

**The Stereotype Threat Effects on Students with Learning Disabilities in Their Academic  
Performance: A Systematic Review**

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### **Abstract**

Research has found stereotypes are a factor that influences the academic performance of specific groups of students. One of the underlying mechanisms of the effect of stereotypes is stereotype threat. Several studies have included the concept of stereotype threat in order to observe its possible effects in the educational setting. However, only a few have focused on the group of students with learning disabilities and how stereotype threat affects their academic performance while we can witness an increase in the number of individuals with learning disabilities attending school over the past 10 years. This present contribution aims at reviewing the influence of stereotype threats on the academic performance of students with learning disabilities. From 40 potential records identified in four databases, we selected 8 articles that we reviewed in-depth. The results of this systematic review showed that stereotype threat is observed as an influential factor in students with learning disabilities. However, this observation cannot be made based on academic performance, but on other areas of their learning process that might affect the academic performance of these students later. These are synthesized as the increase of a negative self-concept and a decrease in motivation for learning. Future research is discussed in light of these results.

*Keywords:* stereotype threat, students with learning disabilities, academic performance.

## **The Stereotype Threat Effects on Students with Learning Disabilities in Their Academic Performance: A Systematic Review**

It is widely known that school might be a challenging stage in an individual's life. Students struggle with several aspects throughout the different stages of their education process such as adaptation to the context, contents, and assessment, among others. As students progress through school, classroom learning environments may become increasingly competitive, evaluative in nature, and stressful for some minority students (Barrat et al., 2014). Research has found stereotypes are a factor that influences the academic performance of specific groups of students (May & Stone, 2010). One of the underlying mechanisms of the effect of stereotypes is the stereotype threat mechanism (Steele, 1997).

Stereotype threat was defined for the first time as "anything one does or any of one's features that conform to a stereotype of a specific group, make of this something more plausible as a self-characterization in the eyes of others, and perhaps even in one's own eyes" (Steele & Aronson, 1995, p. 797). The logic behind the concept of stereotype threat in education is that being aware of negative stereotypes related to one's own characteristics may lead to a feeling of academic inferiority. Thus, since the introduction of the concept, research has investigated several aspects that are negatively affected by stereotype threat, such as cognitive skills and procedural competencies, providing significant insight into the problem of stereotype threat. An example of such an aspect relates to how stereotype threat leads students in this self-characterization situation to underperform despite high content knowledge and ability (Lyons et al., 2017).

Several studies have included the concept of stereotype threat in order to observe its possible effects in the educational setting. For instance, stereotype threat effects have been

widely studied for women and Black students (e.g., Doyle & Voyer, 2016; Flore et al., 2015; Nadler & Clark, 2011; Nguyen & Ryan, 2008). However, only a few have focused on the group of students with learning disabilities and how stereotype threat affects their academic performance (Desombre et al., 2018).

While Desombre and colleagues' study (2018) represents a good start to better understanding stereotype threat related to students with learning disabilities, results are not consistent across studies and researchers lack systematic investigations of its potential negative effect. Also, numerous studies note a dramatic increase in the number of individuals with learning disabilities attending school over the past 10 to 15 years (May & Stone, 2014). These findings demonstrate that students with learning disabilities are a meaningful population to consider in the educational setting and studies are needed to understand their realities.

Therefore, we believe there is a need to review the ways stereotype threat affects students with learning disabilities in order to research these influences on the academic performance of this group of students. This review may lead to observations that explain why this group of students may have fewer opportunities to develop as human beings in the future, such as reduced access to higher education and negative impacts on their employment opportunities (Zhao et. al., 2019). Moreover, up to now, no systematic review has been conducted to present a review of all the current literature on the effect of stereotype threat on students with learning disabilities.

## **Theoretical Framework**

### **The Concept of Stereotype Threat and its Effects on Academic Performance**

When the concept of stereotype threat was introduced, it was defined as being at risk of confirming, as a self-characterization process, a negative stereotype about one's group (Steele & Aronson, 1995). Thus, this differs from the term stereotype since stereotype threat goes beyond

