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Aida Rose Delony April, 08, 2025

The Role of Language in the Perception and Emotional Expression of Anxiety: Autobiographical Memories of Spanish-English Heritage and Sequential Bilingual Speakers

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Abstract

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By Aida Rose Delony

The current study examines the role of language in the perception and expression of anxiety among English-Spanish heritage speakers. It was influenced by the work of Kyriakou et al. (2024), which examined bilingual emotional expression in the context of guilt. While prior research has explored broader emotions, this study focuses on anxiety due to its prevalence in many individual's lives. Fourteen bilingual undergraduate students participated and were split into two categories: Spanish Heritage (n = 8) and Sequential Bilingual (n = 6) speakers. Participants reviewed and rated their level of anxiety after reading anxiety-inducing scenarios. They provided autobiographical memories regarding anxiety in English and then Spanish. Emotional Intelligence (EI) scores were also assessed.

Findings suggest that one's mother tongue has some influence on anxiety expression. Spanish Heritage speakers reported higher anxiety ratings in Spanish. Sequential Bilinguals had more balanced ratings, although slightly higher in English. Linguistic analysis revealed that Spanish Heritage speakers produced more narratives about childhood and family in Spanish but more university-related stressors in English. Sequential Bilinguals primarily focused on university-related stress in both languages. Gender differences emerged, with female participants scoring higher in EI and using more anxiety-related words. Male participants used more anxiety-related words in Spanish than in English. These findings provide nuances to the discussion on the influence of language on emotional perception and memory recall.

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Introduction

Anxiety is a universal mental state and an essential human emotion. It is primarily classified as a secondary emotion since it is more difficult to express than primary emotions like anger or sadness (Meek, 2024). As such, it can manifest in different ways and is oftentimes characterized by feelings of worry, stress, and apprehension (Gross & Hen, 2004). It usually functions in tandem with physiological responses such as increased heart rate and perspiration. It is an integral element in survival and adaptation (Gutiérrez-García & Contreras, 2013).

While anxiety does have benefits for preparing us for dangerous situations and potential threats, it can just as easily become unmanageable and excessive. At that point, one's anxiety begins to hinder their well-being and ability to cope with daily life. In contemporary society, we have a better understanding on how this transpires and ways to mitigate the symptoms. Anxiety disorders are quite prevalent and impact one's emotional regulation, memory-processing, and ability to connect with others (Remes et al., 2016). Anxiety is multidimensional and varies by one's specific self and their experiences. The ways in which we express anxiety is also contingent upon how we cognitively function and societal contexts making it an interesting variable to observe.

The development of anxiety within an individual is complex and requires brain maturation alongside a responsive social environment (Fox & Kalin, 2014). One of the key neural processes that is closely intertwined with anxiety is cognitive functioning. This is oftentimes linked to the growth of the region of the brain primarily involved in executive functions (Decety & Lamm, 2006). The development of higher cognitive functioning is necessary for emotional regulation as it allows individuals to better coordinate their responses to others and more effectively navigate social interactions (Thompson et al., 2021). Examining

young adults in particular is important for understanding how anxiety manifests and is perceived. They are at a stage in life where they grapple with immense stressors daily and their brains are almost done developing (Zhou et al., 2023). These factors could lead to more insight into how young adults are able to emotionally regulate and compartmentalize anxiety-inducing events.

Language and Thought

The way in which emotions present themselves is closely intertwined with the language an individual speaks (Kotz & Paulmann, 2011). There is a complex relationship between language and thought. Language plays a central role in influencing emotion, memory, and how we are able to connect with the world around us. The connection between these variables is a long debated subject going back to the early 20th century (Pavlenko, 2005). This was when the theory of linguistic relativity was first formulated (Sapir & Whorf, 1956). This theory states that the type and structure of language one is fluent in affects the speaker's perception and how they categorize the world (Wolff & Holmes, 2010).

One's language structure can influence color perception, grammatical gender, spatial relations, and memory retrieval (Everett, 2013). For instance researchers have observed that language can impact how an individual conceptualizes time and causality. In one study, Boroditsky observed that Mandarin speakers perceived time in a vertical sense and were faster to order the months while English speakers viewed time horizontally (Boroditsky, 2001). A similar effect was observed for color as one study comparing Russian and English speakers' abilities to distinguish colors found that Russian speakers had a faster discrimination time (Wolff & Holmes, 2010).

Individuals who speak two languages sometimes experience additional benefits as they have to maneuver between two linguistic systems. For instance, bilingualism can lead to

enhanced cognitive flexibility since they have more complex thought processes which in turn affects their interpretation of memories (Kharkhurin, 2017). Maintaining two linguistic systems can also have adverse effects. The more enhanced linguistic systems can lead to cognitive overload which might infringe on one's ability to interpret their emotional experiences (Louie & Snell, 2009). Investigating bilinguals is essential for understanding how language interacts with thought processes. The language that a memory is solidified in one's mind can affect how it is later recalled and narrated (Mortensen et al., 2014).

Variations of Bilingualism

The concepts "bilingualism," acts as an umbrella term since it possesses several variations. For instance, one primary subtype is heritage speakers in particular since these individuals were raised in a unique environment. Heritage speakers are defined as individuals exposed to a minority home language growing up that is different from the dominant language of the community they live in (Noguera & Mavrou, 2014). They have varying levels of proficiency in their heritage language. Oftentimes that proficiency dwindles as they leave their dual-language contexts and lean more into their second language (Montrul & Mason, 2019). Heritage speakers need their second language more in their day-to-day life and use it more frequently. Another relevant subtype is sequential bilinguals. This refers to a form of acquisition where the individual has partially developed their L1 while beginning to learn their L2 in early childhood (Amengual, 2019). Sequential bilinguals can also be adults, such as individuals who immigrated to another country (Kohnert, 2008). One theory surrounding this subtype suggests that there is a correlation between higher levels of development in L1 with high levels of development in L2 (Cummins, 2001). However, one study observed an association between semantic skills of Spanish L1 and English L2, but not for grammatical skills (Castilla et al., 2009). Overall the strength of the L2

for sequential bilingualism is contingent upon the extent to which they use it, similarly to heritage speakers (Kohnert, 2008).

Autobiographical Memories and Bilingualism

Autobiographical memory (AM) refers to an individual's remembrance of previous experiences and events (Bluck, 2003). Previous empirical evidence suggests that bilingual individuals acquire and recall memories differently depending on what language was employed in the retrieval process (Marian & Neisser, 2000). For instance, Japanese-English bilinguals have been shown to retrieve more memories and more fluently from childhood and adolescence in their first language. The recall was stronger when the language of the cue words provided matched the language that the event initially transpired (Matsumoto & Stanny, 2006). This is a concept known as the language-dependent recall effect. It has been further corroborated by research that observed how Spanish-English bilinguals were able to remember more details when recalling childhood memories in the language that they were primarily utilizing at the time of the event. Interestingly Marsh et al. found no difference between the languages for more recent memories (Marsh et al., 2015).

