorities may seek to conceal their group identity to avoid the stigma altogether. Indeed, past research has suggested that for those with concealable stigmatized identities, such as members of sexual minorities, there exists a continuum of identity management strategies that differ in the degree to which they involve concealing one’s identity from those around them” (p. 4)

Plante et al. (2014) highlights two key types of strategies – passing strategies and covering strategies. Passing involves denial of the group identity and may entail “vigilance in language choice or outright fabrication of information to appear as part of the majority” (p. 4). Covering strategies involve changing one’s behavior so as not to display characteristics associated with the stigmatized identity. In either case, the stigmatized individual may pay a cost, in that concealment strategies can deplete cognitive resources and contribute to anxiety, depression, and chronic stress. Relatedly, a substantial amount of research has demonstrated the negative effect of identity concealment on the self-esteem and general well-being of members of minority

groups (e.g. Meyer, 2003), in some cases specifically highlighting the impact of preoccupation with potential disclosure (Smart & Wegner, 1999; Quinn & Chaudoir, 2009). In the current study, secrecy regarding special education was associated with increased anxiety and was also negatively correlated with both self-esteem and school belonging. Furthermore, secrecy was found to significantly predict all three when entered into a regression model controlling for gender, age, and LRE. Unfortunately, the measure of secrecy used in this study included only one item and referred only to participation in special education and not to LD-status. Given prior research documenting the negative effects of concealment of an identity as well as the associations found here between secrecy, anxiety, self-esteem, and school belonging, future studies should employ more effective measures of secrecy and/or preoccupation with disclosure.

In sum, there are several potential reasons why a student might not identify as having a LD on a survey such as the one administered as part of this study. First, a student simply may not know they have a LD. Second, they may be aware that they are “different” but may use alternative wording in reference to this difference. For example, some students may use descriptive terms such as “reading difficulties” to capture perceived or experienced differences while others may use language more directly linked to the structures or institutions of special education, perhaps referring to themselves as “resource students” or as students with IEPs. A student may also know they have been assigned the LD label, but consciously or defiantly reject the label. Or, perhaps, they are following the lead of family members, who may have impressed upon them not to disclose. Lastly, a student may be aware of their LD label and even believe that it applies to them but still choose not to disclose it because of the stigma associated with the label. Simply put, they may be too embarrassed or stigmatized to do so.

Regardless of the reason, nonidentification of LD has potentially serious repercussions for students in addition to presenting researchers with critical issues that must be considered in future research on stigma and LD. As previously discussed, students with LD remain underrepresented in college and experience higher attrition rates when they do attend. Accessing disability services and using accommodations are two strategies that have been consistently linked to college completion rates for students with disabilities. In spite of this, numerous studies have documented the underutilization of these services by students with LD (Connor, 2012a, 2012b). Students who are reluctant to disclose their disability due to stigma may have a harder time requesting and accessing accommodations that could help them succeed and, therefore, may be at greater risk of dropping out of college. The same goes for adults with LD in the workforce, who may be unable or hesitant to articulate what accommodations they need. On the other hand, it is also possible that acknowledging an identity, such as LD, that has been linked to stereotypes of laziness or unintelligence could lead to a self-fulfilling prophecy both in terms of educational and occupational aspirations. Is it sometimes better not to know?

Nonidentification of LD by students with an LD label also presents researchers with substantial challenges. Osterholm et al. (2002) suggests that “[L]abeled students, their co-learners, and teachers often experience considerable frustration in negotiating the legal, ethical, educational, and social mazes that learning disabilities present” (p. 2). Researchers interested in LD are not immune to this frustration and must also navigate these same mazes to varying degrees. Students who have LD but do not identify as having it remain susceptible to both discrimination and public stigma. They may still be stereotyped by teachers and fellow students who are aware of their LD or know that they are “in” special education. In other cases, educators and peers may treat them in different and stigmatizing ways as a response to behavioral

indicators or manifestations of the disability in the classroom (e.g. reading aloud in class) rather than as a result of the label itself. In both cases, students may internalize the negative messages, intentional or unintentional, that they receive. How do researchers capture the experiences of these students? And, if it is indeed true that some students are so highly stigmatized by their LD that they choose not to disclose it, even within the context of a confidential research study, then the findings of that study will be incomplete. The perceptions of the most stigmatized students, the very population that the researcher was hoping to reach, will be missed. Future research must consider how to correct this.

Ultimately, the findings from this exploratory study point to the idea that there is not one type of student with LD. As discussed above, there are potentially several different profiles just of nonidentifying students. Furthermore, all individuals inhabit multiple social categories. Possessing multiple stigmatized identities is likely to impact or shape the experiences of those students who possess them. Recent work in social psychology has begun to examine intersectional stigma (Earnshaw et al., 2019) and has offered some evidence that possessing multiple CSIs is, in fact, associated with worse quality of life (Reinka et al., 2020). However, this work is in its nascent stages and, to my knowledge, has not focused on the school context. The need for more studies, especially in relation to concealable disabilities such as LD, is urgent.

Another surprising finding of this study was the positive correlation between internalized stigma of special education and positive beliefs about LD. The same relationship was not found to be statistically significant between positive beliefs about LD and internalized stigma of having a LD. This suggests that these two types of stigma (LD and Special Education), while interrelated, represent different constructs and should not be conflated in the emerging research literature on stigma and concealable disabilities. Daley & Rappolt-Schlichtmann (2018) recently

validated a measure of stigma consciousness to be used with adolescents with LD. This represents an important step forward in the study of LD-related stigma. To my knowledge, however, no one has developed a validated stigma measure addressing special education stigma. This is an important next step and would allow researchers to compare the impact of special education stigma not only among students with LD but also across disability categories.

To be clear, some students might feel stigmatized about being “in special ed” while simultaneously accepting their LD or even seeing it as a valuable and important aspect of their identity. Shih (2004) has advocated for researchers to take a broader approach in examining the experience of being stigmatized, pointing out that the vast majority of research on stigma has focused on the harmful or deleterious impact of stigmas on the lives of the stigmatized. As important as this continues to be, it is based on a “coping” model of dealing with stigma and, as such, assumes that stigmatized persons will necessarily be depleted by the process of dealing with or overcoming stigma. This approach largely ignores individuals possessing a stigmatized identity who prosper. This gap calls for an approach to studying stigma that also considers resilience and empowerment. Certainly, important things could be learned from such an approach.

Measurement issues

In carrying out this study, several measurement issues were encountered. The three-item measure of salience adapted from Quinn et al. (2014) did not hold together for this sample of students. Even after dropping one item about which several participants expressed confusion, the scale still exhibited a low Cronbach’s alpha ($\alpha = .49$). The internalized stigma of LD scale also demonstrated relatively low reliability ($\alpha = .57$) in spite of including very similar items to the internalized stigma of special education measure ($\alpha = .84$). The fact that the measure of secrecy

consisted of only one item is a serious limitation. Furthermore, that this item correlated so highly with internalized stigma of special education raises concern. While the measure of centrality had high reliability ($\alpha = .84$), it was not found to have a statistically significant relationship with any other variable. In Higgins et al. (2002), participants expressed feelings of “differentness,” but, generally, did not consider themselves as part of a separate subculture or community. It may be that some of these measures, such as centrality, are not relevant to this specific population and that importing methodology or measures from existing social psychological research on CSIs is insufficient.

