The Role of Language Skills and Bilingual Proficiency in Emotion Regulation in Early Childhood

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Honors Thesis

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December 2026

Abstract

Emotional and self-regulation skills are beneficial for children's socioemotional states and proper development. The development of such skills is facilitated by high level cognitive skills like executive function (EF), as well as language which allows children to express their emotions as a form of regulation. Bilingual children benefit from higher levels of EF skills compared to monolingual children. This study aimed to understand if bilingual children are more proficient in emotion regulation (ER) in their dominant language. It was hypothesized that because children use language as a tool for ER, bilingual children would be better at ER in their most proficient language, as higher language skills facilitate better ER strategies. This study assessed expressive language skills in English and Spanish, degree of bilingualism, EF skills, and ER success in Spanish-English bilingual children in a within-subject study. The study looked at which language yielded more positive ER outcomes in two waiting tasks. The two waiting tasks consisted of children being primed for each language and asked to wait alone in a room for five and a half minutes to open a gift. Initial pilot data show similar waiting task performance in dominant and non-dominant language conditions, but there was a ceiling effect, such that children waited in both conditions. These initial observations did not provide any indication of whether language dominance affects ER. Modifications to the study design in the waiting tasks and language skill level assessments are needed as we move towards the full study.

Keywords: emotion regulation, bilingualism, executive function, language skills

Emotion regulation (ER) and self-regulation have been linked to the level of language skills in preschool aged children (Fields-Olivieri et al., 2024; Kopp, 1982). ER and self-regulation skills are important for children's socioemotional wellbeing (Roben et al., 2013). ER facilitates the evaluation and monitoring of our emotions to change how we experience and react to what we feel, helping us manage our reactions (Thompson, 1994). Self-regulation is the process of independent ER within an individual without the intervention of another person (Kopp, 1982). Language skills and self-regulation begin to develop simultaneously starting at around two years of age and develop rapidly between ages two and five (Fields-Olivieri et al., 2024; Kopp, 1982).

ER benefits from executive functioning (EF) skills that are acquired during development. Inhibitory control and attention control are two EF skills that are especially relevant to ER. Inhibitory control allows a person to shift their attention from an initial dominant response and replace that first reaction with a less dominant one, facilitating more acceptable responses to emotions (Rhoades et al., 2009). Attention control allows individuals to focus on one thing and complete cognitive tasks without getting distracted by external or internal input, for example, mind wandering (Garner & Robison, 2025). Inhibitory control helps us mitigate the first emotional response evoked by a situation, so we can choose a more appropriate response. In bilinguals, attention control, and inhibitory control facilitate inhibition of the non-active language so the target language can be spoken without interference (Bialystok, 2017). Therefore, the demands that bilingual people experience on their cognitive and control systems are much greater than those of monolinguals (Bialystok, 2017). These executive functioning skills are transferable to other parts of language and cognition, such as emotion and self-regulation (Roben et al., 2013). The ways in which bilingual children might experience emotions and emotional

regulation in either language separately remain unexplored. If these skills are transferable and children are actively using language to regulate their emotions, then it would be expected that bilingual children would have higher levels of emotion regulation skills than monolingual children, because of higher EF levels and because of the facilitation of ER through language. This has indirect real-life implications. If language plays a part in how children regulate their emotions and if bilingualism leads to higher ER success, then it could inform education systems, parents, and clinicians leading to more emphasis on bilingual education for children. This study's piloting phase did not indicate any relationship between language dominance and ER success. The study design will be revised moving forward to accommodate piloting observations and errors to better assess the role of language dominance in ER. If the full study results reveal an effect of language dominance in ER, the implementation of bilingual education emphasized in schools may lead to more positive socioemotional experiences for children as young as preschool age. This study explored concepts of emotion and self/regulation, executive function skills, and ways in which they help with ER, bilingualism, and how language and ER converge.

Emotion Regulation and Self-Regulation

Emotion regulation (ER) refers to a person's ability to observe, track, evaluate, and adjust emotions and reactions to achieve their goals in an efficient manner (Thompson, 1994). ER is an important skill for children to develop as it facilitates functional and successful social relationships, which are necessary for positive mental health outcomes across the lifespan. Without ER skills, children can become dysregulated and unable to control their emotions. This often results in infringements in expected social and developmental norms that later hinder their social relationships and overall development. When emotion dysregulation happens and children

have no tools for dealing with their "big feelings", it leads to other emotional outlets like tantrums and at times, violent outbursts.