For bilinguals, the language-dependent recall effect goes beyond the proficiency of fluency. For instance, heritage speakers may acquire their heritage language in a more emotional environment. These speakers often have personal and familial connections to their non-majority language. The second language is primarily assigned to academic and professional environments (Pozzi et al., 2021). Regarding the recollection of autobiographical memories, an individual might more readily procure memories from their childhood in their heritage language. This can be juxtaposed with the individual more readily obtaining more recent memories or those related

to education in their dominant language (Kohnert, 2008). It seems as though the language used has an influence on the type of memories retrieved.

Emotional Intelligence and Bilingualism

Emotional Intelligence (EI) refers to one's ability to recognize, understand, and regulate their own emotions as well as the feelings of those around them (Mayer et al., 2008). It is a mechanism that influences how an individual might perceive certain emotionally-charged experiences. To clarify, this does not always have to be in relation to intense situations, as EI can be employed in everyday experiences especially when navigating interpersonal relationships. Because bilinguals have two different linguistic systems and are often raised in unique environments their levels of EI could play an especially interesting role in the manifestation of memories. While one's language background cannot predict EI, higher emotional processing and perspective-taking was more apparent when using one's first language (Ward & Ragosko, 2025). Previous research has also observed that memories retrieved in one's first language were more emotionally intense and detailed in comparison to their second. This might be due to less emotional connection to the second language (Mortensen et al., 2014). Emotional intensity and expression is influenced by the language employed during the memory retrieval process (Mavrou, 2021).This could implicate how bilingual speakers process emotions like anxiety when procuring autobiographical memories (AMs).

Emotional Intelligence and Anxiety AMs

Previous studies demonstrate that individuals with higher EI are able to better express themselves emotionally (Linley et al., 2010). This is particularly relevant as AMs are influenced by the individual's capacity to process and express their emotions which differs from person-to-person (Noguera & Mavrou, 2014). For instance, when faced with a stressful situation,

some might respond in a calm manner while others might perform the contrary. The way that they calmly express their emotions will alter how that memory is encoded for them. AMs can oftentimes encompass events considered "self-defining memories," (Conway et al., 2004). Self-defining memories are those where emotional intensity was experienced during the event which might be ongoing or cause frequent rumination (Morgan, 2010). As such, individuals with higher levels of anxiety are more readily able to access anxious memories. A prior study regarding undergraduates and their ability to acquire anxious memories found that those related to panic and more intensely negative emotions were more vivid and detailed (Wenzel et al., 2004). Researchers have observed a negative relationship between EI and levels of anxiety. For instance, those who self-reported a higher capacity to regulate their emotional state demonstrated less anxiety (Fernández-Berrocal et al., 2006). However, other studies have found a positive relationship between EI and anxiety factors such as academic stress and testing anxiety (Stankovska et al, 2018). It becomes difficult to assert whether speakers with higher EI ratings might incorporate less or more intense negative emotions when recounting memories regarding anxiety.

Gender on Emotional Intelligence and Autobiographical Memories

Gender difference is another important factor to assess when looking at language, memory, and EI. A previous study on the emotional expression and emotional vocabulary of English-Spanish bilinguals found that female participants produced more emotional concepts (Mavrou, 2021). Those with higher trait EI tended to produce more emotion words used. Additionally, the number of emotion words used correlated with sociability and emotionality (Mavrou, 2021). This illuminates the connection between EI and emotional vocabulary as well. Those with higher EI, especially women have been shown to possess a wider vocabulary

knowledge (Asadollahfam et al., 2012). It is unsurprising that individuals who are more able to regulate their feelings based on society's standards would be able to express them more effortlessly.

However, this is not always the case when recalling memories from childhood and adolescence. In one experiment, women reported more memories and with greater emotional intensity (Davis, 1999). This aligns with the idea that more intense or self-defining memories are easier to recall. Conversely, another experiment within the same study found no gender difference in the intensity of emotion depending on what that emotion was. For instance, more dominant memories such as happiness or sadness had similar levels of recall (Davis, 1999).

Current Study

While research has been done on the link between autobiographical memories, emotional intelligence and bilingualism; the literature comparing different forms of bilingualism and assessing autobiographical memories regarding secondary emotions is scarce. Only recently has a study looked into emotions surrounding anger and surprise of Spanish-German heritage speakers within their autobiographical memories (Noguera & Mavrou, 2024). There are gaps in research on secondary emotions being examined in this particular context. This disparity is addressed within the current study which aims to examine anxiety within related-contexts among two different bilingual groups. By looking at these subtypes individually, we can gain broader insight into the influence that language has on memory recollection and emotional expression.

The current study aims to build upon the recent work of Kyriakou, Mavrou, and Palapanidi (2024). They explored the role of bilingualism within the experience and emotional expression of guilt and morality by focusing on Greek (L1) and Spanish (L2) speakers. However, the present research shifts focus to the emotional expression of anxiety among bilingual and

heritage speakers of Spanish and English. This study seeks to investigate how language influences the emotional ratings of anxiety, content of autobiographical memories, and the role of emotional intelligence in both of these cognitive processes. Three research questions are explored:

(1) Does the language used (Spanish/English) influence the emotion ratings of anxiety that Spanish Heritage speakers and Sequential Bilinguals give after reading anxiety-inducing scenarios?

(2) Does the language used influence the linguistic features and general content employed by both groups in their spoken autobiographical memories of anxiety?

    (a) Does the type of Scenario provided to participants affect this?

(3) Does the level of Emotional Intelligence influence the content within the autobiographical memories in English and Spanish?

(4) Does gender play a role in the level of Emotional Intelligence and subsequently the content of the AMs?

Methods

This study assessed whether language influences the emotion words used by bilinguals in their autobiographical memories of anxiety in English vs. Spanish. Gender was an additional variable investigated to see if it played a role in the way that the bilingual individual perceived and recorded their emotions. The data for this study was constructed based on:

1. A Language Consultant Questionnaire modified after Kim (2025) to categorize participants (**Appendix D**)

2. A survey modeled after the shortened form of the Trait Emotional Intelligence Questionnaire by Petrides (2009) to quantify an individual's level of trait emotional self-efficacy (**Appendix E**)
3. Two emotional scenarios. The Exam Dilemma was modified from Kyriakou et al. (2024). The Friendship Dilemma was adapted from the Cheater's Dilemma by Kyriakou & Mavrou (2023).
4. An autobiographical memory task that was modified after Kyriakou et al. (2024)

Participants

The sample included 14 participants, eight of whom identified as female and six identified as male. Participant ages ranged from 20 to 22 (M = 21.43, SD = 0.62). Participants were recruited online through promotional flyers placed around a private university's campus as well as through word-of-mouth. This method is classified as a convenience sample. Concerning the linguistic background, participants were categorized into two groups based on their self-reported first language (mother tongue) as well as language acquisition history: Heritage Spanish Speakers and Sequential Bilinguals.