Structural Stigma, LRE, and Inclusion

In validating their measure of LD stigma consciousness, Daley & Rappolt-Schlichtmann (2018) highlighted the overall variability of individual perceptions of stigmatization within a sample of adolescents with LD. Overall, some students with LD may just be more prone to feeling stigmatized than others, regardless of whether they are included 40% of the school day or 90. Person characteristics such as temperament or a tendency for rumination could interact with or even override structural factors such as LRE when it comes to student experiences of disability and stigma. Age of diagnosis, for instance, could be one individual level factor that shape the development of a student’s feelings of stigma and/or perception of school belonging. Unfortunately, in this study, there was not sufficient data to explore how a variable such as age of diagnosis impacted stigma.

On the other hand, it may be that conceptualizing LRE simply as a percentage of time in general classes is inadequate. For one, what is the nature of the classes in which a student is included? Are the experiences of a student who spends all of their “included” time in electives comparable to those of a student who is included for academic classes? What of extracurriculars?

Then, there is the issue of what specifically happens in each of those classrooms. What are the attitudes of the teachers or the classmates who are present?

While this study did not offer evidence of structural stigma as originally conceptualized (i.e. LRE as a predictor of stigma processes), the distinction uncovered between stigma of LD and stigma of special education offers another way of thinking about structural stigma. If a student does not feel a sense of stigma about their disability (an identity specific to them) but does feel stigmatized as a result of being a part of the special education system, it suggests that there is a structural component to stigma. The presumed existence of structural stigma is arguably at the heart of the inclusion movement embraced by many advocates, educators, researchers, family members, and individuals with disabilities. As a response to the stigma associated with variations in educational placement, some scholars have called for the fostering of least restrictive attitudes (Baglieri & Shapiro, 2012), while others have argued, for decades, that students with disabilities are too often caught in the continuum of placements (Taylor, 1988). While these arguments are often made in reference to students with extensive support needs, they are applicable to students with LD as well.

Moving forward, research needs to take a more nuanced approach to understanding the varying ways in which students labeled with LD encounter and experience stigma in the school setting. This entails more effectively addressing structural stigma in its myriad forms, including LRE. This is no small undertaking and a survey of one population alone (i.e. students with LD) may not be sufficient to meet the task. Future studies will need to take into account contextual factors that inform how LRE gets enacted at the school level. For instance, observational studies of the school environment could document the location and visibility of the special education-specific classrooms as a school level variable predicting stigma for students who must attend

those classrooms. Since a “labeled individual’s self-perception is inextricably bound to others’ perceptions and reactions” (Osterholm et al., 2007, p. 2), teachers and students without disabilities should be surveyed in order to get at the levels of public stigma in a given school. The results of these surveys could be examined in conjunction with measures of self-stigma and anticipated stigma collected from the students with disabilities to better capture the forces that could be acting upon students with LD and perpetuating stigma.

Mixed methods research offers one way forward, perhaps enabling researchers to better approach these issues in all their complexity. In-depth interviews, conducted with sensitivity, could offer one way to assess stigma among nonidentifying students without explicitly asking them to disclose their disability. Furthermore, the results of these interviews hold the potential to illuminate stigma arising “from the cumulative impact of experiences germinated by the symptoms of the *disorder*” (Osterholm et al., 2011, p. 3) or stigma associated with the “folk” labels or descriptions students may have adopted as an alternative to the LD diagnosis. When surveys are administered to students with LD, they may need to include definitions of LD or special education, provide vignettes, or ask students about metastereotypes of disability or even if they have ever been told by a teacher that they have a LD or problem with reading.

Given the extensive research documenting “the hidden costs of hidden stigma” (Smart & Wegner, 2000) as well as the psychological impact of concealing a stigma (Pachankis, 2007), thinking about more effective ways to examine secrecy, stigma, and disclosure in relation to concealable disabilities seems an important endeavor. Ultimately, all of these methodological and conceptual issues need to be taken seriously as the field moves forward.

Conclusion

Over the last few decades, a considerable body of research has developed around concealable stigmatized identities (CSIs), specifically examining the impact of possessing a CSI on a range of psychological and health outcomes. While some of this research has involved adolescents, very little of it has taken into account the school context or even school outcomes. This pilot study did both, adding school related outcomes such as school belonging and academic engagement in addition to examining least restrictive environment (LRE) as a school-level factor that might contribute to the stigmatization of students with learning disabilities (LD).

In keeping with prior work on CSIs, stigma was conceptualized in this study in terms of a constellation of identity-related variables (internalized stigma, anticipated stigma, centrality, salience, and secrecy). Each variable was examined in terms of its unique contribution to mental health and school outcomes for students with LD. In sum, anticipated stigma, internalized stigma, and secrecy were all, to varying degrees, associated with increased anxiety or depression and lower self-esteem in this sample. Academic engagement and, in particular, perceived barriers to college were similarly impacted by stigma. The impact on school belonging was less clear while the overall influence of LRE was minimal in this study.

Nevertheless, school context, including LRE, should play a greater role in future research on CSIs. A key limitation of this study was its small sample size, which raises the possibility that some of the findings are subject to Type II errors. A larger sample size would allow for a more in depth and rigorous examination of stigma and LD. However, before this occurs, key measurement issues need to be addressed – primarily validating both a measure of internalized stigma of special education and a measure of secrecy for use with an adolescent sample. It may also be necessary for researchers to broaden the ways in which they think about stigma and

disability in order to develop a more complete picture of the ways in which youth might navigate their LD identities – whether it be through passing, coping, hiding, denying, overcoming, or even in some yet to be uncovered way.

More than half a century has passed since Goffman's (1963) seminal work on stigma. A staggering amount of research on stigma has evolved over the last several decades, crossing disciplines and covering a wide array of stigmatizing conditions, including those that are concealable. Given that the Education for All Handicapped Children Act (EAHCA) was enacted by the United States Congress in 1975, there is still considerable room for research on disability-related stigma in the school context to develop. While some studies have identified the benefits that a label might provide, such as access to needed services and resources or as focus for advocacy (e.g. Keogh, 1987), other lines of research have consistently identified the dangers of label application. An influential sociological concept, labeling theory, posits that the labeling of individuals as "different" not only potentially marks them in stigmatizing or negative ways but actually creates a distorted reality not only for those who are marked but for those with whom they interact – including family members, teachers, and peers (Hebding & Glick, 1987). In one sense, then, students and teachers alike, both with and without disabilities, can get caught in the continuum of placements. Clearly, students with LD are more than passive recipients of negative labels, but rather are engaged in an ongoing process of negotiating the meaning of the labels to which they have been "assigned." But what of the administrators, teachers, and policy makers? They are hardly passive either. Special education represents a form of negotiation among multiple stakeholders, one in which decision making has consequences. As Osterholm et al. (2007) suggests, policies that result in the physical segregation of labeled students from nonlabelled co-learners may legitimize feelings of stigmatization. This has implications for both

practitioners and researchers. Assigning a diagnostic label, such as LD, to a child or young adult and entering them into the special education system will almost certainly have a profound effect on them, not only educationally but psychologically as well.