being oversimplified and defined based on a fixed idea. This time, the theory behind this term focuses on the immediate situational threat that derives from the broad dissemination of negative stereotypes about one's group. That means the person does not even have to believe the stereotype but knows this stands as a hypothesis about the group they belong to in a situation where the stereotype is relevant (Steele & Aronson, 1995). To test this theory, Steele and Aronson (1995) conducted a study in which the intellectual performance of African Americans was tested. Their results showed that stereotype threat affected the academic test performance of a stereotyped group by disrupting intellectual performance and impairing it. The Stereotype Threat Model which was proposed by Steele and Aronson (1995), explained that students who identified themselves as stereotyped and experienced a performance situation suffer the effects of the self-threat of the stereotype threat (Lund, 2021). Some of the effects mentioned in a different study that analyzed the concept were distraction, loss of motivation, and anxiety (Croizet et al., 2001). Also, research showed that stereotype threat did harm academic school performance by showing effects on academic self-efficacy (Slobodnikova & Randolph-Seng, 2021). Moreover, Bedysnka et al. (2020) hypothesized that stereotype threat may lead to the impact of higher intellectual helplessness, lower working memory capacity, lower achievement, and domain identification. This last aspect refers to "the process by which individuals tacitly form a relationship between themselves and some field or pursuit, such as the academic, occupational, or athletic domain" (APA Dictionary of Psychology, 2023).

Consequently, stereotype threat is concerned with explaining the academic gap between two different groups through a social-psychological phenomenon with implications for the field of education. Knowing how much stereotype threat can negatively impact an individual's performance provides opportunities to design interventions to mitigate the pernicious effect of

stereotype threat (Neville et al., 2008). Indeed, a study conducted by Hackler (2019) concluded that educational leadership should gain a better understanding of the obstacles to stereotype threat. This may allow students to proactively realize their self-regulatory orientation and diminish the negative effects of stereotype threat.

### **Stereotypes Threat, Stereotypes and Students with Learning Disabilities**

According to Cortiella and Horowitz (2014), learning disabilities come from neurological differences in the structure of the brain and its function, affecting a person's ability to receive, store, process, retrieve or communicate information. Learning disabilities impact, among others, the learning areas of reading, math, and writing expression. Students with learning disabilities can struggle with the challenges of learning every day. Sometimes teachers and parents can have lower expectations of students with learning disabilities compared to those who do not have learning disabilities (Shifrer, 2013). Lund's research (2021) showed that academic difficulties in school due to learning disabilities can increase the possibility that these students become aware of the stereotypes linked to having learning disabilities. Hence, they become vulnerable to the stereotype threat.

Even though learning disabilities are not a prescription for failure if the right kinds of instruction, guidance, and support are applied, students with learning disabilities are still vulnerable to stigmatization (Cortinella & Horowitz, 2014). For example, May and Stone (2010) found that these students who felt stereotyped showed signs of memory limitations and anxiety. Proving this relationship between the concept of stereotype and students with learning disabilities could potentially affect the academic performance of this group of students and probably make them vulnerable to stereotype threat.

Moreover, Lyons et al., (2019) found, based on a study in which students with learning disabilities were asked to mention their race before the test, that the effects on students with learning disabilities that stereotype threat contributed to may be significantly underestimated.

Thus, over the past three decades, researchers have documented that stereotype threat affects students' learning and testing performance (Aronson & Steele, 2005). Relating this to students with learning disabilities, Lund (2019) highlighted there is an effect of vulnerability produced by stereotype threat on these students specifically in their learning environment, which lead them to perform lower in school. This last research presents the self-perception of being a student with a documented learning disability diagnosis and being vulnerable to stereotype threat. This study shows how students in these conditions develop anxiety and self-distraction that is reflected in lower marks compared to their peers.

On the other hand, Zhao et al. (2019) emphasize the significant implications of learning-disabled students' response to stereotype threat for framing targeted interventions, studying the academic performance of students with learning disabilities who were more vulnerable to stereotype threat. After several interventions, they concluded that the stereotype threat effect on academic performance persisted only among students with a low level of psychological engagement.

In addition, even though studies have shown a negative effect on academic performance blaming the stereotype threat, May and Stone (2014) observed students who were part of the learning disabilities group that suffered from stereotypes and reported different results from the previous statement. The results showed that only poor support to these students was a contributor to the lower performance. The authors reported that even when the vulnerable group took more time to perform and could not finish all the tasks, they were able to perform the one they did

complete successfully. Concluding in a performance as good as the one of the not-stereotyped group. However, a limitation of the study by May and Stone (2014) was that they did not consider the aspect of time students took to complete the tasks as a point of negative effects connected to stereotype threat.