Classification Criteria

Heritage Spanish Speakers: Participants who identified Spanish as their first language (mother tongue) were classified as Heritage Spanish Speakers. These individuals learned Spanish first in a home environment but were raised in an English-dominant society. Spanish is then considered their heritage language, while English is their dominant language for daily life (ex: education, work, interpersonal relations). This group consisted of eight participants (five female, three male).

Sequential Bilinguals: Participants who identified English as their first language (mother tongue) were classified as Sequential Bilinguals. These individuals learned English first and acquired Spanish later. This acquisition could have happened simultaneously or sequentially, in a dual-language home environment. They were raised in an English-dominant society. English is their dominant language and Spanish is an additional language. This group consisted of six participants (three female, three male).

Materials and Measures

Emotional Intelligence Questionnaire Short Form (TEIQue-SF). This study used the Emotional Intelligence Questionnaire (TEIQue-SF; Petrides, 2009; **see Appendix E**). TEIQue-SF contains 30 items and was administered to each participant. The measure used a Likert scale. Participants rated their level of emotional intelligence between 1 (*Completely Disagree*) to 7 (*Completely Agree*). The TEIQUE-SF was provided in English. English was the first language used for the subsequent tasks and this questionnaire was administered first. Each item in the TEIQue-SF questionnaire assessed either global trait EI, well-being, self-control, emotionality, or sociability. Global trait EI gauges the participant's overall perception of their emotional abilities. All items were scored together to acquire global trait EI. Well-being assesses how the participant's management of their emotions contributes to life satisfaction. For example, an item indicating the usage of well-being was, "I generally don't find life enjoyable." Self-control gauges the participant's self-perception on how well they manage impulses. An item indicating the application of self-control would state, "I tend to get involved in things I later wish I could get out of." Emotionality assesses how the participant perceives and understands their emotions and others. An item indicating emotionality was, "I often find it difficult to show my affection to those close to me." Sociability looks at the participant's comfort and ability to

navigate social interactions. For example, an item indicating the application of sociability was, “I can deal effectively with people.” The average score for each participant was calculated after reverse scoring procedures were implemented, this method was recommended by the authors of the TEIQUE-SF.

Exam Dilemma Scenario. After providing their informed consent and responding to questions regarding their demographic and emotional intelligence, the participants were instructed to complete two separate tasks in both English and Spanish. The first set of tasks was initiated in December 2024 and administered in English. The same participants were contacted after a month and the same experimental tasks were repeated but in Spanish. The month difference was to create enough time between scenarios that the participants would be less able to remember their initial responses. Participants were presented with the two scenarios and emotional ratings in that language. The exam dilemma was modified (Kyriakou et al., 2024) to align with issues a student would face in this contemporary era. For instance, one of the scenarios was about a friend cheating on his wife, that did not match the age range of the young adult participants. Moreover, the exam dilemma employed in Kyriakou et al.’s study focused on triggering feelings of guilt.

For the purposes of this study, it was altered to mimic instances that would trigger anxiety. The participants were asked to imagine that they were enrolled in a course that assigned a final exam worth the majority of their grade. In addition to the stresses of the exam, the participant finds themselves incredibly underprepared. Due to a lack of adequate time, the student is unable to study properly. Late into the night, they decide to give up and face the exam the next day. The exam contains information the participant did not study for and they have no idea how to answer. The participant has to accept defeat and risk potential failure in the class.

After reading each anxiety-inducing conflict, the participants were asked to rate the intensity at which they experienced feelings of anxiety, stress, or worry. A 7-point Likert-type scale was used that went from 1 being *Not at All* to 7 being *Very Strong* (**see Appendix F**).

The Friendship Dilemma Scenario. The participants are given another scenario that was adapted from the cheater's dilemma (Kyriakou & Mavrou, 2023). The task was altered to a scenario that would be more universally experienced by college students at this age. Additionally, the modified version focuses on analyzing feelings of anxiety rather than guilt. The participant is given a scenario where they have to decide which friend to choose in an argument. They are in a group of three and one day, both friends decide to no longer be friends. Each tells the participant that in order to remain friends, the individual must lose the other as a friend. The participant finds themself directly in the middle of the argument and must decide what to do and if they must face the potential loss of a friendship. After reading each anxiety-inducing conflict, the participants were asked to rate the intensity at which they experienced feelings of anxiety, stress, or worry. The same scale for the student's dilemma was used within this one as well (**see Appendix G**).

Autobiographical Memory Task. After reading each scenario, participants were instructed to describe out loud an event that made them experience feelings of anxiety, stress, worry, unease, or fear in English. This did not have to be relevant or related to the scenario provided. It was supposed to make them think back to a memory in which the level of anxiety experienced was similar to the rating that they gave after initially reading the scenarios. They were also asked to provide specific information on their age, who they were with at the time of the incident, where they were, and what caused their anxiety to eventually dissipate. The same participants were contacted after a month to complete the second session where they were asked

to perform the same experimental tasks. They were presented with the same prompts for both dilemmas, however, they were translated to Spanish. The instructions to describe an autobiographical memory related to anxiety were also translated, participants were instructed to respond in Spanish as well (**see Appendices H & I**).

Language Consultant Questionnaire. Language Consultant Questionnaire was modified for this study. Regarding the questionnaire, the information sheet contained 16 questions. It contained some demographic questions as participants self-reported their age, gender, and where they were born. The remainder of the questionnaire requested information regarding when the participants learned both English and Spanish, which language was spoken with parents, with friends, through electronic messaging, etc. (**see Appendix D**). These questions were utilized to cement the categorization of the two groups. This questionnaire was administered after the rest of the study method since examining the different subtypes of bilingualism was not the initial aim.

Procedure and Design

Participants were undergraduate university students who volunteered to complete the measures and tasks. Two sessions were completed with participants involved. Each session took approximately 10-20 minutes to complete and was recorded, however, they were only witnessed by the primary investigator. Participants were first given the Language Consultant Questionnaire and Emotional Intelligence Questionnaire Short Form (TEIQue-SF) before the interview started. Upon completion, the participants joined a Zoom where they were shown each scenario one at a time. They were in charge of reading through the scenarios and were given the opportunity to read them out loud to help comprehension. After reading through it, and providing an anxiety rating, they would speak about what memories were triggered. It was an unstructured interview

format. The recordings were transcribed, the corpus was of both the English and Spanish responses. All identifiers and private contents were removed, pseudonyms were given to each participant to ensure that there was no violation of privacy or break of confidentiality.