Table 1

Intercorrelations and Descriptive Statistics for LRE, Stigma Identity, Stigma, and Outcome Variables

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1. LRE	-														
2. Int. Stigma (SpEd)	.20	-													
3. Int. Stigma (LD)	-.21	.77**	-												
4. Anticipated Stigma	.07	.55	.32	-											
5. Centrality	-.12	-.34	-.01	.10	-										
6. Saliency	.06	.64*	.23	.29	.04	-									
7. Secrecy	.10	.82**	.30	.52*	-.38	.38	-								
8. Stigma of Seeking Help	-.08	.13	.16	-.09	-.19	-.50*	-.10	-							
9. Positive Beliefs	-.04	.66*	.39	.20	.25	.47*	.12	-.34	-						
10. Anxiety	-.13	.59**	.23	.50*	-.14	.34	.48*	.09	-.11	-					
11. Depression	-.09	.34	-.09	.43*	.06	.32	.34	-.02	.12	.71**	-				
12. Self-Esteem	-.03	-.52*	-.03	-.32	.30	-.27	-.41*	-.15	.26	-.71**	-.66**	-			
13. School Belonging	-.22	-.44	.11	-.36	.14	-.04	-.49*	-.14	.18	-.44**	-.45**	.67**	-		
14. Academic Engagement	-.23	-.50*	.23	-.11	-.02	-.17	-.32	-.04	.06	-.39*	-.42**	.69**	.65**	-	
15. Perceived Barriers	.02	.58*	.23	.63**	.22	.23	.27	.14	.03	.56**	.33*	-.45**	-.27	-.31*	-
N	38	18	23	23	23	23	26	40	23	40	40	40	40	40	40
Mean	.47	2.81	2.89	2.35	2.88	2.82	3.19	2.69	3.31	2.25	1.73	3.79	3.66	4.05	2.54
Std. Deviation	.21	1.28	.96	.80	1.08	1.24	1.36	.99	.77	.44	.54	.63	.52	.61	.75

Note. Int. Stigma (SpEd) is an abbreviation for Internalized Stigma of Special Education, while Int. Stigma (LD) is an abbreviation for Internalized Stigma of Learning Disabilities. * $p < .05$ ** $p < .01$

Table 2

Intercorrelations and Descriptive Statistics of Stigma Process and Identity Variables

	Int. Stigma of Sp. Ed	Int. Stigma of LD	Anticipated Stigma	Centrality	Salience	Secrecy	Stigma of Seeking Help	Positive Beliefs
Int. Stigma of Sp. Ed	-							
Int. Stigma of LD	.77**	-						
Anticipated stigma	.55	.32	-					
Centrality	-.34	-.01	.10	-				
Salience	.64*	.23	.29	.04	-			
Secrecy	.82**	.30	.52*	-.38	.38	-		
Stigma of seeking help	.13	.16	-.09	-.19	-.50*	-.10	-	
Positive beliefs	.66*	.40	.20	.25	.47*	.12	-.34	-
Mean	2.81	2.89	2.35	2.88	2.82	3.19	2.69	3.31
SD	1.28	.96	.80	1.08	1.24	1.36	.99	.77
N	18	23	23	23	23	26	40	23

Note. * $p < .05$ ** $p < .01$

Table 3

Intercorrelations of Stigma Variables and Mental Health Outcomes

	Int. Stigma of Sp. Ed	Int. Stigma of LD	Anticipated Stigma	Salience	Secrecy	Anxiety	Depression	Self- Esteem
Int. Stigma of Sp. Ed	-							
Int. Stigma of LD	.77**	-						
Anticipated stigma	.55	.32	-					
Salience	.64*	.23	.29	-				
Secrecy	.82**	.30	.52*	.38	-			
Anxiety	.59**	.23	.50*	.34	.48*	-		
Depression	.34	-.09	.43*	.32	.34	.71**	-	
Self-esteem	-.52*	-.03	-.32	-.27	-.41*	-.71**	-.66**	-
N	18	23	23	23	26	40	40	40
M	2.81	2.89	2.35	2.82	3.19	2.25	1.73	3.79
Std. Deviation	1.28	.96	.80	1.24	1.36	.44	.54	.63

Note. * $p < .05$ ** $p < .01$

Table 4

Summary of Simple Regression Analyses for Internalized Stigma of SpEd Predicting Anxiety and Self-Esteem for Students with LD

Variable	Anxiety			Self-Esteem		
	<i>B</i>	<i>SE B</i>	β	<i>B</i>	<i>SE B</i>	β
Intercept	2.190	1.975		3.972	2.954	
Age	-.023	.118	-.045	.049	.177	.067
Gender	-.213	.265	-.195	.367	.396	.227
LRE	-.236	.596	-.090	-.628	.892	-.162
Intern. Stigma of SpEd	.242*	.092	.585	-.278	.138	-.455
<i>R</i> ²		.394			.375	
<i>F</i>		2.115			1.946	

*Note. SpEd refers to Special Education. * $p < .05$ ** $p < .01$*

Table 5

Summary of Simple Regression Analyses for Anticipated Stigma Predicting Anxiety and Depression for Students with LD

Variable	Anxiety			Depression		
	<i>B</i>	<i>SE B</i>	β	<i>B</i>	<i>SE B</i>	β
Intercept	.806	1.479		.087	2.046	
Age	.065	.088	.153	.071	.122	.135
Gender	-.221	.172	-.259	-.115	.237	-.109
LRE	-.656	.398	-.335	-.453	.550	-.188
Anticipated Stigma	.292*	.103	.547	.304*	.143	.462
<i>R</i> ²		.382			.224	
<i>F</i>		2.622			1.229	

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

Table 6

Summary of Simple Regression Analyses for Secrecy Predicting Mental Health Outcomes for Students with LD

Variable	Anxiety			Depression			Self-Esteem		
	<i>B</i>	<i>SE B</i>	β	<i>B</i>	<i>SE B</i>	β	<i>B</i>	<i>SE B</i>	β
Intercept	1.913	1.603		1.158	2.127		4.237	2.412	
Age	-.003	.094	-.007	.025	.125	.044	.012	.142	.017
Gender	-.250	.206	-.252	-.138	.273	-.116	.418	.310	.288
LRE	-.204	.440.	-.090	-.439	.584	.273	-.132	.662	-.040
Secrecy	.187*	.068	.531	.159	.091	.584	-.226*	.103	-.441
<i>R</i> ²		.300			.144			.258	
<i>F</i>		2.142			.844			1.741	