According to Kopp (1982), ER skills start to develop around two years old and continue to develop through childhood. From three years old onward, children are able to self-regulate. Emotional regulation allows for the control of emotions to fit societal expectations, and self-regulation refers to the ability to do so independently (Kopp, 1982). Refining self-regulation is critical so that children may be prepared to face emotional challenges and overcome them without the assistance of an adult. This leads to beneficial socioemotional outcomes for parents, peers, teachers, caregivers, and more importantly, children (Roben et al., 2013). By learning how to comfort and distract oneself, and when and how to seek help, children can manage frustration and avoid outbursts that negatively impact their relationships with other children, teachers, parents, etc. (Calkins et al., 1999). This learning process for emotion and self-regulation is rooted in cognitive skills, specifically executive function, and will continue to be helpful throughout the course of one's life.

Executive Function Skills

EF skills are high level cognitive skills that allow a person to control and manage their behavior (Nyongesa et al., 2019). EF skills include inhibitory control, attention control, planning, working memory, joint activation, among others (Rhoades et al., 2009; Hong et al., 2024). Inhibitory control and attention control facilitate emotion regulation (Thompson, 2011; Fields-Olivieri et al., 2024). Inhibitory control allows initial reactions to be inhibited, suppressed, and replaced by more appropriate, and less dominant, ones (Rhoades et al., 2009). Thus, inhibitory control is a tool for ER, by identifying, suppressing, and replacing the initial response that a situation might evoke like a frustration during play in the classroom. Attention control blocks out

interferences to allow cognitive focus on a task or activity (Garner & Robinson, 2025). When an event or task elicits frustration or anger, children are able to use their attention control in conjunction with inhibitory control to focus on something else to avoid further emotional arousal that can result in inappropriate responses.

These EF skills are key to the development of children's ability to handle the expected societal demands exerted on them. The ability to manage emotions for successful social relationships is one of these demands. One of the main functions of EF is problem solving and planning (Zelazo & Cunningham, 2007). When overwhelming emotions come onto a child while they play with peers or during a frustrating task, they problem-solve their way out of it by using attention control to shift their focus away from the negative initial reaction and inhibitory control to suppress and replace it with a socially acceptable response.

EF skills are central to children’s development, and the ability to control their behavior and adapt and function in society. This includes the management of their emotions and how they are able to regulate themselves to comply with societal expectations. Without EF skills, emotions would dominate and dictate behaviors which would not allow for positive socioemotional outcomes and would counter standards of societal function.

Bilingualism

Bilingual people have cognitive advantages such as higher EF skills, including attention control and inhibitory control than monolingual people (Bialystok, 2017). When a person is bilingual, both languages coexist and are active within a person's brain at all times. Joint activation is the process where two languages compete for attention. Because two languages coexist, one can influence the other, and the brain has to work to keep them separated to avoid

interference from the non-target language. If both languages surface as opposed to only the target language being spoken, communicative breakdown happens. Spivey and Marian (1999) tested English/Russian adult bilinguals to see if there would be interference effects of one language on the other. They asked participants to look at 4 different pictures: a picture of a stamp pronounced *marka* in Russian, a picture of a marker, and two more pictures with no phonological similarity to these 2 words in Russian or English (key chain "*brelok*" and quarter "*dvadtsati piati tstentof*"). Then the participants were asked to move the stamp to the cross in Russian: "*Poloɲ marku nɲe krestika".* The instructions were given in Russian to prime responses with the English word "marker" and the Russian word "stamp" or "*marka"*, this allowed to see if one had an effect on the other. Spivey and Marian expected that if there was a crosslinguistic priming effect where both languages would be activated at the same time and would influence each other, they would a) look at the picture of the marker and b) spend more time looking at the picture of the marker than the other 2 unrelated pictures before shifting their attention to the stamp. They found that the subject looked at the marker 200 milliseconds after they started to hear the word *marku* (around the *mar-* part of the word). This showed that one language affected the other, they both coexist and work together as a single unit, with crosslinguistic priming responses which made participants respond faster if they had seen a similar word in the task like "marker" and "marka", and lexical retrieval between the two (Spivey & Marian, 1999).