### **The Present Study**

Studies concluded there are effects that might influence the academic performance of students with learning disabilities. Indeed, studies agreed that reducing the amount of stereotype threat in assessment situations for students with learning disabilities would contribute to better academic performance. This might result not in a more accurate performance but in a more efficient one (May & Stone, 2014). However, while there is this overall agreement, results between studies are not consistent and then it is not assured that reducing stereotype threat might actually improve the learning experience and academic performance of students with learning disabilities exposed to stereotype threat. This lack of consistency between studies led us to this contribution. Thus this research focuses on how stereotype threat actually affects this group of students. Also how this is reflected in their academic performance by revising the effects found in current research available. In order to identify these effects, factors, and other possible influential aspects, the following question arises: In which ways can stereotype threat affect students with learning disabilities in their academic performance?

### **Method**

The focus of this thesis lies on the role of stereotype threat on students with learning disabilities by analyzing the different routines, mechanisms, and processes where stereotype threat affects these students with learning disabilities. This considers previous studies conducted on the connection between the concepts of “stereotype”, “stereotype threat” and “students with



learning disabilities.” A concise picture of the field is already established since the existing research has shown the effects of stereotype threat on students with learning disabilities.

Therefore, a systematic review was carried out focusing on the synthesis of the evidence as an approach to objectively identify the different ways that lead to stereotype threats affecting students with learning disabilities.

### **Selection of Literature Sample**

For this review, the inclusion criteria considered scientific literature focusing on a population of students including all levels of formal education (i.e., primary, secondary, and higher education). This was decided considering that the field is still a niche and in its infancy (even if it originated 30 years ago), which made a global approach to the phenomenon suitable. So, there are no restrictions to any level of education. Also, there were no limitations regarding the cultural background, nationality, gender, or language of the students either. Regarding the areas of learning to measure academic performance and the publication period used for the literature selection, no specific one was defined as well.

Thus, the objective was to obtain as many articles as possible related to educational settings. While these aspects were considered in general, they still must strictly concern students with learning disabilities and the effects they might experience due to the exposure to stereotype threat.

