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## Perceptions of Emotions by Simultaneous Bilinguals Across Various Relationship Contexts

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Perceptions of Emotions by Simultaneous Bilinguals

Across Various Relationship Contexts

by

Lisa A. Wickham

An undergraduate honors thesis submitted in partial

fulfilment of the requirements for the degree of

Bachelor of Science

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## PERCEPTIONS OF EMOTIONS BY SIMULTANEOUS BILINGUALS

### Abstract

Currently, a significant amount of existing research on bilinguals does not distinguish between sequential and simultaneous bilingualism. Furthermore, there is a significant gap in the existing research on simultaneous bilinguals. This exploratory study investigated simultaneous bilinguals' perceptions of emotional expression in their two first languages, within three relationship contexts: professional, family, romantic partners and friends. A questionnaire was administered to simultaneous bilinguals. According to the findings of this study, simultaneous bilinguals have a preference between one of their first two languages when expressing certain emotions. Additionally, participants report that relationship context impacts the language they select to use when conversing with certain individuals as well as frequency of language use. The findings of this study may have implications in the field of clinical psychology.

**Keywords:** *simultaneous bilingual, emotions, language, relationships*

## PERCEPTIONS OF EMOTIONS BY SIMULTANEOUS BILINGUALS

### **Introduction**

Throughout the world, across social classes and age groups, there are more bilinguals than monolinguals (Grosjean, 1997). The age and stage in life in which individuals acquire their second languages vary drastically, resulting in various types of bilingualism (Grosjean, 1997). Unfortunately, the existing research on bilingualism does not frequently distinguish between these types of bilingualism. Moreover, there is currently little existing research on simultaneous bilingualism and emotional expression. A plethora of factors may influence an individual's perceptions of emotional expression in either of their languages including how the language is used within various relationship contexts relationship contexts (Ożańska-Ponikwia, 2012).

This study will explore the relationship between language and emotional expression in simultaneous bilinguals-- individuals who have been exposed to two languages from birth (Ekman, 1999). It will examine the relationship between individuals' first languages and perceptions of emotional expression in three relationship contexts: professional, family, romantic and friends. A questionnaire was distributed to simultaneous bilinguals asking about emotional perceptions of their two first languages. The questionnaire also addressed how comfortably and how frequently each of the individuals use their first languages within various relationship contexts. The study strives to answer: What are simultaneous bilinguals' perceptions of emotional expression in their first two languages? How do relationship contexts, specifically, work, family, romantic partners and friends affect simultaneous bilinguals' perceptions of emotions in their first languages?

## PERCEPTIONS OF EMOTIONS BY SIMULTANEOUS BILINGUALS

### Literature Review

#### Bilingualism

Bilingualism is a knowledge and fluency of two languages. Within bilingualism there are several variations that are dictated by the timing and order of language acquisition. Simultaneous bilingualism is the acquisition of two languages from early childhood; the individual develops two first languages (Ekman, 1999; Pavlenko, 2005). In contrast, sequential bilinguals develop fluency in one language then a second language (Pavlenko, 2005). The context and timing in which a language is acquired has the potential to inform how an individual perceives language about emotion. If a bilingual acquires emotional language in a formal school setting the emotional language may not carry emotional significance because there is no emotional experience to accompany the linguistic tools. Alternatively, if an individual is provided with emotional language while experiencing emotions, they will be able to form stronger emotional associations with that language. Discussing emotions during the emotional experience positively impacts emotional expression (S. H. Chen, Kennedy, & Zhou, 2012). Context and timing of language acquisition will therefore likely influence the bilingual individuals' emotional perceptions. Simultaneous bilinguals' perceptions of emotional expression may differ from other bilinguals as a result.

Current research suggests that sequential bilinguals, prefer using their first language when expressing sad memories. However, there is currently some debate as to whether or not this preference towards L1 is also true for happy memories (Kheirzadeh & Hajiabed, 2016). A study conducted by Kheirzadeh and Hajiabed (2016), found that bilinguals did not have a language preference when relating happy memories, diverging from previously established findings (Kazanas & Altarriba, 2016; Pavlenko, 2008). Language specificity theory may offer

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insight into sequential bilinguals' preference for one language over another when expressing emotional memories. According to this theory, bilinguals are likely to recall memories in the language in which they occurred (Kheirzadeh & Hajiabed, 2016). Thus, if a bilingual experienced a significant part of life such as childhood in one language, they may prefer to use that same language when relating childhood memories. The language that an experience is encoded in significantly influences the language a bilingual may elect to use when expressing memories. Although simultaneous bilinguals use both languages frequently, the context in which they use each language varies. Seldom will a simultaneous bilingual use both languages equally in all contexts. The context that the language is most frequently used in may impact the individuals' perceptions of emotions.