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

Table 7

Intercorrelations of Stigma Variables and School Outcomes

	Int. Stigma of Sp. Ed	Int. Stigma of LD	Anticipated Stigma	Salience	Secrecy	School Belonging	Academic Engagement	Barriers to College
Int. Stigma of Sp. Ed	-							
Int. Stigma of LD	.77**	-						
Anticipated stigma	.55	.32	-					
Salience	.64*	.23	.29	-				
Secrecy	.82**	.30	.52*	.38	-			
School Belonging	-.44	.11	-.36	-.04	-.49*	-		
Academic Engagement	-.50	.23	-.11	-.17	-.32	.65**	-	
Barriers to College	.58*	.23	.63**	.23	.27	-.27	-.31*	-
N	18	23	23	23	26	40	40	40
M	2.81	2.89	2.35	2.82	3.19	2.25	1.73	3.79
Std. Deviation	1.28	.96	.80	1.24	1.36	.44	.54	.63

Note. Int. Stigma of Sp. Ed refers to Internalized Stigma of Special Education and. * $p < .05$ ** $p < .01$

Table 8

Summary of Simple Regression Analyses for Secrecy Predicting School Belonging

Variable	School Belonging		
	<i>B</i>	<i>SE B</i>	β
Intercept	3.455	1.509	
Age	.064	.089	.136
Gender	.072	.194	.072
LRE	-.518	.414	-.227
Secrecy	-.184**	.064	-.520
<i>R</i> ²		.391	
<i>F</i>		3.205*	

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

Table 9

Summary of Simple Regression Analyses for Internalized Stigma of SpEd Predicting School Related Outcomes for Students with LD

Variable	Academic Engagement			Perceived Barriers to College		
	<i>B</i>	<i>SE B</i>	β	<i>B</i>	<i>SE B</i>	β
Intercept	3.638	1.730		2.781	2.700	
Age	.068	.103	.120	-.071	.161	-.094
Gender	.573*	.232	.459	-.596	.362	-.357
LRE	-.824	.522	-.275	.252	.815	.063
Intern. Stigma of SpEd	-.183*	.081	-.389	.330*	.126	.524
<i>R</i> ²		.642			.510	
<i>F</i>		5.816**			3.382*	

*Note. SpED refers to Special Education. * $p < .05$ ** $p < .01$*

Table 10

Summary of Simple Regression Analyses for Anticipated Stigma Predicting Perceived Barriers to College

Variable	Perceived Barriers to College		
	<i>B</i>	<i>SE B</i>	β
Intercept	-1.756	2.177	
Age	.180	.130	.257
Gender	-.363	.253	-.259
LRE	-.079	.586	-.024
Anticipated Stigma	.597**	.152	.679
<i>R</i> ²		.508	
<i>F</i>		4.380*	

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

Appendix A

Survey Instrument

**Thank you for agreeing to participate in the CSULA & UCLA
High School Study!**

Progress 



1. To begin...

Please type in the
participant ID in this box


Progress




Please re-type the participant ID here to confirm



2. From the drop down menu select the MONTH of your birthday:

--Click Here-- 

3. From the drop down menu select the DAY of your birthday:

--Click Here-- 

4. From the drop down menu select the YEAR of your birthday:

--Click Here-- 

5. What is your school code?

Progress 



The Ladders of Life

6. Imagine that this ladder pictures all the students at your school.

At the top of the ladder are the students who get the **BEST GRADES** and at the bottom are the students who get the **WORST GRADES**. Where do you think **YOU** would be on this ladder?

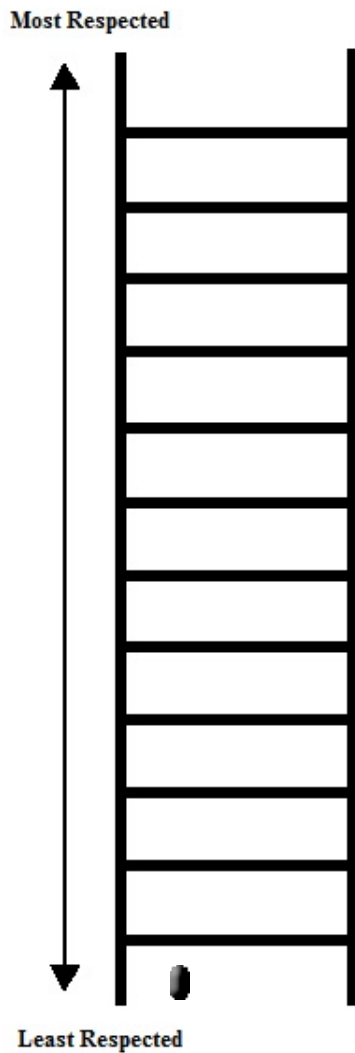


Progress



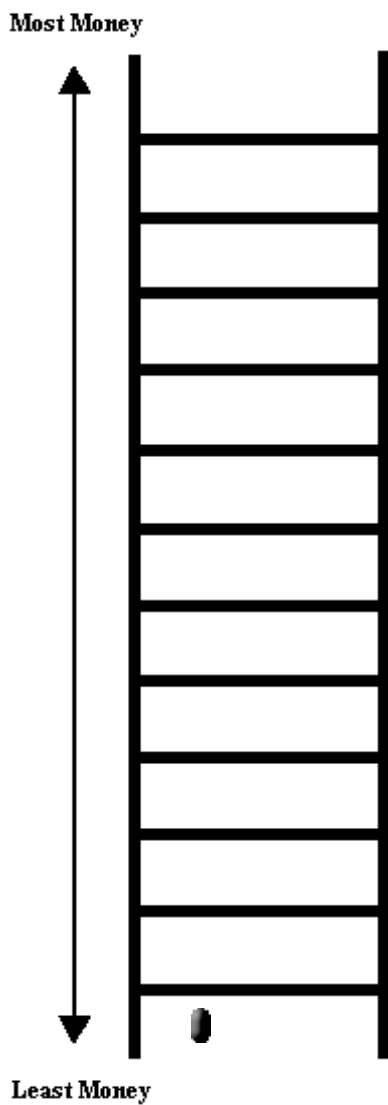
7. Imagine that this ladder pictures all the students at your school.

At the top of the ladder are the students who are MOST RESPECTED and at the bottom are the students who are LEAST RESPECTED. Where do you think you would be on this ladder? Move the oval button to indicate where YOU would be on this ladder.



k

This ladder pictures how American Society is set up. At the top are the people that have MOST MONEY and at the bottom are the people who have the LEAST MONEY. Now think about YOUR FAMILY. Where do you think they would be on this ladder? Move the oval button to indicate where YOUR FAMILY would be on this ladder.



My Ethnic Group Every person belongs to an ethnic group, or more than one group. Please select the box that describes your ethnic group.