Data Analysis Plan

The transcriptions in both English and Spanish were reviewed and tagged for several identifiers: word count, sentence length, and usage of anxiety words. Word count was obtained through built-in tool feature of Word Document. Sentence length was obtained through a public sentence length counter website. The usage of anxiety words includes any word, metaphor, or description that indicated anxiety was present in that moment. The anxiety words were categorized into three separate degrees of intensity: low, moderate, high. Low level can be classified as lower-intensity words that are more manageable. For instance, *worried*, *uneasy*, and *nervous*. Moderate level was classified as anxiety words that have more intensity behind them but are still manageable. For instance, *stressed*, *frustrated*, and *sad*. High level was classified as anxiety words that were high-intensity and overwhelming to the participant. For instance, *crushing*, *desperate,* and *terrified*. Context was key for classification as well. Regarding the academic dilemma in Spanish, a Spanish Heritage speaker stated, "I felt a little anxious before the exam." The usage of *little* makes the feeling of anxiety low-intensity. However, for the same dilemma and same language, another speaker responded with, "My anxiety was very very very strong." This would be placed in the severe level category.

Results

Research Question 1 asks: Does the language used influence the emotion ratings of anxiety that Spanish Heritage speakers and Sequential Bilinguals give after reading anxiety-inducing scenarios? To investigate this, the mean for anxiety ratings by language and

anxiety dilemma used was found. Table 1 illustrates interesting differences between the Spanish Heritage and Sequential Bilingual speakers.

Table 1

Average Anxiety Ratings for Each Group by Scenario

Group	Exam Scenario 1 (English)	Friendship Scenario 2 (English)	Exam Scenario 1 (Spanish)	Friendship Scenario 2 (Spanish)
Spanish Heritage	5.38 (1.22)	4.88 (1.32)	6.00 (1.32)	6.25 (0.97)
Sequential Bilingual	6.00 (0.82)	5.50 (1.12)	5.50 (1.12)	5.17 (1.07)

The Spanish Heritage group reported higher anxiety ratings in Spanish for both the Exam Dilemma scenario ($M = 6.00$) and Friendship Dilemma scenario ($M = 6.25$) compared to their ratings in English ($M = 5.38$ and $M = 4.88$). For example, CH rated her anxiety in English as 5 for the first Scenario and 4 for the Second scenario. However, when reading the same scenarios in Spanish, her ratings increased to 7 for both.

The Sequential Bilingual participants reported slightly higher anxiety ratings in English for both scenarios ($M = 6.00$ and $M = 5.50$). This can be juxtaposed with their ratings in Spanish ($M = 5.50$ and $M = 5.17$). For instance, SRS rated her anxiety in English as a 6 for Scenario 1 and 4 for Scenario 2. In Spanish her ratings slightly dropped to 5 for Scenario 1, while the rating for Scenario 2 remained the same. This indicates that perhaps the Sequential Bilingual participants may perceive their emotions more evenly across languages, while Spanish Heritage Speakers experience more intensity when perceiving events in their native language. **Table 2** has a more extensive breakdown of the anxiety ratings per participant in Supplemental Materials.

Research Question 2 asks if the language used influences the linguistic features and general content employed by both groups in their AMs. An additional sub question was whether the type of Scenario provided would affect this. Table 2 displays the mean number of emotion words used and their intensity (low, moderate, and high) for both groups.

Table 2

Average Anxiety Word Usage and Intensity Among HS and SB Speakers

Group	Language	Low	Mod.	High	Total S1 Anxiety Words	Total S2 Anxiety Words	Total Anxiety Words
Spanish Heritage	English	4.38	7.63	3.75	8.75	7.00	15.76
	Spanish	5.50	6.13	3.88	7.63	7.88	15.51
Sequential Bilingual	English	5.33	6.00	3.00	8.17	6.17	14.33
	Spanish	4.67	5.50	2.00	6.83	5.33	12.17

Participants used a similar number of anxiety-related emotion words across both languages. For the Spanish Heritage group, they had a slightly higher average of overall anxiety words used in English (M = 15.76) than in Spanish (M = 15.51). Participants used more moderate-intensity anxiety words in English (M = 7.63) and Spanish (M = 6.13). However participants used slightly more high-intensity emotion words in Spanish (M = 3.88) than in English (M = 3.75). This indicates that their native language could promote a greater expression of emotions. Participants used more anxiety words when describing English memories prompted by academic anxiety (M = 8.75) than relational anxiety (M = 7.00). It was more balanced in Spanish, however, participants used slightly more anxiety words within the friendship scenario (M = 7.88) than the exam scenario (M = 7.63). This juxtaposition could signify that Spanish

Heritage Speakers can emotionally express more when explaining academic scenarios in English since that's the language they use more in their day-to-day.

The Sequential Bilingual group had a more prominent difference between average emotion words in Spanish (M = 12.17) and in English (M = 14.33). This group used far fewer high-intensity words in Spanish (M = 2.00) compared to English (M = 3.00). They also used fewer moderate anxiety words in Spanish (M = 5.50) compared to English (M = 6.00). Both groups used more moderate-intensity anxiety words than any other level of intensity. Table 4 has a more extensive breakdown of the anxiety word usage per participant per language in Supplemental Materials.

Table 3

Average Word Count and Sentence Length from Both Groups in English and Spanish

Group	Avg. Word Count (Eng)	Avg. Sentence Length (Eng)	Avg. Word Count (Spa)	Avg. Sentence Length (Spa)
Spanish Heritage	403.88	11.14	341.50	18.96
Sequential Bilingual	378.56	11.54	317.56	11.27

Table 3 illustrates the word count and sentence length for both groups. Word count was averaged since each participant had a different length of comments. On average, Spanish Heritage speakers produced longer narratives in English than Spanish (M = 403.88 and M = 341.50). The Sequential Bilingual group followed the same pattern (M = 378.56 and M = 317.56). Perhaps English was used more for both since that is the language primarily used in their day-to-day lives. Despite the language background, this would make both groups more accustomed to speaking for longer periods in English rather than Spanish. Spanish Heritage

speakers had a far longer average sentence length in their autobiographical memories in Spanish than English while Sequential Bilingual speakers had fairly similar sentence lengths for both Spanish and English. However, these differences are not significant since there are too many confounding variables to take into account regarding sentence length. For example, run-on sentences.

Table 4

Overarching Themes Among Autobiographical Memories in English and Spanish

Theme	Spanish Heritage (Spanish)	Spanish Heritage (English)	Sequential Bilingual (Spanish)	Sequential Bilingual (English)
University Academic Stress	3 (18.75%)	6 (37.50%)	5 (41.67%)	4 (33.33%)
High School Academic Stress	2 (12.50%)	2 (12.50%)	1 (8.33%)	2 (16.67%)
University Social Conflict	1 (6.25%)	5 (31.25%)	5 (41.67%)	3 (25%)
Child-Adolescent Social Conflict	4 (25%)	2 (12.50%)	1 (8.33%)	3 (25%)
Family Dynamics	6 (37.50%)	1 (6.25%)	—	—

Table 4 presents the overall content of the participants' autobiographical memories in English and Spanish. It displays the themes included in these autobiographical memories, which were classified into five main categories: (1) university academic stress, (2) high school academic stress, (3) university social conflict, (4) child-adolescent conflict, (5) family dynamics. Overall, in all language conditions, participants mainly narrated autobiographical memories of anxiety after an academic assignment (ex: test, presentation), or social conflict (ex: dropping a friend). For instance,

SRS, SB, English: I think I just kind of… having that realization of like “oh I actually don’t value this friend as much because we’re very different people um…and have different values and systems.”