### **Emotions and emotion language**

Emotional expression is not always deliberate, especially in instances of involuntary, physical reactions such as laughing at a joke, or crying during a film (Collier, 1985). Emotions are characterized as an interpretation of a current event which is influenced by an individual's personal history. Emotions provide feedback about current experiences, often through the lens of previous experiences (Ekman, 1999). Some scholars contest that emotions are first conveyed through involuntary facial expressions (Collier, 1985). Thus, language may be a secondary mechanism for emotional expression. Language can serve as a tool to facilitate emotional expression and offers a pathway for direct communication of an emotional experience (Freeman, Shook, & Marian, 2016a). An advantage to using language to express emotions, is that it can eliminate ambiguity because interpretation of facial expressions is highly subjective (Pavlenko, 2005).

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Bilingualism could facilitate expression of emotions as it provides the individual with multiple mechanisms for expressing a potentially wider array emotions (Freeman, Shook, & Marian, 2016b). Language allows for expression of deep and intimate emotions and eliminates ambiguity (Pavlenko, 2005). Bilingualism, in any form, can be advantageous when expressing emotions. Knowledge of two languages may aid an individual's ability to articulate emotions by providing a wider range of vocabulary that is exclusive to that language, as well as the numerous cultural contexts that may be associated with emotions (Freeman et al., 2016a). While many emotions may exist universally, languages and cultures differ in the way emotions are encoded into words and which emotions have specific words. Subsequently, some emotions may be experienced exclusively in their cultural contexts where the vocabulary exists (Pavlenko, 2005). An example of an untranslatable word is the German word *Schadenfreude*, a feeling of enjoyment when someone else, often someone who is disliked, experiences misery (Williams, 2014). *Koi no yokan* is a phrase that is unique to Japanese and means the feeling of knowing one will inevitably falling in love with someone upon their first meeting (Williams, 2014). *Voorpret* is a Dutch word that describes the anticipated feeling of pleasure before experiencing an enjoyable event, such as a vacation (Williams, 2014). While it is possible that similar words may exist in other languages or that the meaning is conveyed through extensive explanations, these words are often accompanied by a cultural understanding, as language is culturally specific (Ożańska-Ponikwia, 2012). It is thus possible for an individual to feel the emotion specifically associated with a given language only in that cultural context (Pavlenko, 2005). While it is possible to convey the general meaning of the aforementioned words, they are best understood in their specific cultural contexts (Ożańska-Ponikwia, 2012). An understanding of more than one

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language may extend the individual's ability to express their emotions because the bilingual individual has a greater breadth of vocabulary and emotional contexts (Pavlenko, 2005).

Intentional emotional expression, such as sharing feelings or an emotional experience, is a learned practice that is significantly influenced by culture (Collier, 1985). Language and culture are significantly intertwined. Thus, understanding cultural practices and culturally normative behavior, especially where emotional expression is concerned, is critical to understanding emotional expression in its entirety (Ożańska-Ponikwia, 2012). Culture can inform the individual's perceptions of emotions in language. If, for example, overt physical or verbal expressions of emotion are commonplace in a culture, it may encourage the bilingual individual to be extremely expressive when using that language. Conversely, in a culture where overt expression of emotions is considered taboo or inappropriate, the individual may be more conservative in their emotional expression in the language associated with that culture (Ożańska-Ponikwia, 2012).

A robust knowledge of multiple languages provides the speaker with an extended vocabulary, including vocabulary for emotion and emotion-laden words (Freeman et al., 2016a). There are several elements of the composition of language that may affect an individual's perception of emotion in the language. Influential elements in emotional perception of language include word type, specifically emotion and emotion-laden words. Emotion words are those that explicitly express an emotion, such as *happy*, *sad*, or *angry*. These words tend to have concrete meaning and their interpretation is uniform among speakers of the language (Pavlenko, 2008). Conversely, emotion-laden words are words that carry highly individualized emotional significance such as *divorce* or *secret*. Emotion-laden words, unlike emotion words, are more abstract in their meaning, open to interpretation and influenced by an individual's experiences



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(Pavlenko, 2008). Additionally, emotion-laden words, may evoke different emotions depending on the context the word is used in as well as the individuals' personal history (Pavlenko, 2008). *Secret* may elicit a sense of curiosity and wonderment in one individual or a sense of dread in another individual. When compared, emotion words tend to elicit a stronger responses than emotion- laden words indicating that emotion words likely carry more emotional weight (Kazanas & Altarriba, 2016). Despite discrepancies between emotion and emotion- laden words, both are capable of being utilized for emotional expression.