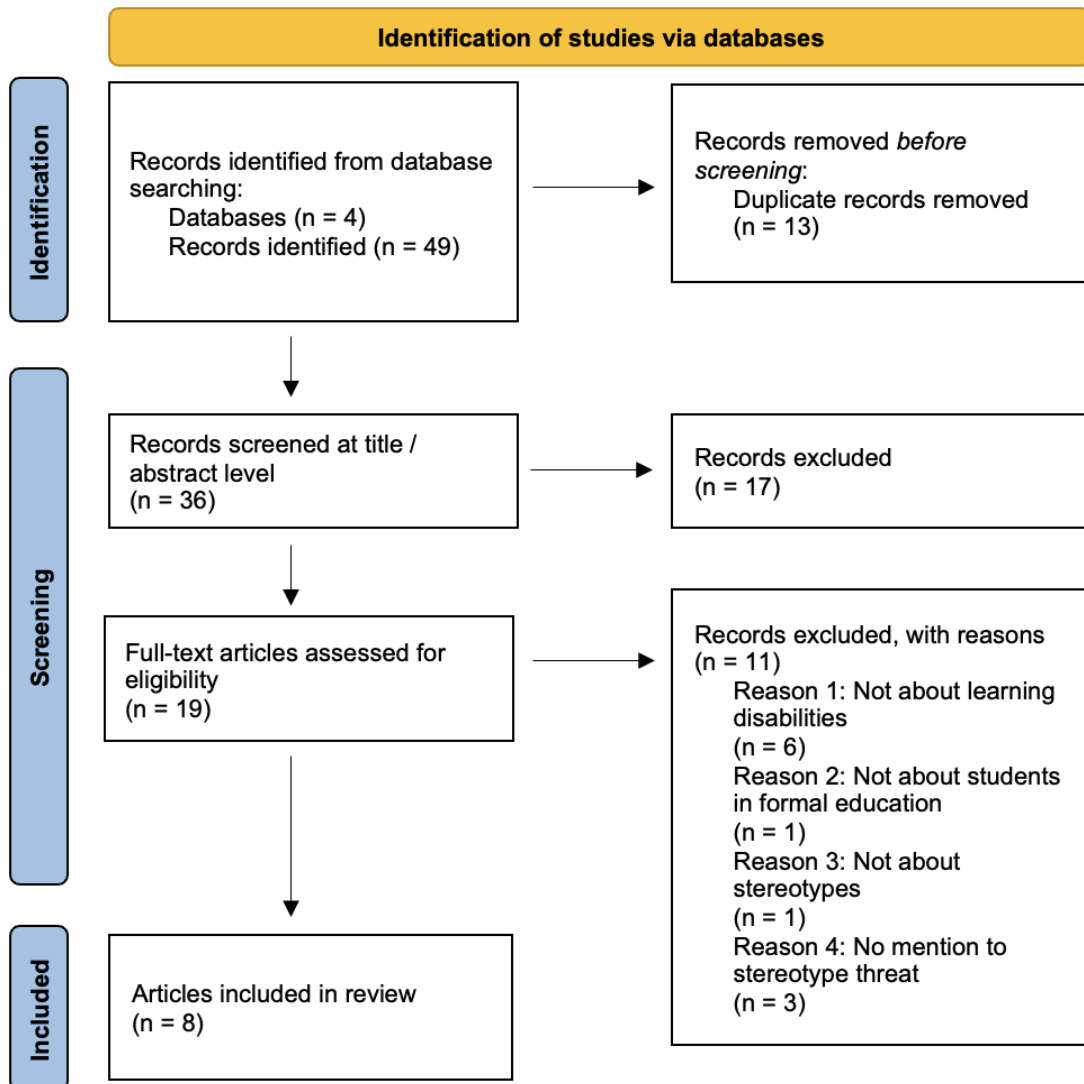
### **Procedure**

The search terms used in this thesis were a combination between “students,” “learning disabilities,” and “stereotype threat”. The term “stereotype” was always included to keep the scope as specific as possible and avoid possible research conclusions in which stereotype is not considered a main factor influencing the students' performance. Then, the research line was

finally established as “stereotype\* AND ("disability" OR " disabilities") AND student\* AND threat\*”. The literature utilized in this paper to be reviewed was obtained from the databases ERIC, PsycINFO, Web of Science, and SCOPUS. The articles used were only the ones written in English. Through the use of the online tool CADIMA (Kohl et. al., 2018), the study selection was completed as reported in Figure 1.

**Figure 1**

*PRISMA 2020 flow diagram of the literature search from databases, screening, and inclusion*



Next, a total of 49 records were identified through database searching. From these 49 studies, 10 were from ERIC, 11 from PsycINFO, 12 from Web of Science, and 13 from Scopus. After the duplicate removal, 36 records were left, corresponding to 6 of them to ERIC, 10 to PsycINFO, 6 to Web of Science, and 13 to Scopus. From the previous 36 studies left, criteria were applied when screening the title and abstract of each study first. Then, the same standards were applied to the full text. From this procedure, 17 records were excluded after the criteria were applied to the title and abstract, leaving 19 in total. Finally, these 19 results were screened once more applying the criteria of full-text, excluding 11 and rating 8 studies in total to be included in the study.

### **Analysis**

After the remaining literature was scanned, the papers were analyzed to identify the quality of these as meaningful contributions to answer the framed research question. Then, these were analyzed considering their main aspects such as year, type of study, and population.

Firstly, in order to ensure that the included studies contain sufficient information about the sample, papers were critically appraised in order to keep a reliable review, trying to avoid possible biases in individual conclusions that can affect the results. Following the advised items for a systematic review of Petticrew and Roberts (2008, p. 120) initially proposed by Jadad (1998), Figure 2 shows how each study was appraised through a checklist that considered the relevance of each study to answer the research question, its internal validity, its external validity, the appropriateness of methods, and the ethical implications. In order to meet the item-required information, the questions used for this checklist were the ones suggested by Orme and Shemmings (2010). These allowed the researcher to identify some important aspects regarding the quality of the currently available research. For example, even though all studies are closely

related to the research question, almost none of them are free of limitations regarding the bias in methods to “fit for purposes”. The confidence levels for the finding of each study at the time of assessing them were generally low. Also, the levels of how generalizable the results of each of these included studies were mostly unclear. To complete the checklist, studies were synthesized through narrative summaries and conceptual maps.

## Figure 2

*Checklist results presentation for critical appraisal in studies quality assessment*

<b>Checklist results presentation for critical appraisal</b>							
1.	Aquino, 2012	1	✓	✓	?	?	✓
2.	de Carvalho & Skipper, 2020	2	✓	✓	?	X	✓
3.	Fields, 2012	3	✓	✓	✓	X	✓
4.	Lund, 2022	4	✓	X	?	?	✓
5.	May, 2002	5	✓	✓	✓	X	✓
6.	May & Stone, 2014	6	✓	?	?	X	✓
7.	Powner, 2015	7	✓	?	?	?	✓
8.	Zhao, 2019	8	✓	✓	?	✓	✓

Is the study relevant to the research question?  
 Are its findings trustworthy?  
 Are its findings hardly generalizable?  
 Were the methods used appropriate and not “fit for purpose”?  
 Was it conducted ethically?