9. What is your ethnic group?

- American Indian*
- Black/African-American*
- Black/other country of origin*
- East Asian*
- Latino/other country of origin*
- Mexican/Mexican-American*
- Middle Eastern*
- Pacific Islander*
- South Asian*
- Southeast Asian*
- White/Caucasian*
- Multiethnic/Biracial*
- Other*

Progress 



My Gender This question is about what gender you personally identify with (not who you are attracted to). If there are any words that you are not familiar with, or you do not see a word that describes you, you can also write in your own words what identity you would describe yourself as.

12. How would you describe your gender? You can mark as many responses as you need. You can also write a different identity for the "Different Identity" option.

- a Boy*
- a Girl*
- Transgender*
- Nonbinary*
- Gender Fluid*
- Questioning/Not Sure*
- a Different Identity*

Progress 



About My School

Now we would like to know what you think about your high school. How much do you agree with these statements? At this school...

	FOR SURE	Yes	Sort of	No	NO WAY!
1. I can really be myself.	YES!				
2. I am included in lots of activities.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. I sometimes feel as if I don't belong.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. I feel close to people at this school.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. The teachers respect me.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6. I feel different from most other students.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7. I am treated with as much respect as other students.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8. I sometimes wish I was in a different school.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9. I look forward to going to school.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
10. The teachers are NOT interested in me.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
11. I worry about school a lot during my free time	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

12. I often sleep badly because of things that happen at school.
13. I often think of giving up.
14. I like this school.
-

In Your Classes

	FOR SURE	Yes	Sort of	No	NO WAY!
1. I mostly feel good.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. I enjoy learning new things.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. I work as hard as I can..	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. I participate in class discussions.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. I pay attention.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6. I get frustrated when I can't answer a question.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7. I feel bored.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8. I do just enough to get by.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9. I don't try very hard.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
10. I only pretend to do work.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



How often do you do the following with your friends...

15. How often do you and your friends...	Not at all	Once in a While	Sometimes	Frequently	All the time
1. Talk about your future educational plans.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. Talk about the classes you are taking in school.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. Help each other with homework.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. Share class notes, books, and materials with each other.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. Study together for tests.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6. Talk about how to meet graduation requirements.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7. Talk about test-taking strategies.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8. Talk about going to college.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Progress 



Now About You

16. Do any of the following describe you?

	FOR SURE YES!	Yes	Sort of	No	NO WAY!
1. I feel like I have a lot of good qualities.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. I am able to do things as well as most people.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. On the whole I am satisfied with myself.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. I feel like a failure.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. I feel like I do NOT have a lot to be proud of.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6. At times I think I am no good at all.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7. There are alot of things I would change about myself.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8. I often wish I was someone else.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9. I am a lot of fun to be with.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
10. I am proud to be me.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
11. It is pretty tough to be me.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Progress 



Think about how you have felt in the Past Week.

How often during the Last 7 Days did you have any of these feelings?

17. How often have you...	Rarely or none of the time (less than 1 day)	A little (1-2 days)	Some of the time (3-4 days)	Almost all the time (5-7 days)
1. Felt sad?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. Had trouble keeping your mind on what you were doing?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. Felt depressed?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. Felt hopeful about the future?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. Had trouble sleeping?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6. Felt like you could not "get going?"	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7. Felt lonely?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8. Had a crying spell?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9. Felt that you couldn't shake the blues?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
10. Felt that everything was an effort?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
11. Felt hopeful about the future	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Progress 

A number of statements that people use to describe themselves are listed below. Read each statement and then check the statement that best matches how you feel most of the time.

18. How often is each of these true:

	Almost never	Sometimes	Often	Almost always
1. I feel calm	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. I feel nervous.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. I feel satisfied with myself.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. I wish I could be as happy as other people.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. I feel like a failure.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6. I feel well rested.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7. I worry too much.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8. I make decisions easily.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Progress 



My Physical Health

Please rate how many times in the PAST TWO WEEKS you experienced each of the following physical complaints, using the rating scale below.

19.	Not at all	Once or twice	A few times	Almost every day
1. Headaches	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. Very tired for no reason	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. Stomach aches or pain	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. Upset stomach/nausea	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. Poor appetite	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6. Problems sleeping	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

20. Do you smoke?

- Yes, *alot*
 - Yes, *a little*
 - No
-

Progress 



Your Education

21. Compared to other students in your classes, how smart are you in school?

- A lot smarter*
- Somewhat smarter*
- About the same as them*
- Less smart*
- A lot less smart*

22. How far do you think you will go in school?

- Will not finish high school*
- Graduate High School*
- Go to community college/ vocational school (ex. to be a hairdresser, mechanic)*
- 4 year college graduate or beyond*
- Don't know*

23. Compared to other students in your classes, how well do you expect to do in this school year?

- A lot better*
- Somewhat better*
- About the same*
- Somewhat worse*
- A lot worse*

Progress 



24. Do you go to a different room for extra help with math or reading for part of the school day?

Yes

No

Not sure

26. Do you receive special education services?

Yes

No

Not sure

Progress



**27. In what grade did you first receive special education?
Answer to the best of your ability.**

Kindergarten

1st grade

2nd grade

3rd grade

4th grade

5th grade

6th grade

7th grade

8th grade

9th grade

10th grade

11th grade

12th grade

Progress 



28. How often do you think about being in special ed?

- Almost never*
- Once a month*
- Several times a month*
- A few times a week*
- Once a week*
- Probably once a day*
- Many times each day*

Progress 



How much do you agree with the following statement?

29. I often feel the need to hide that I am in special education.

Progress



30. How often in the past month did you...?

Very often! Fairly often Sometimes Almost never Never!

Feel embarrassed that you are in special education?

Feel different from students who are NOT in special education?

Progress 



31. Do you have an individualized education program (IEP)?

- Yes
- No
- Not sure*

Progress 



32. How long ago was your last IEP meeting?

- Less than a month ago*
- 1-3 months ago*
- 3-6 months ago*
- 6-9 months ago*
- 9 months to 1 year ago*
- More than a year ago*

33. How much did you participate in your IEP meeting?

- A lot!*
- Somewhat*
- Very little*
- Not at all*

34. How useful has your IEP been?

- Very useful!*
- Somewhat useful*
- Only a little useful*
- Not useful at all*

Progress 



35. Sometimes students receive additional support or accommodations to help them in their classes. Which of the supports listed below do you receive?