For the Spanish Heritage group, AMs about Family Dynamics and Child-Adolescent Social Conflict were more frequent in Spanish. An example of Family Dynamics is when one participant described the stress of wanting to support her family:

CH, HS, Spanish: That, as always, gives me a lot of stress because of course I want to take care of my family and um... and to have a career so that, so that I can, I don't know, support my family.

The second most frequent category for this group in Spanish was Child-Adolescent Social Conflict. One participant mentioned being isolated from her friend group in high school:

SR, HS, Spanish: They said, “You're leaving now. No, you're not going to be our friend." And I was like, "What?" And so, for like a whole week, I was just eating my food alone.

Conversely, University Academic Stress and University Social Conflict were the primary categories used for the Spanish Heritage group in English. For example, VC discussed anxiety over a chemistry exam as well as a recent break-up. This indicates that heritage speakers tended to associate older memories or those regarding family/home life more in their native language. They associate more recent memories in English since that has become their dominant language and is used more frequently day-to-day. For the Sequential Bilingual group, there was more balance in the categories when narrating an autobiographical memory in English. Conversely, for the same group, almost every participant fell under the University Academic Stress and University Social Conflict categories when recalling a memory in Spanish. One participant spoke about a recent story in where she faced a communication issue with a friend:

HA, SB, Spanish: So I didn't want that, but it made me anxious to tell her because I know that in the past, when I had said no that I didn't want to do that, she would get mad, and I didn't want to make her mad.

Regardless of what language the participants of the Sequential Bilingual group used to recount an autobiographical memory, none were about Family Dynamics. This indicates that these participants don't attribute familial connections with their second language.

Research Questions 3 and 4 ask how Emotional Intelligence and gender influence the content of the AMs. Appendix C displays the correlation between gender, EI, average word count, and average number of anxiety-related words used for both languages. There is no meaningful relationship between EI and average word count for English AMs. However, there is a slight negative trend between EI and average word count for Spanish AMs. This suggests that on average, participants with higher EI might be associated with shorter AMs. There is a weak positive relationship between EI and average anxiety-related emotion words used in English. This result suggests that participants with higher EI scores may use slightly more anxiety words in their AMs. Conversely, there was a very weak negative relationship between EI and average anxiety-related emotion words used in Spanish, but that correlation was essentially negligible.

There is a moderately strong positive relationship between EI and gender. This signifies that there is a tendency for female participants to score higher on emotional intelligence. There was also a slight tendency for female participants to use more anxiety-related words when describing their memories in English. Interestingly, there was a slight tendency for male participants to use more anxiety-related words when describing their memories in Spanish. While the relationships of both are very weak, it should be investigated in future studies (see **Appendix C**).

Table 5

Average Emotional Intelligence Scores Between Male and Female Participants

	Global Trait	Well-Being	Self-Control	Emotionality	Sociability
Female	5.14	5.61	4.67	5.55	4.59
Male	4.05	4.79	3.61	4.46	3.49

Table 5 reports the participant's gender and specific emotional intelligence scores. Regardless of the language group, the female participants had higher EI scores. They had a higher average Global Trait EI score ($M = 5.14$) compared to the male participants ($M = 4.05$). Female participants scored a higher average on the Well-Being subscale ($M = 5.61$) than the male participants ($M = 4.79$). This indicates that they had a greater overall life satisfaction. Female participants scored a higher average on the Self-Control subscale ($M = 4.67$ vs. $M = 3.61$ for males), indicating that they have more effective emotion regulation. Female participants also had a higher average on the Emotionality subscale ($M = 5.55$) than for male participants ($M = 4.46$). This suggests that they have better emotional awareness and expression. Lastly, female participants had a higher average on the Sociability subscale ($M = 4.59$ vs. $M = 3.49$ for males) demonstrating that they are more comfortable in social interactions.

Table 6

Average Emotional Intelligence Scores Between Male and Female Participants

	Avg. Anxiety Words (Eng)	Avg. Word Count (Eng)	Avg. Anxiety Words (Spa)	Avg. Word Count (Spa)
Female	7.67	360.94	6.56	278.50
Male	7.17	337.83	7.42	270.50

Table 6 reports how regardless of the group, on average, female participants used more anxiety terms in their narratives in English (M = 7.67) in comparison to male participants (M = 7.17). However, on average, male participants used more anxiety-related words in Spanish (M = 7.42) than the female participants (M = 6.56) Female participants had a higher word count for narratives in English and Spanish (M = 360.94 and M = 278.50) in juxtaposition to male participants (M = 337.83 and M = 270.50).

Discussion

The present study examined the influence of language on the emotional perception and recollection of anxiety in Spanish Heritage Speakers and Sequential Bilinguals. These groups were analyzed on differences in emotional intensity and the role of Emotional Intelligence (EI) in influencing how they recalled autobiographical memories in English and Spanish. Four research questions were explored in this study: 1) Does the language used (Spanish/English) influence the emotion ratings of anxiety that Spanish Heritage and Sequential Bilingual speakers give after reading anxiety-inducing scenarios? 2) Does the language used influence the types of words and general content employed by speakers in their spoken autobiographical memories of anxiety in English and Spanish? 3) Does the level of Emotional Intelligence influence the content within the autobiographical memories in English and Spanish? 4) Does gender play a role in the level of Emotional Intelligence and subsequently the content of AMs?

Regarding the first research question, findings revealed that the Spanish Heritage group reported higher anxiety ratings when given scenarios in Spanish while the Sequential Bilinguals displayed slightly higher ratings when given scenarios in English. This corroborates the idea that more earlier-acquired languages resonate in a more emotionally intense manner for the individual (Mortensen et al., 2014). It aligns with prior research that suggests primary language

acquisition has more emotional ties due to the emotional context in which the acquisition transpired (Dewaele et al., 2008). Conversely, the Sequential Bilingual group reported more balanced emotional ratings between English and Spanish. Their English ratings were only slightly higher, which suggests that their emotions are less tied to a specific language. This provides a different perspective since one's first language does not always have to be more emotionally-charged than their second.