**Key:**  
 ✓ - Yes  
 X - No  
 ? - Unclear

Secondly, as is shown in Table 1, it is observed that the population considered in most of them is limited to the same country. For example, it was identified that 75% of the included studies are American, representing one of the possible limitations at the moment of interpreting the results due to possible similarities in the level of cultural background, language, and educational system, among others. Also, of the 8 final studies, 6 were quantitative studies, and 2 were qualitative studies. Within the quantitative studies, 3 of them worked with a control group and an intervention group. All quantitative studies considered more than one variable, so the ones that represent the strongest connection to the terms researched and the research question were considered to report the results. Even though none of these studies discussed the potential of contamination between study groups, only 3 out of the 8 studies included randomized groups, where most of the population assigned was selected by the institution they were working with or with volunteer participants. Most studies worked with small groups of participants with an average of 20 students. In addition, all records included mentioned in their results that these should be considered inconclusive and emphasized the need for more future research. These limitations are addressed in the conclusion.

**Table 1**

*Main information about the selection of studies included.*

<b>N°</b>	<b>Year</b>	<b>Author</b>	<b>Title</b>	<b>Type of study</b>	<b>Population considered</b>
1	2012	Aquino, Anthony T.	The impact of stereotype threat on the cognitive testing performance of children diagnosed with learning disabilities.	Quantitative research (Empirical study)	Primary and middle school students - Local special private school - USA.
2	2020	de Carvalho, E.; Skipper, Y.	A two-component growth mindset intervention for young people with SEND	Quantitative research method (quasi-experimental study)	High school students (14 to 16 years old) - Secondary special school for children and young people with special needs - UK
3	2012	Fields, Tracy M	California high school exit exam for students with disabilities: The impact of setting, anxiety, and stereotype threat on students' math performance	Quantitative research (causal-Comparative)	High-school students (15 years old) - Public High school - USA
4	2022	Lund, Dayna M.	Stereotype threat and students with learning disabilities: A phenomenological study of the perspectives of five college students	Qualitative research (phenomenological research)	Students from 2 different colleges - USA
5	2002	May, Alison Lee	The role of stereotype threat in the test performance of undergraduates with learning disabilities	Quantitative research	University students from two public universities - USA

6	2014	May, Alison L.; Stone, C. Addison	An Initial Investigation into the Role of Stereotype Threat in the Test Performance of College Students with Learning Disabilities	Quantitative research (quasi-experimental study)	College students - USA
7	2015	Powner, Steven James	Stereotype threat in college-age students with reading disabilities: Does it exist?	Qualitative study	College students - USA
8	2019	Zhao, F.; Li, S.; Li, T.; Yu, G.	Does Stereotype Threat Deteriorate Academic Performance of High School Students with Learning Disabilities? The Buffering Role of Psychological Disengagement	Quantitative research	High school students (15 to 19 years old) - Local high school - China.

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Finally, in order to report the results, the overarching ideas of each reliable study included were identified and classified into groups. These groups of ideas were selected based on the most repeated influential factors and relevant aspects observed in the results sections of each study. From these clusters, the influential aspects were divided into two main themes. These were synthesized as results based on the connections shown between the terms researched in order to answer the research question. Considering this as an appropriate way to explore and interpret the current evidence. The first theme corresponds to the affected intrinsic attitudes by stereotype threat through the increasing of a negative self-concept and disengagement, and whether these effects are reflected in the student's academic performance. The second theme corresponds to the influential aspects that would cause variations in the level of influence of the stereotype threat on students with learning disabilities in their academic performance. The themes presented are defined and developed according to the studies in order to answer the research question.

## **Results**

### **Student's Self-concept and Level of Engagement**

One of the biggest aspects found in most studies that show how stereotype threat affects students, was through specific intrinsic attitudes such as a more negative self-concept toward academic performance and a decrease in psychological engagement. However, most studies agreed these affecting procedures were not reflected in students' grades.