Because there are two languages that are constantly competing for attention and selection in one's brain (Rossi, 2024), certain cognitive abilities are needed to allow bilingual people to speak in one language without interference from the other. This is where attention control and inhibitory control come in. Attention control allows bilinguals to keep their attention on the language that they are speaking without getting distracted by the other. Because joint activation

of both languages happens, the language that is not being actively used at any given time needs to be inhibited. When inhibitory control and attention control come together, they avoid interference between the two languages and as a result communicative breakdown as well (Bialystok, 2017). Because bilingual children must constantly do this, they practice these skills and develop higher EF skills than monolingual children (Grote et al., 2021). Inhibitory control works in the short term in this cross-language regulatory process to avoid interference; in the long term, inhibitory control impacts behavior in a deeper way (Gullifer et al., 2018). For example, adult second language (L2) learners have shown slower word retrieval in their first language (L1) after L2 immersion for an extended period of time (Linck et al., 2009). Prolonged inhibitory control activation slowed down first language (L1) retrieval after (L2) immersion. If inhibitory control and attention control are transferable and children can use them for other domains of their development, such as ER, greater emphasis on bilingual education could be beneficial for children. Bilingualism allows people to communicate with a larger portion of the population, and it can be developmentally favorable in terms of socioemotional outcomes.

Language and Emotion Regulation

Level of Language Skills and Emotion Regulation

As children transition out of toddlerhood, they need to be able to regulate their emotions and reactions to situations that happen all around them. The development of self-regulation is also important for their introduction into school. Language skills help ER in children (Roben et al., 2013; Fields- Olivieri et al., 2024) in part by allowing children to verbalize their emotions and emotional needs rather than resorting to disruptive and potentially harmful behaviors like physical violence or tantrums. Delays in language can be linked to behavior problems, but

children's use of self-directed speech to guide their actions, for example, can help their socioemotional competence (Roben et al., 2013).

A longitudinal study of children by Roben and colleagues (2013) assessed language skills, anger regulation, and ER strategies to see if there would be a connection between them. Children were assessed at 18, 24, 36, and 48 months of age, in four home visits and four lab visits. During home visits, they were told to continue with their routine and were observed at home with minimal interaction and no specific instructions. Recordings of the children's speech at home were used to analyze their complexity based on the measure of mean length utterance (MLU). By measuring MLU across multiple months, they were able to determine children's language growth. In the lab, children completed tasks designed to incite frustration like waiting for an exciting gift for a few minutes, and relief tasks like "play". One of the frustrating tasks asked the children to wait for their mothers to be done with a task so they could receive a present sitting in front of them. The children were given a "boring" toy while mothers completed questionnaires for eight minutes. After eight minutes had passed, the mothers let the children open their gifts. Roben and colleagues found that language skills and language growth as measured over time in the home visits were associated with milder reactions associated with anger. Anger declined as language skills developed. The rate of growth of language was associated with less frustration when the gift task was applied. Their study also showed that ER strategies developed with language as well. At 36 months of age, children sought calm support from mothers, and at 48 months of age they engaged in distraction as a regulation strategy. These results show that as children's language skills get better, their ER skills develop as well.

Distraction as a coping strategy for frustration and strong emotions can be connected to executive function, especially attention control. Another study looked at children with specific

language impairment (SLI), to see if their language skill levels would affect their reticence and ER skills (Fujiki et al., 2004). SLI is a disorder that affects children's language development, it is not linked to hearing loss, and it can affect multiple aspects of children's communication like speaking, listening, reading, or writing (NIDCD, 2019). Children with SLI had lower levels of language skills, which was expected for the SLI group, as well as low levels of ER skills compared to normally developing children. Additionally, lower levels of language skills and ER predicted higher levels of reticence which can affect children and their socioemotional wellbeing. Thus, a child's degree of skill in a language has a positive relationship with ER skills, which children need for a positive and formative socioemotional experience.