For the second research question, the analysis of lexical components within the autobiographical memories demonstrated that both groups used a similar amount of anxiety-related emotion words for both English and Spanish. This suggests that anxiety is a notable emotion that is capable of going beyond the boundaries of one's language. However, the intensity and context of the anxiety words differed depending on the language used. The Spanish Heritage group used high-intensity anxiety words slightly more in Spanish than in English. This points toward the idea that one's native language carries more emotional weight and allows for more intense emotional expression (Harris et al., 2006). They had a higher average of moderate-intensity anxiety words in English than Spanish. This indicates that English is used more as a daily function language where anxiety is referred to moderately, while Spanish is used for more intense anxiety expressions. Contrastingly, the Sequential Bilingual group had a greater variation in the emotion word usage between English and Spanish. They used more high-intensity and moderate-intensity anxiety words in English. This suggests a greater comfortability and potentially proficiency in English. This corroborates previous studies that found that sequential bilinguals don't associate their second language with the same emotional intensity and depth as their first language (Dewaele, 2006).

Another key finding was that for Spanish Heritage and Sequential Bilingual speakers produced longer narratives in English than in Spanish. This points toward English being the dominant language for both groups. The fact that they use English more in day-to-day life would result in greater fluency in the language. This coincides with prior research that demonstrated how bilinguals produce more detailed narrative in their dominant language (Mortensen et al., 2014). It might be easier for both groups to express their emotions more readily in English since they are more accustomed to it at this stage of their lives.

The context that the anxiety was recalled in also played a role in shaping the content of the memories. Spanish Heritage speakers used more anxiety words when describing academic scenarios in English compared to relational ones. This could indicate that English is more tied to academic experience especially in terms of anxiety. It is unsurprising seeing as how English is the primary language used for the participants at their university. Conversely, there was a more balanced use of anxiety words across the contexts in Spanish. Slightly more anxiety words were used in the context of the relational scenario which could signify that Spanish is more associated with interpersonal relationships. For the Sequential Bilinguals, they used more anxiety words in English for both contexts. This further supports that English is their primary language when it comes to emotional expression.

The analysis of overarching themes of the autobiographical memories demonstrates interesting differences between the two groups. The Spanish Heritage group recalled more memories related to Family Dynamics and Child-Adolescent Social Conflict in Spanish. It seems as though these participants associate their native language with familial relationships and earlier life experiences. This goes back to previous research that shows how bilinguals often use their first language to better access memories from childhood (Marsh et al. 2015). Moreover, this

group primarily recounted University Academic Stress and University Social Conflict in their English narratives. This suggests the shift these participants have toward English being their dominant language since they are encoding the more recent memories in their lives in English.

The Sequential Bilingual group followed a different pattern and expressed a more balanced distribution of themes in English despite that being their first language. Interestingly, nearly all memories recounted in Spanish fell under the University Academic Stress and University Social Conflict categories. For this group, Spanish is far less associated with childhood and familial experiences. This could be based on the fact that sequential bilinguals learn their second language later rather than within the family right off the bat. They might also only get to acquire their second language in educational contexts which would be why their memories in Spanish were more associated with that environment. These findings increase our understanding of language acquisition and context. Timing is imperative as it influences the emotional memories tied to certain languages.

The third research question aimed to analyze the extent to which EI influenced the content within the AMs in both languages. There was no meaningful relationship between EI and the average word count for AMs in English. There was a very slight negative relationship between EI and average word count for AMs in Spanish. This could signify that those with higher EIs have shorter AMs because they are more accustomed to regularly expressing their emotions. There was also a weak positive trend between EI and average amount of anxiety-related emotion words used in English, and an insignificant relationship in Spanish. These results suggest that those with higher EIs use more anxiety words when describing their AMs. Having a more enhanced ability to regulate and perceive one's emotions reflects onto the way that the individual outwardly expressed past memories.

Regarding the fourth research question, it seems that gender does influence EI and AMs regardless of the participant grouping. There was a moderately strong positive relationship between EI and gender which signifies a tendency for female participants to have higher EI scores. This aligns with previous analyses pointing toward women having higher EI than men (Joseph & Newman, 2010). However, this current study does not seek to create over-generalizations especially since there are many societal factors at play that would impact this relationship. It is interesting to note in regards to how female and male participants were able to express their emotions in their autobiographical narratives. Overall, the female participants spoke more words in their AMs for both English and Spanish. They also used more anxiety-words in their AMs in English. This indicates that they are able to be more emotionally expressive and potentially self-perceive their feelings of anxiety better. However, male participants used more anxiety-words than female participants when recounting memories in Spanish. This was interesting since they had lower EI scores. These results help provide nuances to previous literature as prior studies have found no major gender differences in regards to the expression of emotions via memory recall (Davis, 1999). This could be due to stereotypes regarding language emotionality as English is oftentimes viewed as the more rigid and business language (Caldwell-Harris, 2015). As a result they are more comfortable expressing themselves more openly in Spanish than English.

Limitations

The results of this study should be interpreted in light of several limitations. Potential confounding variables not evaluated within this study could explain certain associations or the lack thereof. Since the questions and tasks were administered to the participants in person, response biases may have played a role in their descriptions of events. For the Autobiographical

Memory Task in particular, they might have felt pressured to answer in a way that would be most relevant to the study or in a way that made them appear more socially desirable.

Second, the participants completed the anxiety scenario and the autobiographical memory tasks first in English and a month later in Spanish. There is a chance that a month was not a long enough time interval between both measurements. Had more time been given, it could have further minimized the possibility of the scenarios being remembered by the participants. Moreover, to mitigate these effects and create a better analysis, there was the intent to interview half of the participants in English and the other half in Spanish for the first session and then swap after the month time interval. However, not enough participants volunteered in the study for that to feasibly transpire. Future studies should replicate this study but with a larger sample size to find more conclusive results.

Third, the timing in which the sessions were conducted was inconsistent; they were recorded at any time or day. Generally, most of the interviews were conducted during the evening, however, a few were conducted in the afternoon. Additionally, the time in which the second sessions were conducted was inconsistent with the first. Fortunately, given the nature of an undergraduate's lifestyle, most of the second sessions were recorded at around the same time as the first. However, this might have significantly affected the responses and behaviors of the participants. For example, they most certainly experienced juxtaposing energy levels when answering questions in the afternoon as opposed to the evening. Additionally, the time of the semester may have influenced the results. The first sessions were conducted during December which is the busiest time of the semester. The Exam Dilemma Scenario might have been more relevant to participants when completing the first session since that was when they were also taking major exams. In comparison, the second sessions were conducted in January when classes

were just starting. The anxiety-inducing impact of the scenarios might have been less intense since they were starting classes, therefore the dilemmas were less relevant.