In the first study conducted by de Carvalho and Skipper (2020), the effects of the growth mindset intervention on students with learning disabilities were investigated. One of their objectives was to prove if a growth mindset could diminish the negative effects of stereotype threat, such as their low grades. With a total of 18 participants, they concluded that the evidence collected during the research could not be sustained enough. A single intervention applying a



growth mindset activity was not reflected in their grades as a method that helped students with learning disabilities to reduce the effects of stereotype threat. However, their results suggested that after the intervention, students in the control group showed a decreased self-integrity. This was observed in their attitude towards learning, and their decreased motivation. Then, becoming more vulnerable to negative stereotype threat effects. Thus, if students with learning disabilities are exposed to stereotype threat, they would develop a negative self-integrity concept and a low level of engagement. On the other hand, when these students were not exposed to stereotype threat, there were no effects observed. Therefore, the way stereotype threat negatively affects students would not be in their academic performance, but in their motivation and self-integrity. This last concept refers to social identity and academic self-belief, which means, how the students see themselves as individuals related to their academic performance as an individual (de Carvalho & Skipper, 2020).

Then, the fourth study, conducted by Lund (2022), studied the relationship between stereotype threat and college students with learning disabilities. With the hypothesis that stereotype threat affects students by lowering their grades, her results coincided with de Carvalho and Skipper's study regarding the effects of stereotype threat and self-concept. Lund (2022) concluded that students exposed to the stereotype threat did not feel affected by their academic scores but by their personality at school. In this qualitative study, experiential evidence showed that participants exposed to stereotype threat identified themselves as different from their peers without learning disabilities and that they were a more vulnerable group, but this was not enough to make them underperform academically.

Moreover, throughout the eighth study conducted by Zhao (2019), it is explained that even though the vulnerability produced by the stereotype threat on students with learning

disabilities was associated with one exam performance, there was no correlation. The biggest finding of the study was made in the levels of engagement of students. A clear way of how stereotype threat affects students with learning disabilities was by decreasing their psychological engagement. This moderated the relationship between stereotype threat and academic performance. Specifically, stereotype threat affected the academic performance of students with a high level of psychological disengagement only, even when controlling for the previous academic performance. Then, this effect became nonsignificant among those students with a high level of psychological disengagement, affecting them negatively. However, it is the aspect of psychological engagement that alters academic performance and not the exposure to stereotype threat itself. This means that even when a student with learning disabilities is not exposed to stereotype threat but does have a high level of disengagement, it can influence their academic performance.

### **The Classroom Setting and Proper Study Support**

Another big finding based on most of the results and conclusions in the studies included were the aspects that vary the effects of the stereotype threat on students with learning disabilities. According to the hypothesis of the third study included, conducted by Fields (2012), mainstream classroom settings help to reduce anxiety and stereotype threat, thereby increasing performance in a high-stake testing situation. That means that if stereotype threat is not present, students with learning disabilities would perform better. Throughout this study, the author explores the connection between stereotype threat, anxiety, and settings, and their impact on students with learning disabilities. It was hypothesized that an individual with learning disabilities under a stereotype threat situation will perform worse than one that is not under stereotype threat. This hypothesis is born from the idea that stereotype threat affects students

with learning disabilities by depressing them with thoughts such as failing a test or struggling against the possibility this might happen. The results were not statistically significant between the two groups in this study, and the test performance was barely affected when the stereotype threat was manipulated in the intervention group. However, the results follow the theory of stereotype threat implying that students in a mainstream setting have the same level of negative group identification concern as do students with disabilities in self-contained settings. Their test scores are not influenced by a significant result, but their self-esteem and social skills instead. These aspects could be considered as part of the identification domain and self-concept. Therefore, the educational setting is a clear way where stereotypes might manifest themselves and influence students with learning disabilities.

When students with learning disabilities were not provided with a proper environment, they tended to feel judged and would have thoughts such as: “I am cheating because I am receiving help” (Lund, 2022). This idea is connected to Fields’ research about how settings are a way to fight against stereotype threat to avoid negative self-concept aspects. Finally, contrary to the hypothesis, participants in this study were interviewed and expressed they felt they could actually perform better since they were “driven to learn” due to their disability. It was concluded that stereotype threat would not have effects on their academic work unless they count in an inappropriate environment. This was defined by Fields (2012) as a self-contained one, with no individual instruction from the teacher and no extra time provided.