Bilingualism and Emotion Regulation

ER is supported by language skills because of the EF benefits of language. EF benefits from knowing two languages, and bilingual proficiency may predict ER levels. For example, Ren and colleagues (2016) found that Mandarin-English bilingual children had better emotional and behavioral outcomes when their language skills were higher. In their study, Ren et al. looked at Mandarin-English bilingual preschoolers (36 to 69 months of age) and measured their language skills, social competence, positive emotional regulation, and emotional dysregulation. They gathered said measurements through parent and teacher surveys to determine social competence, and positive emotion regulation; a task where kids receive a disappointing gift was used to measure dysregulation; and standardized language tests used in preschool aged children were used to assess their language levels in English and Mandarin. After the assessments were completed, Ren and colleagues found that emotion dysregulation was associated with behavioral problems, whereas positive emotion regulation was associated with adaptive skills and not behavioral problems. Children with difficulties in regulating emotions had lower levels of

English proficiency and higher levels of behavioral problems whereas children with higher levels of English proficiency showed lover levels of behavioral problems. Thus, bilingual children use their language to better regulate themselves, with higher language proficiencies resulting in less behavioral problems and ER difficulties.

If bilingualism is a predictor of better emotion regulation and emotion regulation predicts better socioemotional and behavioral outcomes, then it is vital to implement bilingual learning in preschools in the interest of helping children.

Conclusions

Emotion and self-regulation are important skills for children to develop for successful social relationships and better behavioral and mental health outcomes. Research has shown that ER is linked to level of language skills and EF in children before their preschool years (Fields-Olivieri et al., 2024; Roben et al., 2013). Bilingual children have higher levels of EF skills (Bialystok, 2017); therefore, they might be more proficient at emotion regulation by transferring EF skills acquired from bilingualism into ER strategies. If they are able to use EF to facilitate ER more efficiently in one language or the other, then we can understand in which ways they are using language to help them, and the role of language in the ER process. Research has been done on the association between ER and language skills in monolingual children (Fields-Olivieri et al., 2024; Roben et al., 2013), but bilingual children and how their ER levels might differ within an individual based on language proficiency have not been widely studied. The goal of the present study was to explore bilingualism as a tool for EF which was hypothesized to assist processes of ER in young children. It is important to understand which strategies children can benefit from during their socio-emotional development so we can help them 1) have a better socioemotional experience in childhood and 2) develop skills for their adult lives, perhaps, through an emphasis

on language and bilingual education. The results discussed in this work are preliminary pilot data, changes needed to the design moving into the full study will be addressed.

Methods

Design Overview

This study assessed bilingual children's language proficiency and dominance, their EF skills, and their ER skills to determine if language skill levels and language dominance play a role in ER success. So far, only piloting sessions have been carried out. Children's language dominance for each language was assessed using the Child Bilingual Language Profile (CBLP; Ramirez, 2017) which was completed by the child participants' caregivers. The second measurement for bilingualism, specifically expressive language skill levels was the Preschool Language Scale 4th edition (PLS-4; Zimmerman et al., 2001) in Spanish and English which was completed by children. Executive functioning skills were evaluated using the Animal Stroop (Wright et al., 2003). Finally, emotion regulation levels were measured once in each language with an adapted version of the Waiting task from Vaughn (1984) and Roben et al. (2013), which is designed to incite frustration in children. After the initial measures for language skills and EF were completed, children were told to wait to open a gift that was placed in front of them. A secondary qualitative analysis was performed by coding for specific ER behaviors like distraction, self-talk, etc., to see which behaviors were the most common. Using a within-subject design, the children experienced the waiting task twice, once after being primed in each of their languages to measure the differences in their responses in each. The conditions— Spanish first- English second, and English first- Spanish second—were counterbalanced to avoid ordering effects. The independent variable was the language being spoken during the Waiting Task. The responses and behaviors linked to ER during the task were dependent variables. We

hypothesized that children would be more proficient at emotional regulation in their most dominant language as it helps them express themselves verbally and use self-directed talk to manage frustration.

Participants

Participants for piloting were (*N*= 2) Spanish/English bilingual children ages three to five years old recruited through the Child Development Center (CDC) database at the University of Texas at Austin. Participants with developmental or other disorders that would not have allowed them to complete the tasks were excluded. When brought into the lab, parents/caregivers were given informed consent to sign, and children were asked if they wanted to participate in the study with a scripted assent form.