- Extra time for test*
- Use of calculator during test*
- Having part of test read to you*
- Use of spellcheck during test*
- Taking test in quiet or private area*
- Teacher provides notes*
- Color coded notes*
- Textbooks converted to audio*
- Organizer or checklist created with teacher*
- Given choice o give verbal presentation in place of written one*

36. How much do agree with each of these statements?

	Strongly agree!	Agree	Neither agree or disagree	Disagree	Strongly disagree!
1. It makes me feel bad to ask a teacher for extra help with classwork.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. Asking to use my accommodations (listed above) makes me feel worse about myself.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Progress 



37. Do you have a learning disability or learning difference?

- Yes
- No
- Not sure*

Progress 



37. Do you have a learning disability or learning difference?

- Yes
- No
- Not sure

38. What type of learning disability/difference do you have?
You can check more than one.

- Language
- Reading
- Writing
- Math
- Attention (ADD/ADHD)
- Other

Progress 



39. At what age did you find out that you had a learning

[

Progress 



40. My learning disability/difference often crosses my mind for no reason.

Strongly Agree! **Agree** **Neither agree or disagree** **Disagree** **Strongly disagree!**

My learning difference or disability or difference often crosses my mind for no reason.

I spend a lot of time thinking about my learning difference or disability.

Progress 



**41. How often do you think about your learning disability/
learning difference?**

- Almost never*
 - Once a month*
 - Several times a month*
 - A few times a week*
 - Once a week*
 - Probably once a day*
 - Many times each day*
-

Progress 



42. How often in the past month did you...?

Very often! Fairly often Sometimes Almost never Never!

Feel different from other people due to your learning disability or learning difference?

Feel embarrassed that you have a learning disability or learning difference?

Progress 



In My Opinion

The following questions are about how people with learning disabilities or differences might be treated by teachers and students. How much do you agree with each statement?

43. If other students knew about your learning disability or difference, how likely do you think it is that these things would happen?

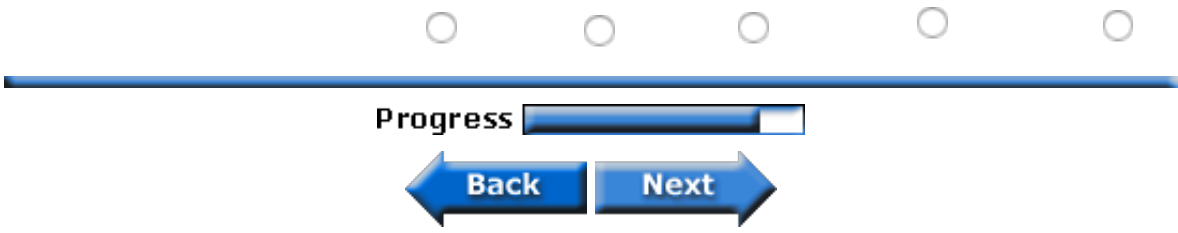
	Very Likely	Likely	Equally Likely or Unlikely	Unlikely	Very Unlikely
1. People acting like you are not smart.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. Other students not wanting to hang out with you.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. People not wanting to date you.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. Other students ignoring you.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. People acting as if they are better than you.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6. Other students giving you a hard time	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7. Other students teasing you.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

44. How much do you agree with the statement below?

Strongly Agree!	Agree	Neither agree or disagree	Disagree	Strongly disagree!
--------------------	-------	---------------------------------	----------	-----------------------

Most of the things
people think about
people with
learning disabilities
or differences are
true.

45. How much do you agree with statements below?	Strongly Agree!	Agree	Neither agree or disagree	Disagree	Strongly disagree!
1. My learning disability/ difference makes me unique.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. Some things about my learning disability/ difference are positive.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. I would be a different person without my learning disability/ difference.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. My learning disability/ difference is a source of strength.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. My learning disability/ difference helps me think in interesting ways.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6. It is impossible to understand me without knowing that I have a learning disability/ difference.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7. My learning disability/ difference makes me creative.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8. My learning disability/ difference has made my life more meaningful.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9. Overall, my learning disability/difference is an important part of how I see myself.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



46. During this school year, have you done any of the following?

	No	Yes at school	Yes outside of school
Started new clubs or groups?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Served as a captain of a sports team?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Tutored someone?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

47. Did you run for student council/government at school?

- No
 Yes

48. Did you serve on student council/government or as a student representative of the school?

- No
 Yes

List all extracurricular activities you are (or have been) involved in this year at school. Extracurricular activities are things you do outside of the classroom like clubs, sports, or student government.

50. Are you planning to go to college right after you graduate from high school?

- Yes

- No*
- Undecided*

Progress 



How I FEEL About Finishing High School

Sometimes, people don't get to go to school as long as they may want to. For example, they finish high school then stop.

51. If you don't go to school beyond high school, which of these would be a reason?

	YES! Definitely a reason	Yes	Maybe a reason	No	NO! Definitely NOT a reason
1. I'm not smart enough.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. I didn't try hard enough.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. My friends aren't going.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. My teachers/counselors don't think that someone like me should go to college.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. I have to help my family.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6. There won't be people like me at college.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7. I wouldn't fit in.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8. I won't have enough money.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9. My grades are too low.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
10. I would need a scholarship and they are hard to get.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**We would now like you to explain your typical school day.
There is space for you to answer questions about 8
classes. If you are taking fewer than 8 classes, leave the
remaining spaces blank and skip the questions.**

52. How many classes are you currently taking?

53. What is your first class?

54. Who is your teacher for your first class?

**55. About how many students are in this class with
you?**

1-5

6-10

11-15

16-20

more than 20

56. How hard or easy is this class?

Really hard!

Somewhat hard

Neither hard or easy

Somewhat easy

Really easy!

57. What is your second class?

58. Who is your teacher for your second class?

59. About how many students are in this class with you?

1-5

6-10

11-15

16-20

more than 20

60. How hard or easy is this class?

Really hard!

Somewhat hard

Neither hard or easy

Somewhat easy

Really easy!

61. What is your third class?

62. Who is your teacher for your third class?

63. About how many students are in this class with you?

1-5

6-10

11-15

16-20

more than 20

64. How hard or easy is this class?

Really hard!

Somewhat hard
Neither hard or easy
Somewhat easy
Really easy!

65. What is your fourth class?

66. Who is your teacher for your fourth class?

67. About how many students are in this class with you?

1-5
6-10
11-15
16-20
more than 20

68. How hard or easy is this class?

Really hard!
Somewhat hard
Neither hard or easy
Somewhat easy
Really easy!

69. What is your fifth class?

70. Who is your teacher for your fifth class?

71. About how many students are in this class with you?

1-5
6-10
11-15

16-20

more than 20

72. How hard or easy is this class?

Really hard!

Somewhat hard

Neither hard or easy

Somewhat easy

Really easy!

73. What is your sixth class?

74. Who is your teacher for your sixth class?

75. About how many students are in this class with you?

1-5

6-10

11-15

16-20

more than 20

76. How hard or easy is this class?

Really hard!

Somewhat hard

Neither hard or easy

Somewhat easy

Really easy!

77. What is your seventh class?

78. Who is your teacher for your seventh class?

79. About how many students are in this class with you?

1 to 5

6-10

11-15

16-20

more than 20

80. How hard or easy is this class?

Really hard!