Furthermore, as predicted by stereotype-threat theory, students with learning disabilities spent more time per item in the stereotype-threat condition than control participants in May’s (2002) study. The two groups participating did not differ in their academic result when the reduced-threat condition was applied. Contrary to expectation and the primary hypothesis for this

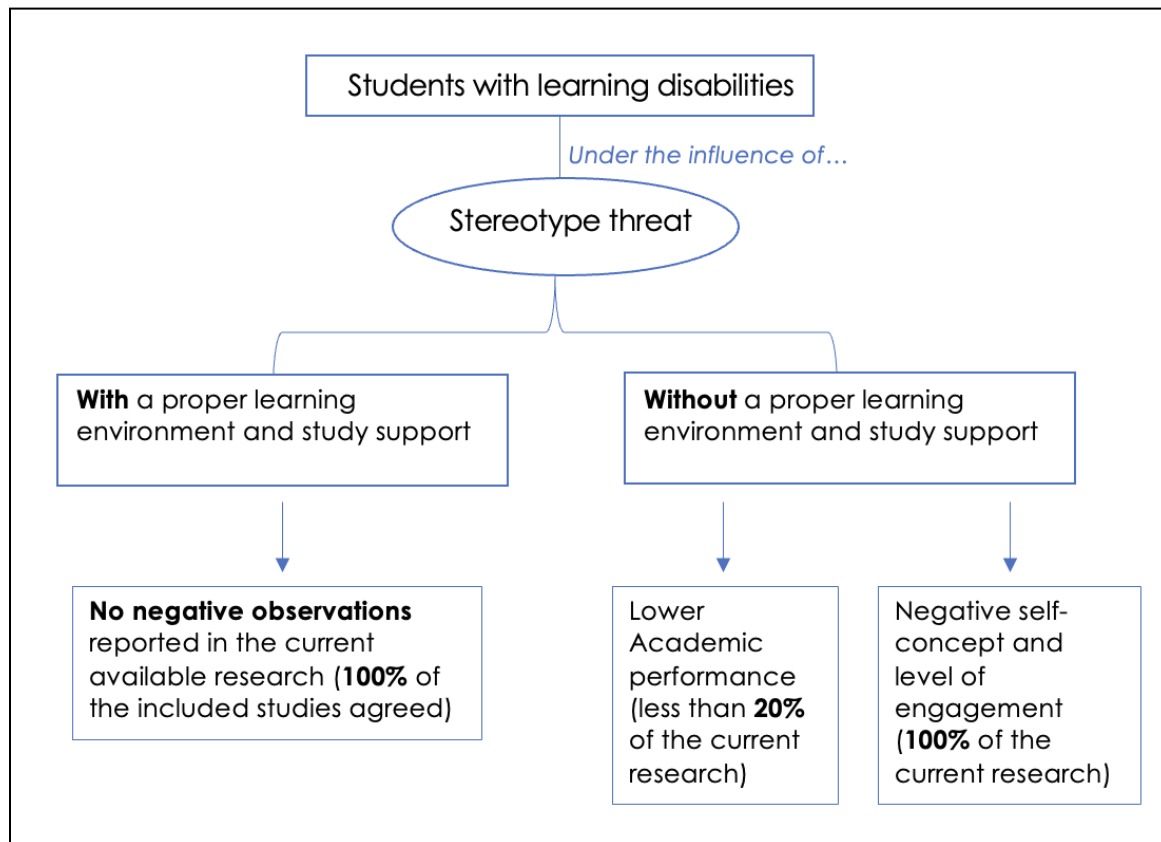
study as it was seeing lower grades in the intervention group affected by the stereotype threat, it was the increased efficiency afforded to participants with learning disabilities by the reduced-threat condition, but it was not reflected in their overall performance.

In addition, complementary included studies to the previous one have shown only marginal support for the hypothesis that stereotype threat is a contributor to the diminished performance of students with learning disabilities (May & Stone, 2014). The authors reported no statistically significant effects on academic performance. However, there was a significant effect regarding the lack of support for students with learning disabilities when they were exposed to stereotype threat. The result was identified through the intervention applied by the authors when noticing students were affected in the efficacy of their performance, such as needing more time and instruction. Therefore, due to the lack of support from teachers, the performance was affected, not only because of the exposure to the stereotype threat.

Consequently, findings suggested low evidence to identify the ways that stereotype threat affects students with learning disabilities in their academic performance. Figure 3 shows that most of the studies analyzed in this study agreed on how the aspects of the learning environment and study support vary the effects of stereotype threat on this group of students. All studies observed an increase in a negative self-concept and disengagement reflected in the attitude of the students, while a much lower percentage observed effects that were reflected in academic performance. Therefore, it might be interpreted that the effects of stereotype threat reflected in academic performance are not reliable enough to base the identification of the ways in which stereotype threat affects students with learning disabilities.