Materials and Measures

Child Bilingual Language Profile

The first bilingual measurement was completed by parents who filled out the Child Bilingual Language Profile (CBLP; Ramirez, 2017). The CBLP is an adapted version of the Bilingual Language Profile (BLP; Birdsong et al., 2012) which was used to assess language exposure and proficiency in bilingual people. Parents answered questions about their child's relationship with bilingualism and each individual language. The question categories were as follows: language history (e.g. "At what age was your child first exposed the following languages?"), language use (e.g. percentage of use per week of both languages with friends, family, etc.), language proficiency (e.g. "How well does your child speak English/Spanish?"), and education where parents indicate what type of education program their children attend (e.g. English based, Spanish immersion, etc.). The test used a Likert scale (0-10) to measure how

much a person agrees or disagrees with the statements; each individual language (Spanish/English) has a score. A sum of responses for every category in each language was used to determine language dominance. For example, if a child's parent marked "4" to "*How well does your child speak English/Spanish?*", four points were added to their score. Scores closer to 124 (total number of possible points) indicated higher language dominance. Scores closer to zero indicated lower language dominance levels. Dominant (DL) and non-dominant language (NDL) categories were assigned to each child based on their scores; the higher scoring language was assigned (DL) and the lower language score (NDL).

Preschool Language Scales- 4th Edition (PLS-4)

Children were evaluated with the PLS-4 in English and in Spanish (Zimmerman et al., 2001). The PLS is widely used to assess children's language skills from ages zero to seven years old and is validated in both Spanish and English. Each test took approximately 15 to 20 minutes per language to complete. For this study, children were only evaluated in their expressive communication. The test included pictures where various events take place like a boy with a stomachache or a girl playing in a sandbox. A researcher displayed the pictures to the child participants one by one, asking questions to incite verbal responses in different language areas. For example, children were asked to make use of their language skills to indicate the size or number of specific objects in the pictures. Responses were scored as correct or incorrect on a log-in sheet with the item number for each question; the assessment ended if children answered incorrectly three times in a row. The PLS-4 handbook (Zimmerman et al., 2001) outlines age ranges based on the difficulty of the numbered items; these age ranges were used to determine language skill levels. The point at which the child reached failure was considered their language skill level. For example, if a child who was 40 months old failed at 56 months of age according

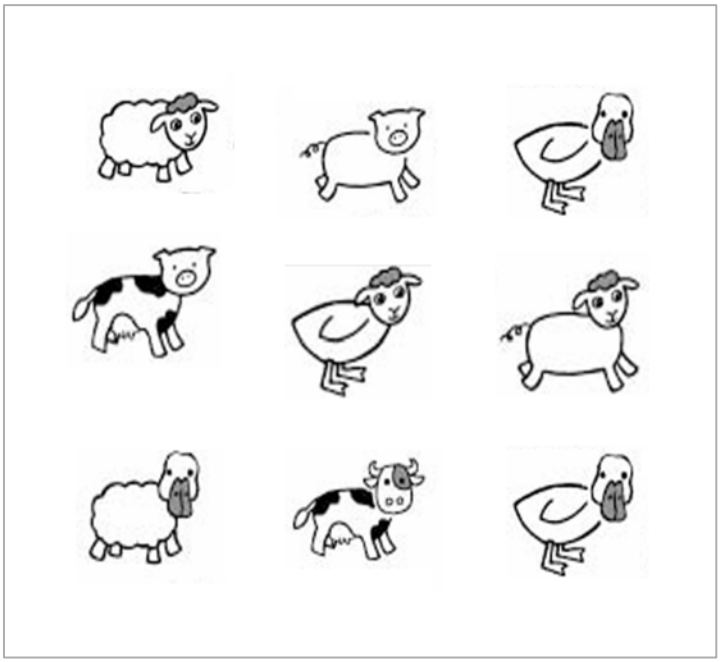
to the manual, their language skill level assessment was 56 months of age. Piloting sessions demonstrated that the PLS was too long for children to effectively complete before it became too frustrating and boring. Moving forward, the full study will be revised to make use of an adapted version of the PLS-4 or a different and shorter language assessment tool. The PLS is currently on its 5th edition; for budgeting purposes, this study used the 4th edition which was available at the Language Development Lab at the University of Texas at Austin.