Lastly, the participants were told to recall and narrate a memory that provoked feelings of anxiety at any point in their lives. The manner in which anxiety is experienced differs depending on where someone is in their life. This could have created additional variability in the results since the memories provided by the participants differed greatly from session to session and when compared with one another. Fortunately, the majority of participants recalled events that transpired more recently. For example, most of the responses for the Exam Dilemma Scenario were based on a time during the participant's undergraduate career. If this study were to be replicated in the future, researchers should investigate the memories of anxiety within the confines of a more specific time period. This could also include questions that ask for different time periods, but the time periods defined should be set.

However, these limitations do not undermine the legitimacy and importance of the study. The interviews were conducted over Zoom which was a more casual setting. This might have helped foster more genuine responses from the participants than had they been questioned in a lab. Moreover, since everything was conducted virtually and the participants volunteered their time, it was more cost-effective.

Future Directions

Findings from the current study enhance our understanding of how experiences of anxiety are expressed and the influence that the language we speak has on this factor. The current study was heavily influenced by Kyriakou et al.'s research study which focused on guilt. Further research should be conducted to examine this topic on a broader scale. Another cross-sectional study could be performed, to determine how different age groups might respond to the scenarios

and how they might describe certain memories. It could be interesting to replicate this study but for participants in secondary school or perhaps individuals in their 30s. Both groups have drastically different responsibilities and social expectations which alters how their anxiety manifests and how they remember instances of anxiety in their lives. Individuals in their 30s have had more diverse life experiences than undergraduates in their 20s. Researchers would be able to establish a clearer trajectory on how these components develop from young adulthood to adulthood. Additionally, there is a lack of substantial research regarding autobiographical memories and secondary emotions. More research should be done looking into different language combinations alongside emotions other than just primary ones.

Conclusion

This study contributes to the nuanced relationship between language, emotion and memory within bilingual populations. The findings support previously observed notions that heritage speakers experience stronger emotional connections to their native languages, however, it was not entirely substantial. Sequential Bilinguals displayed more balanced emotional expression in regards to anxiety across both languages. Additionally, Emotional Intelligence was found to have connection with gender and shapes how memories are recalled. It is important to compare two subtypes of bilingual populations to better understand if and how these variations influence emotional cognition. The Spanish Heritage speakers who obtained Spanish first but now use English as their dominant language still demonstrated emotional ties to their heritage language. On the other hand, Sequential Bilinguals who acquired English primarily but were exposed to Spanish in a dual-language environment demonstrated less emotional ties to Spanish. These differences observed in the current research can be applicable on a wider scale by providing insight into educational and psychological settings. For instance, in a school

environment, the language an education provider uses when handling children could help with their ability to express themselves.

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Supplemental Materials

Appendix A

Anxiety Ratings of All Participants for Both English and Spanish Scenarios

Participant	Group	Scenario 1 (Eng)	Scenario 2 (Eng)	Scenario 1 (Spa)	Scenario 2 (Spa)	Mean (Eng)	Mean (Spa)
SR	HS	7	6	6	4	6.5	5.0
CH	HS	5	4	7	7	4.5	7.0
VC	HS	7	7	7	7	7.0	7.0
IV	HS	6	4	7	7	5.0	7.0
JG	HS	3	2	3	6	2.5	4.5
PL	HS	5	7	6	7	6.0	6.5
OC	HS	5	7	7	6	6.0	6.5
MS	HS	5	2	5	6	3.5	5.5
HA	HS	7	6	7	5	6.5	6.0
SRS	SB	6	4	5	4	5.0	4.5
AA	SB	6	6	4	6	6.0	5.0
RK	SB	5	4	5	5	4.5	5.0
AR	SB	7	6	7	4	6.5	5.5
AK	SB	5	7	5	7	6.0	6.0

Appendix B

Amount of Anxiety-Related Emotion Words by Language, Group, and Scenario

ID	G	M/F	L Eng S1	L Eng S2	M Eng S1	M Eng S2	H Eng S1	H Eng S2	L Spa S1	L Spa S2	M Spa S1	M Spa S2	H Spa S1	H Spa S2
SR	HS	F	2	4	3	1	0	0	2	1	1	3	1	0
CH	HS	F	2	2	3	3	1	0	2	2	2	2	0	0
VC	HS	M	1	3	6	3	8	2	6	5	5	5	6	5
IV	HS	F	1	3	3	3	2	0	4	4	2	1	2	2
JG	HS	M	1	0	2	6	2	4	4	3	4	4	2	1
MS	HS	F	3	2	3	3	3	0	2	2	3	1	0	1
PL	HS	F	2	1	10	6	5	2	1	3	4	6	5	2
OC	HS	M	5	3	2	4	0	1	1	2	1	2	1	3
HA	SB	F	6	4	7	5	5	5	3	5	5	4	3	2
SRS	SB	F	2	1	3	2	0	0	2	3	3	2	0	0
AA	SB	M	2	2	2	2	0	1	3	1	0	1	0	0
RK	SB	F	1	4	4	1	3	0	3	2	4	2	0	0
AR	SB	M	1	2	4	3	2	0	2	1	2	2	2	0
AK	SB	M	3	4	2	1	2	0	2	1	4	4	3	2

Appendix C

Correlation between Gender, EI, Average Word Count, and Anxiety-related Word Usage for Both Languages

Measures	1	2	3	4	5	6
1. Gender	—	—	—	—	—	—
2. Emotional Intelligence	.68	—	—	—	—	—
3. Avg. Word Count (Eng)	.05	.02	—	—	—	—
4. Avg. Word Count (Spa)	-.15	-.03	.61	—	—	—
5. Avg. Anxiety Words (Eng)	.10	.23	.87	.43	—	—
6. Avg. Anxiety Words (Spa).	-.12	-.07	.82	.77	.61	—

Appendix D

Emory College Linguistic Department Language Consultant Questionnaire

- If you don't wish to answer a question, just leave it blank.
- If you have any questions, feel free to contact me at aida.delony@emory.edu

1.) What is your name?

2.) What is your gender?

3.) What year were you born?

4.) Where were you born? Provide as much information as you can about the country, province, district, location, sub-location, village, etc.

5.) List all the countries where you have lived for a period of one year or more, and how long you lived in each.

6.) What was the primary language of instruction at the school(s) you have attended?

7.) Which languages do you speak?

8.) Which dialect(s) of this/these language(s) do you speak?

9.) Which language/dialect do you consider to be your 'mother tongue' (first/primary language)?

10.) Which language(s)/dialect(s) do/did your parents speak?

11.) Which language(s)/dialect(s) are you most comfortable speaking for the purposes of our class?

12.) Which language(s)/dialect(s) do/did you speak with your parents?

13.) Which language(s)/dialect(s) do you use to write letters, email, texts, social media posts, etc. to your family or friends in your home country (if applicable)?

14.) Which language(s)/dialect(s) do you speak with your brothers and sisters (if applicable)?

15.) Do you read books, newspapers, magazines or internet resources in languages other than English? If so, which languages and how often?

16.) Any other information you'd like to share right now about your use of language?