**Figure 3**

*Conceptual map of findings summarized*



### Conclusion

Consistent with the stereotype threat hypothesis (Steele & Aronson, 1995) regarding the negative effects on minority groups of students, the results of this systematic review showed that stereotype threat is observed as an influential factor on students with learning disabilities.

However, this observation cannot be made based on the academic performance of the students.

The following section answers the original research question and explains how the results and findings lead to the conclusion regarding academic performance as an unreliable aspect to focus on when identifying the negative effects of the stereotype threat.

### **Answer to the research question**

The technical answer to the research question “In which ways can stereotype threat affect students with learning disabilities in their performance?” would be that there is no current evidence that shows ways in which stereotype threat affects students in their academic performance.

Nevertheless, there are ways in which stereotype threat affects students with learning disabilities in other areas of their learning process that might affect their academic performance later. These ways are through the increase of a negative self-concept and a decrease in motivation for learning.

Other aspects that might influence the degree to which students with learning disabilities experience stereotype threat are a proper learning environment and study support for these students from their teacher. These two concepts were repetitively present throughout the literature selected, showing how they could decrease any negative observations stereotype threat could have on the self-concept of students with learning disabilities.

### **Discussion**

The effects of stereotype threat on students with learning disabilities remain uncertain. However, current research suggests that academic performance needs to act as a reliable aspect where stereotype threat effects are reflected in. Various authors coincided with the idea that a positive perception of self-performance (mentioned as self-concept or self-integrity) and increase their psychological engagement, might diminish the influence of stereotype threat in students with learning disabilities (see de Carvalho & Skipper, 2020; Lund, 2022; Zhao, 2019). In other words, observing students’ grades to analyze how stereotype threat affects these

students might not be the finest aspect to focus on if it is desired to identify the effects of stereotype threat if these previous concepts are not considered as strongly influential factors.

The intervention applied in other studies included that researched the effects when students with learning disabilities were exposed to stereotype threat showed that even though the grades did not increase after the intervention, there was an increase in the effectiveness of the academic performance in terms of attitude and self-confidence when they were provided with proper study support and environment. Such as a contained space (where the teacher is close to support the student in case this is necessary), or having more time to complete the tasks (See Fields, 2012; May, 2002; May & Stone, 2014).

Therefore, self-concept and level of motivation can be considered as an important step between the stereotype threat exposure and academic underperformance. This leads students to underperform due to the conditions through this step (a negative self-concept, a low level of motivation, or inappropriate study support) and not due to the stereotype threat itself. Thus, the approach of looking only at the academic result of students might be confusing or misleading since there are no relevant or big enough findings that can be seen reflected in their school grades only. The current overemphasis on academic performance may have led to a knowledge gap regarding the negative effects of stereotype threat on students with learning disabilities and how to address this issue. This research indicates that while most studies have focused on this aspect, it may not be the primary factor affected.

### **Limitations**

One of the main limitations of this review is, firstly, that the classification, analysis, and interpretation of all included articles were done by the main author alone. Also, with regard to

the exclusion of articles published in other languages than English, this research might be limited in terms of the availability of previous research published in other languages.

Regarding the studies selected, limitations of this research included the nationality and level of education of the participants in most of the papers considered. The population in most of the studies was American (80%) as they were also from higher education such as university or colleges, leaving primary and secondary school aside. This might affect the results since the educational system was almost the same and the cultural background, in general, followed the same patterns. This lack of variety could influence the interpretation of some aspects such as the class environment or assessment methods, and therefore, the importance these have in the conclusion of this research.

In addition, it is important to bear in mind that available research was limited in terms of the population used for the studies. In all studies the participants were selected by the institution the researcher worked with, or offered voluntarily. It is relevant to bear in mind how these limitations have influenced the results identified in order to interpret their level of reliability.

### **Future research**

Finally, even though this research originally intended to identify how stereotype threat influences students' performance, the findings in this systematic review suggest it is more effective and efficient to focus future research on other aspects of the learning process rather than academic performance to recognize the negative effects of the stereotype threat. Also, consider exploring other educational levels rather than higher education, in order to widen the population and observe results on different cognitive stages. The same recommendation is made regarding the language considered at the time of the selection of the papers since these might open new perspectives and more variety of results. In this way, time and resources could be



saved for researchers and might optimize the process of finding significant features connected to stereotype threat that affect students with learning disabilities in their academic performance.

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