Somewhat hard

Neither hard or easy

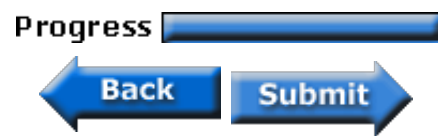
Somewhat easy

Really easy!

Progress 



**Thank you for completing the CSULA & UCLA High School
Survey Please raise your hand to alert a researcher, they
will submit your survey Don't Forget your \$20!**



Appendix B

UCLA and Cal State LA High School Study

Principal Investigator: Bryan Thornton, M.A.

Faculty Sponsor: Sandra Graham, Department of Education

❖ PURPOSE

- Test hypotheses about the relationships between least restrictive environment (LRE) and student experiences of disability-related stigma.
- Test hypotheses about relationships between stigma and student mental health outcomes and academic engagement and sense of belonging.
- Begin to generate knowledge that has potential to inform stigma-reduction efforts and interventions.

❖ SUPPORT

- Society for the Psychological Study of Social Issues (SPSSI) Grant

❖ PARTICIPANTS

- High school students receiving special education services with an eligibility of specific learning disability (SLD)

❖ MEASURES

- Student surveys (self-reports of experiences/perceptions of stigma, measures of academic engagement and school belonging, depression and anxiety, and demographic info)
- Student course schedules
- Individual Education Plans (with permission from parents)

❖ PROCEDURES FOR DATA COLLECTION

- Student self-report data collected once during non-instructional time
- a 20-minute survey administered individually or in small groups on *iPads*
- Survey administered in convenient location (i.e. library or supervised classroom)
- Students receive \$20 for participating
- Lunch provided for the students

❖ POTENTIAL BENEFITS TO THE SCHOOL

- Participate in a study on an important topic that is relevant to the lives of high school students with disabilities
- Principal Investigator will report project findings to school staff and teachers upon completion of analyses
- Principal Investigator will provide the school district with a final report including (1) updates on the project; and (2) recent relevant developments in research on adolescence and learning disabilities
- Upon completion of the project, the Principal Investigator and colleagues will offer to provide professional development on disabilities and stigma (incl. stigma-reduction) to the school district and school

Appendix C

University of California, Los Angeles Parent Consent Form

CONSENT FOR PARENT AND PARENTAL PERMISSION FOR MINOR TO PARTICIPATE IN RESEARCH

UCLA AND CAL STATE LA HIGH SCHOOL SURVEY

Your child is asked to participate in a research study conducted by Bryan Thornton, M.A., and Sandra Graham, Ph.D., and associates from the Departments of Education at the University of California, Los Angeles. Your child was selected as a possible participant in this study because your child's high school is part of this research project. Your child's participation in this research study is voluntary.

Why is this study being done?

The goal of this research is to examine how aspects of students' identities might be related to how they view their school, and how they feel about themselves and their classes. Furthermore, we want to study whether and how these feelings and perceptions about oneself and the school might, in turn, be related to students' well-being and their academic performance.

Our long-term goal is to use the information obtained from the study to develop better programs that are sensitive to the needs of our youth, particularly youth with disabilities.

What will happen if my child takes part in this research study?

If your child volunteers to take part in this study, we will ask him or her to fill out a survey. The survey will be done in a classroom during *nutrition, lunch, or after school*. Each student answers questions privately.

We will also obtain information from school records, including their class schedules, and with additional permission may access their individualized education plans (IEPs). School records will be matched to the survey responses. It is important to note that we will not use any identifying information and your child's name will not appear anywhere. All data will be identified using randomly generated code numbers rather than names. No individual or school identities will be used in any report or publications resulting from this study.

How long will my child and I be in the research study?

This is a one-time survey. Your child will be asked to complete a survey that takes about 20 to 25 minutes.

Are there any potential risks or discomforts that my child and I can expect from this study?

Some of the questions asked are private and may make your child feel slightly uncomfortable. Your child will be asked about how they feel about his or herself, both in general and in relation to having a disability. They will also be asked to rate if they agree or disagree with questions like: *At this school, I can really be myself.* We are particularly interested in learning about how kids think and feel about important aspects of themselves. For example, the survey asks about students' thoughts and feelings about asking teachers for additional help. This type of information can help us to better understand the experiences of youth in high school. They do not have to answer questions about which they feel uncomfortable and can stop the survey at any time with no negative consequences.

Are there any potential benefits if my child and I participate?

Your child will not directly benefit from this study. The results of the research may help educators, researchers, and parents understand how participation in special education impacts their overall school experiences.

Will my child receive any payment if we participate in this study?

Your child will receive a \$20 gift card for completing the survey.

Will information about my child and me be kept confidential?

Any information that is obtained in connection with this study and that can identify your child will remain **confidential**. It will be disclosed only with your permission or as required by law. Confidentiality will be maintained by means of replacing names with code numbers. Only the main researchers will have a list of the code numbers by name. This list will be kept in a locked filing cabinet at UCLA.

What are my rights if my child takes part in this study?

You can either allow or not allow your child to be in this study and your child can choose whether to be in this study or not. Your child may discontinue participation without any penalty or negative consequences. You are not waiving any legal rights if you allow your child to take part in this research study.

Who can answer questions my child and I might have about this study?

If you have any questions, comments or concerns about the research, you can talk to the one of the main researchers. Please contact Bryan Thornton, M.A. (323-333-8115; bethornton1@gmail.com) or Sandra Graham (310-206-1205; shgraham@ucla.edu).

UCLA Office of the Human Research Protection Program (OHRPP):

If you have questions about your rights as a research subject, or you have concerns or suggestions and you want to talk to someone other than the researchers, you may contact the UCLA OHRPP by phone: (310) 206-2040; by email: participants@research.ucla.edu or by mail: Box 951406, Los Angeles, CA 90095-1406.

SIGNATURE OF PARENT OR LEGAL GUARDIAN

Please sign either YES or NO below.

YES!

I understand the procedures described above. My questions have been answered to my satisfaction and I have been given a copy of this form.

Please check one:

I ALLOW my child to participate in this study (i.e., respond to the survey).

I give permission to the researchers to review my child's IEP.

Name of Child Date

_____ Name of Parent or Legal Guardian

_____ Signature of Parent or Legal Guardian

NO!

IF YOU DO NOT ALLOW YOUR CHILD TO TAKE PART IN THIS STUDY, PLEASE SIGN THE PART BELOW. It is important that your child returns this form to school with your signature even if you do NOT allow participation.

_____ Name of Child

_____ Name of Parent or Legal Guardian

_____ Signature of Parent or Legal Guardian

_____ Date

_____ Name of person obtaining consent

_____ Signature of person obtaining consent

UCLA IRB# 19-000362

Appendix D

University of California, Los Angeles Youth Assent Form

YOUTH ASSENT TO PARTICIPATE IN RESEARCH

UCLA AND CAL STATE LA HIGH SCHOOL SURVEY

You are asked to participate in a research study conducted by Bryan Thornton, M.A. and Sandra Graham, PhD. associates from the Departments of Education at the University of California, Los Angeles. You were selected as a possible participant in this study because your school is part of this study. Your participation in this research study is voluntary.