Animal Stroop

The Animal Stroop (Wright et al., 2003) was used to assess children's EF levels. The Animal Stroop is adapted for children from the original Stroop task (Stroop, 1935); the animal Stroop uses pictures of animals to measure reaction times. The Animal Stroop asked children to name the animals that they saw on a printed sheet of paper as fast as they could from a block of 18 trials (See Figure 1). First, children were familiarized with congruent (e.g., cow) and incongruent (e.g., a cow's body and a duck's face) animal stimuli by looking at multiple examples of each. Once children made no mistakes in the familiarization blocks, the researcher proceeded to the measured blocks. Two printed cards with nine animals on each were used to show children

Figure 1.

Animal Stroop Stimuli Card A.



Note. Each card contained congruent and incongruent animal pictures. Card B used the same animals in a different order.

pictures of alternating congruent and incongruent animal stimuli. The incongruent stimuli are designed to be a distraction, or interference so that inhibitory control can be measured. Children were scored based on response times to name all the animals in the block and number of mistakes made in each block.

Waiting Task

An adaptation of the Waiting task (Vaughn, 1984; Roben et al., 2013) was used to test children's tolerance to frustration and for the purposes of this study, the level of ER that children showed as well as the strategies used to achieve it. It consisted of presenting a child with a present and leaving them in a room with it after asking them to wait and not touch the gift while the researcher to completed a task. When the researcher entered the room after the timed wait, they prompted the participants to open their gifts. The waiting task was completed twice by every child in their dominant and non-dominant languages where condition A participants were prompted in English first and Spanish second and condition B participants were prompted Spanish first English second. Roben and colleagues used an eight-minute wait in their study; to avoid too much frustration buildup that could overlap into the second session, the wait time was five and a half minutes in the piloting for this study. ER was scored quantitatively based on time waited to open or touch the gift, as well as pass/fail depending on if children touch/open the gift at all. Additionally, waiting tasks were video recorded for qualitative measures to be collected through the identification of ER behaviors observed during the wait time. ER behaviors expected were distraction and support seeking (Calkins et al., 1999).

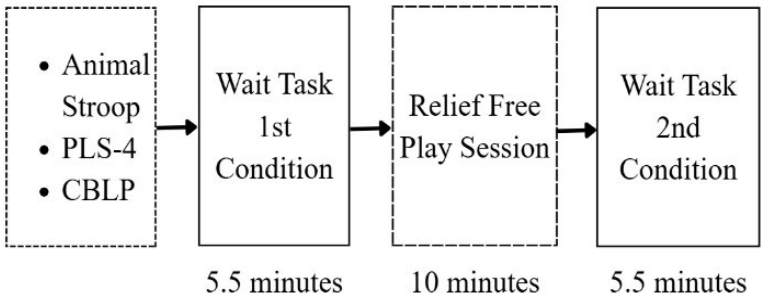
Procedures

Following consent procedures with parents and participants, parents completed the CBLP (Ramirez, 2007) and children were then assessed using the PLS-4 in English and Spanish (Zimmerman et al., 2001), as well as the Animal Stroop (Wright et al., 2003) for the assessment of language dominance, skills, and EF (see Figure 2).

After initial measures were completed, participants were placed in an observation room, at which point the recording of the session started. The waiting task was completed twice by each child in order to measure effects between language proficiencies. The order of the language was counterbalanced to avoid memorization or practice effects. A researcher placed a small gift in a wrapped box on the table in front of the child. The researcher prompted the task in the corresponding language condition. Children were told to wait to open or touch the gift until the return of the researcher to the observation room. The researcher then left the room for five and a half minutes with a simple plastic sheep. After the wait time passed, the researcher entered the observation room and allowed the child to open the gift if they hadn't done so already. If children opened the gift prematurely, the researcher let the child know that the instructions to not touch or open the gift were extremely important, asking them to follow every instruction to the best of their ability. After the first waiting task was completed, parents were encouraged to

Figure 2.

Experiment Design



Note. Video recording began at the start of each wait task; initial assessments and free-play sessions were not recorded.

engage in play for 10 minutes with their child and their gift in the observation room (see Figure 2). When the free-play time was over, the waiting task was repeated in the remaining language, priming the task by prompting it in the appropriate language.