Appendix E

Please answer each statement below by putting a circle around the number that best reflects your degree of agreement or disagreement with that statement. Do not think too long about the exact meaning of the statements. Work quickly and try to answer as accurately as possible. There are no right or wrong answers. There are seven possible responses to each statement ranging from ‘Completely Disagree’ (number 1) to ‘Completely Agree’ (number 7)

1 = Completely Disagree

2 = Mostly Disagree

3 = Slightly Disagree

4 = Neutral

5 = Slightly Agree

6 = Mostly Agree

7 = Completely Agree

(1) Expressing my emotions with words is not a problem for me

(2) I often find it difficult to see things from another person’s viewpoint.

(3) On the whole, I’m a highly motivated person.

(4) I usually find it difficult to regulate my emotions.

(5) I generally don’t find life enjoyable.

(6) I can deal effectively with people.

(7) I tend to change my mind frequently.

(8) Many times, I can’t figure out what emotion I'm feeling.

(9) I feel that I have a number of good qualities.

(10) I often find it difficult to stand up for my rights

(11) I'm usually able to influence the way other people feel.

(12) On the whole, I have a gloomy perspective on most things

(13) Those close to me often complain that I don't treat them right.

(14) I often find it difficult to adjust my life according to the circumstances.

(15) On the whole, I'm able to deal with stress.

(16) I often find it difficult to show my affection to those close to me.

(17) I'm normally able to "get into someone's shoes" and experience their emotions.

(18) I normally find it difficult to keep myself motivated.

(19) I'm usually able to find ways to control my emotions when I want to.

(20) On the whole, I'm pleased with my life.

(21) I would describe myself as a good negotiator.

(22) I tend to get involved in things I later wish I could get out of.

(23) I often pause and think about my feelings.

(24) I believe I'm full of personal strengths.

(25) I tend to "back down" even if I know I'm right.

(26) I don't seem to have any power at all over other people's feelings.

(27) I generally believe that things will work out fine in my life.

(28) I find it difficult to bond well even with those close to me.

(29) Generally, I'm able to adapt to new environments.

(30) Others admire me for being relaxed.

Appendix F

English Version:

Scenario 1:

You are enrolled in a class where you have to take an exam worth a majority of the grade. Due to the busy nature of a college student's lifestyle, you were unable to study for the exam until the night before. You can only study so much content and must give up in order to sleep before the exam. You arrive at the exam and are handed a large packet. After flipping the pages, you realize that you have no mastery in this subject at all. You start to wonder if you are going to fail this class. After hearing this rate from 1 (not at all) to 7 (very strongly), the intensity with which you experienced feelings of anxiety, stress, worry, unease, or fear.

What's a core memory that made you have this response? Can you describe in detail a personal experience in which you felt very anxious or similar feelings to this. It does not have to be exactly the same context as the scenario above but a memory where you felt a similar anxiety.

1) How old were you?
2) Who were you with?
3) Where were you?
4) What were you feeling?
5) What did you do to stop feeling anxious?
6) How do you feel when remembering this event?

Appendix G

English Version:

Scenario 2:

Imagine that you have two best friends. You have been friends with these people for many years and are very close to them. One day, you receive a text from your first friend that she no longer wants to be friends with the second. She tells you that she will never spend time with that group again. You see your second friend later that day and learn that he is mad and doesn't want to speak to your other friend. The two do not like the idea that you want to stay close to both of them. Your first friend tells you that in order to stay friends, you have to stop speaking to the other. Your second friend tells you the exact same thing. You do not know what to do because you care about both of them and don't want to lose anyone. After hearing this rate from 1 (not at all) to 7 (very strongly), the intensity with which you experienced feelings of anxiety, stress, worry, unease, or fear.

What's a core memory that made you have this response? Can you describe in detail a personal experience in which you felt very anxious or similar feelings to this. It does not have to be exactly the same context as the scenario above but a memory where you felt a similar anxiety.

1) How old were you?
2) Who were you with?
3) Where were you?
4) What were you feeling?
5) What did you do to stop feeling anxious?
6) How do you feel remembering this event?

Appendix H

Spanish Version:

Escenario 1:

Estás matriculado en una clase en la que tienes que hacer un examen que vale la mayor parte de la nota. Debido al ajetreado estilo de vida de un estudiante universitario, no has podido estudiar para el examen hasta la noche anterior. Sólo puedes estudiar cierta cantidad de contenidos y debes abandonar para poder dormir antes del examen. Llegas al examen y te entregan un gran paquete. Después de hojear las páginas, te das cuenta de que no dominas en absoluto esta materia. Empiezas a preguntarte si vas a suspender esta asignatura. Después de escuchar esta tasa de 1 (nada) a 7 (muy fuerte), la intensidad con la que experimentó sentimientos de ansiedad, estrés, preocupación, malestar o miedo.

¿Cuál es el recuerdo fundamental que te hizo tener esta respuesta? Relata una experiencia personal en la que te hayas sentido muy ansioso o con sentimientos similares a éstos. No tiene que ser exactamente el mismo contexto que el escenario anterior, sino un recuerdo en el que hayas sentido una ansiedad similar.

1) ¿Cuántos años tenías?
2) ¿Con quién estabas?
3) ¿Dónde estabas?
4) ¿Qué estabas sintiendo?
5) ¿Qué hiciste para dejar de sentir ansiedad?
6) ¿Cómo te sientes cuando recuerdas este suceso?

Appendix I

Spanish Version:

Escenario 2:

Imagina que tienes dos mejores amigos. Son amigas desde hace muchos años y están muy unidas. Un día, recibes un mensaje de tu primera amiga en el que te dice que ya no quiere ser amiga de la segunda. Te dice que no volverá a pasar tiempo con ese grupo. Ese mismo día ves a tu segundo amigo y te enteras de que está enfadado y no quiere hablar con tu otro amigo. A los dos no les gusta la idea de que quieras estar cerca de los dos. Tu primera amiga te dice que para seguir siendo amigos tenéis que dejar de hablaros. Tu segundo amigo te dice exactamente lo mismo. No sabes qué hacer porque las dos te importan y no quieres perder a nadie. Después de escuchar esta tasa de 1 (nada) a 7 (muy fuerte), la intensidad con la que experimentó sentimientos de ansiedad, estrés, preocupación, malestar o miedo.

¿Cuál es el recuerdo fundamental que te hizo tener esta respuesta? Relata una experiencia personal en la que te hayas sentido muy ansioso o con sentimientos similares a éstos. No tiene que ser exactamente el mismo contexto que el escenario anterior, sino un recuerdo en el que hayas sentido una ansiedad similar.

1) ¿Cuántos años tenías?
2) ¿Con quién estabas?
3) ¿Dónde estabas?
4) ¿Qué estabas sintiendo?
5) ¿Qué hiciste para dejar de sentir ansiedad?
6) ¿Cómo te sientes cuando recuerdas este suceso?