Why is this study being done?

We are asking you to fill out a survey because we are trying to learn more about how students feel about their high school. We are curious if students' perceptions of their school are related to feelings about the self. Just to give you an example, we are interested in learning about how kids think and feel about their classes. For example, the survey asks about how much students participate in classes and how hard they feel like they work in classes. Other questions will ask about how you feel most of the time and how much you worry. This type of information can help us to better understand the experiences of adolescents in high school.

What will happen if I take part in this research study?

If you agree to be in this study we will ask you to fill out a survey once. The survey will be done in a private classroom, or office with only the researchers and the student so that you can answer questions privately. You will be asked to rate if you agree or disagree with questions, like: *At this school, the teachers respect me;* or *in my classes, I enjoy learning new things.* We will also ask questions about your experiences based on such things as your race or gender or disability.

How long will I be in the research study?

Participation in the study will take a total of about 25 minutes and will take place either during nutrition, lunch, or after school.

Are there any potential risks that I can expect from this study?

Some of the questions are private and may make you feel uncomfortable. But you can skip any questions you don't want to answer.

Are there any potential benefits if I participate?

You will not directly benefit from your participation in the study. The results of the research may help parents, teachers, and principals understand what sorts of things matter for kids of your age at school.

Will I receive any payment if I participate in this study?

You will receive a \$20 gift card for your participation.

Will information about me and my participation be kept confidential?

All your answers are confidential. That is, the researchers doing this study will not tell anyone what you personally answered, unless we have your permission or are required by law. We keep the information confidential by giving you a personal code number. Only the main researchers have a list of the code numbers by name. This list is kept in a locked filing cabinet at UCLA.

Would I NOT be able to take part in the study?

The investigator may withdraw you from participating in this research if you disturb others while doing the survey. The researchers will make the decision whether you can continue if you break such rules and let you know if it is not possible for you to continue.

What are my rights if I take part in this study?

You can choose whether or not you want to be in this study. You can decline to participate even if you parents have said yes you are allowed to participate. If you volunteer to be in this study, you may leave the study at any time without consequences of any kind. You are not waiving any of your legal rights if you choose to be in this research study. You may refuse to answer any questions that you do not want to answer and still remain in the study. You will not be punished in any way if you do not want to answer some questions or want to stop.

Who can answer questions I might have about this study?

If you have any questions, comments or concerns about the research, you can talk to the one of the researchers. Please contact Bryan Thornton (323-333-8115; bethornton1@gmail.com) or Sandra Graham (310-206-1205; shgraham@ucla.edu) If you wish to ask questions about your rights as a research participant or if you wish to voice any problems or concerns you may have about the study to someone other than the researchers, please call the Office for Protection of Research Subjects at (310) 825- 7122 or write to Office for Protection of Research Subjects, UCLA, 11000 Kinross Avenue, Suite 102, Box 951694, Los Angeles, CA 90095-1694.

SIGNATURE OF STUDY PARTICIPANT

I understand the procedures described above. My questions have been answered to my satisfaction, and I agree to participate in this study. I have been given a copy of this form.

_____ Name of participant

_____ Signature of participant

_____ Date

_____ Name of person obtaining consent

_____ Signature of person obtaining consent

Protocol ID:

Approval Date:

Through: Committee: North General IRB

Appendix E

UCLA IRB Approval Notification



University of California Los Angeles
10889 Wilshire Blvd, Suite 830
Los Angeles, CA 90095-1406

<http://ora.research.ucla.edu/ohrpp>
General Campus IRB: (310) 825-7122
Medical IRB: (310) 825-5344

APPROVAL NOTICE (No Continuing Review Required) New Study

DATE:	4/11/2019
TO:	BRYAN THORNTON, MA EDUCATIONAL INITIATIVES
FROM:	TODD FRANKE, PhD Chair, NGIRB
RE:	IRB#19-000362 Stigma and Learning Disabilities in the High school Context: The Impact of Self-Stigma and Structural Stigma on Psychological and School Outcomes Version: 02/05/19

The UCLA Institutional Review Board (UCLA IRB) has approved the above-referenced study. UCLA's Federalwide Assurance (FWA) with Department of Health and Human Services is FWA00004642.

Submission and Review Information

Type of Review	Expedited Review
Approval Date	4/11/2019
Expiration Date of the Study	N/A

Documents Reviewed included, but were not limited to:

Document Name	Document Version #
19-000362_18_yr_old_STUDENT_CONSENT_form_Stigma_Feb_17_2019_copy.pdf.pdf	0.01
19-000362_POST_IRB_REVISED_Stigma_Parent_Consent_Form_February_17.pdf.pdf	0.01
19-000362_POST_IRB_REVISED_STUDENT_ASSENT_form_Stigma_Feb_17_2019.pdf.pdf	0.01
19-000362_Spanish_POST_IRB_REVISED_Stigma_Parent_Consent_Form_February_17.pdf.pdf	0.01
19-000362_STIGMA_RECRUTIMENT_FORM.pdf.pdf	0.01

Important Note: Approval by the Institutional Review Board does not, in and of itself, constitute approval for the implementation of this research. Other UCLA clearances and approvals or other external agency or collaborating institutional approvals may be required before study activities are initiated. Research undertaken in conjunction with outside entities, such as drug or device companies, are typically contractual in nature and require an agreement between the University and the entity.

General Conditions of Approval

As indicated in the PI Assurances as part of the IRB requirements for approval, the PI has ultimate responsibility for the conduct of the study, the ethical performance of the project, the protection of the rights and welfare of human subjects, and strict adherence to any stipulations imposed by the IRB.

The PI and study team will comply with all UCLA policies and procedures, as well as with all applicable Federal, State, and local laws regarding the protection of human subjects in research, including, but not limited to, the following:

- Ensuring that the personnel performing the project are qualified, appropriately trained, and will adhere to the provisions of the approved protocol,
- Implementing no changes in the approved protocol or consent process or documents without prior IRB approval (except in an emergency, if necessary to safeguard the well-being of human subjects and then notifying the IRB as soon as possible afterwards),
- Obtaining the legally effective informed consent from human subjects of their legally responsible representative, and using only the currently approved consent process and stamped consent documents, as appropriate, with human subjects,
- Reporting serious or unexpected adverse events as well as protocol violations or other incidents related to the protocol to the IRB according to the OHRPP reporting requirements.
- Assuring that adequate resources to protect research participants (i.e., personnel, funding, time, equipment and

space) are in place before implementing the research project, and that the research will stop if adequate resources become unavailable.

- Arranging for a co-investigator to assume direct responsibility of the study if the PI will be unavailable to direct this research personally, for example, when on sabbatical leave or vacation or other absences. Either this person is named as co-investigator in this application, or advising IRB via webIRB in advance of such arrangements.

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