Results

Initial Assessment Results

The results presented in this work are the product of piloting sessions. Because of a small sample size (*N*= 2), a descriptive analysis of pilot results will be outlined and discussed.

Table 1.

Participant Demographic, Language Dominance, and

Participant	Age (months)	Condition	DL	NDL
P1	47	A	Spanish	English
P2	63	B	English	Spanish

Note. $N = 2$ ($n = 1$ for each condition). Participants were both female and displayed opposite language dominance to each other.

Initial assessments of language dominance (CBLP; Ramirez, 2017) determined that Participant one, who is three (approaching four) years old, was more dominant in Spanish than English. Participant two, who is five years old, had opposite language dominance results with English as their dominant language over Spanish. Both participants successfully completed the Animal Stroop (Wright et al., 2003) assessments to the best of their ability. Reaction times decreased in the second naming block of the Animal Stroop. During expressive language skills assessments with the PLS-4 (Zimmerman et al., 2001), children's frustration and boredom started to rise as the assessment went on longer than expected. The length of the PLS-4 and children's reactions to it resulted in the researcher stopping the PLS-4 assessments before both participants reached failure (three consecutive

errors). Thus, language skill levels were not accurately measured in pilot sessions. Demographic information did not reveal any relevant information in piloting.

Waiting Task Results and Observations

Participant one completed both waiting tasks successfully by waiting for the entire duration of each task before the researcher prompted her to open her gift. During both tasks, participant one constantly touched the gift and began to slowly rip the wrapping paper that the gift box was wrapped in. In both tasks, participant one engaged in play with the plastic sheep provided while periodically approaching the door to listen for the researcher or their parent in the hallway and walking in the observation room.

Participant two waited for the entirety of the first waiting task but the second waiting task was discontinued at around the four minute mark by the parent because the child appeared to be upset. Participant two appeared to be upset about being left alone in the room to wait. For the continuity and brevity of the study, the door to the observation room was left open to foster a less threatening environment to address the participant's initial discomfort. Throughout the duration of both waiting tasks, participant two walked inside the observation room, but did not make prolonged or periodic use of the plastic sheep toy. Participant two engaged in play with the two-way mirror in the observation room by making different facial expressions and looking at herself. Additionally, the participant left the room and walked into the hallway adjacent to the observation room to look for the researcher or their parent three separate times. The researcher led her back into the room, repeated the prompt for the task, and left once again.

Both children appeared to be frustrated by the researcher's request to wait to touch or open their present. Additionally, both participants were upset by having to remain alone without their parent or the researcher in the room.

Discussion

Because participants waited for the entirety of the waiting tasks, or the task was ended early by a parent, regardless of language conditions, there was no indication whether language dominance plays a role in ER. Although children touched the gift at times, they followed instructions and regulated their emotions so as to not open their present prematurely. Nevertheless, both child participants displayed the expected emotion regulation behaviors: distraction and support seeking. Distraction was observed when children played with the plastic sheep or the two-way mirror and by walking in the room. Children displayed support seeking by looking or listening for the researcher or their parent in the hallway.

This work presented pilot data only, reflecting the current stage of the study. Further revisions are needed to the methods and study design. Moving forward towards the full study, a new and more brief language skill assessment tool will replace the PLS-4 to avoid frustration and boredom during the initial assessments. Additionally, the waiting task will be modified by prolonging the wait time to provoke more frustration in hopes of better observing the relationship between ER, language skill level, and language dominance. Lastly, a larger and more varied sample of Spanish-English bilingual children ages three to five will recruited by expanding the recruitment scope outside of the Children's Research Center's database.

This study looked at how bilingual children regulate their emotions when facing a frustrating task with the goal of determining whether language dominance plays a role in how

successful children are at regulation. Children's executive function and language skills, as well as their language dominance were measured using widely used assessment tools that were adapted for this study. The pilot data from the initial sessions did not provide any indication of a relationship between language dominance and emotion regulation success. Moving into the full study, language skills and wait task measures will require modifications to accurately assess if there is an existing relationship between emotion regulation and language dominance in bilingual children.

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