Word valence, how positively or negatively the word is perceived on a spectrum, influences perception of emotional language. The valence and perceived emotional weight of words are also influential on emotional perception of language. Valence determines the degree to which a word or phrase is perceived as positive, negative, or neutral. For example, the word *devastated* has a higher negative valence than the word *sad*. While they convey similar emotions, the word *devastated* is perceived as having strong negative connotations than *sad*. The same is also true for words with positive associations (Kazanas & Altarriba, 2016). Emotional weight serves a similar purpose in that it measures how emotionally significant a word or phrase is perceived (Dewaele, 2008). In a study of multilinguals, Dewaele (2008), found that for the majority of multilinguals perceived the phrase '*I love you*' as having the most emotional weight in their first language. Individuals' perception of emotional weight of the phrase '*I love you*' tends to be correlated with the age and context of second language acquisition as well as perceived language dominance. Subsequently, valence and emotional weight influence perceptions of emotion and emotion laden words and phrases in language.

Bilinguals' perceptions of taboo words, language deemed inappropriate or forbidden in certain social contexts, across languages are particularly interesting. Often, taboo words are

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characterized by their negative, social connotations. Conversely, it is possible for an individual to experience a sense of catharsis in an exclamation of a taboo word to phrase. Harris, Ayçiçeği, & Gleason (2003), found that for Turkish-English speakers, taboo words and childhood reprimands elicited a stronger emotional response in their L1 than their L2, indicating that L1 may carry more emotional significance in terms of expression. Similarly, they noted that bilingual individuals reported feeling more ease expressing taboo words in L2. Language learners, especially those who are in the earlier stages of learning, may experience a degree of removal from the language they are acquiring. As a result of feeling distance from the second language, negative emotions commonly associated with taboo words and childhood reprimands in the second language are easier to express as they have less negative emotional weight (Harris, Gleason, & Ayçiçeği, 2006; Kheirzadeh & Hajiabed, 2016).

### **Bilingual Language Processing**

The universalist theory of emotion and language indicates that emotions are biologically innate, and primary expressed through universal facial expressions. Therefore, language and the concept of language as a vehicle to express emotion is secondary. In other words, words only reflect emotion, they themselves are not the emotional stimuli nor do they act as emotional stimulus (Pavlenko, 2005). Under this theory, emotion is the bodily experience. The lexicon for emotions differs between languages and may reflect differences across culture.

Processing both emotion and emotion laden words is often more automatic in a bilinguals first language (Freeman et al., 2016b). Emotion words are often processed more rapidly than emotion-laden words in both languages, which may be attributed to emotion words being more direct and less open to interpretation (Kazanas & Altarriba, 2016). Several explanations have been offered by various scholars to explain the automatic and rapid processing in an individual's

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first language. One possibility is that upon learning the second language, it may be filtered through the first. Thus, some of the initial perceived emotional significance may be diminished (Freeman et al., 2016b). Another explanation, congruent with language specificity theory, is that the individual may acquire more experiences in their first language and thus associates stronger emotions with that language (Kheirzadeh & Hajiabed, 2016)

The relativist or social constructivist theory attempts to explain the relationships between culture and language, socialization is crucial for developing the concepts of emotion. In this theory emotions are classified as bodily states and informed by physical experiences (Pavlenko, 2005). Children develop categories for emotions which are informed by bodily states, physical experiences and external events. These categories are highly plastic, and socialization allows children to develop emotional categories. Additionally, socialization allows them to determine how to appropriately respond to emotions (Pavlenko, 2005). Later in adulthood these experiences and associations may impact an individual's lexicon and could potentially inform the ways in which they interpret and express emotions in each language.

A short coming of these theories and studies is that they have focused on sequential bilinguals, individuals who acquire one language, then another after the first language is established. Simultaneous bilinguals, however, are said to have two first languages as opposed to a first and second language (Pavlenko, 2005). The case could be made for simultaneous bilingualism that the individual would not have had to filter one language through the other because both were acquired simultaneously. Additionally, a simultaneous bilingual would likely have relatively an equal number of experiences in each given language as a result of exposure to both languages from birth. Thus, this lack of representation of the simultaneous bilingual group illustrates the need for additional exploration in the field. Several questions arise: would

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simultaneous bilinguals perceive emotions equally in each of their given languages? Or does the context in which the language used most shape the individuals' perception of emotions in each given language? Relationships and how language are used in various relationships may offer additional insight into perception of emotions in simultaneous bilingual individuals.

### **Relationships language and emotion**

Children are extremely perceptive to language and are significantly influenced by language used by their parents or anyone that frequently interacts with the child (S. H. Chen et al., 2012). Until recently, the recommended approach for raising simultaneous bilingual children was a one parent, one language. It was thought that in doing so the child would be equally exposed to each language. However, a limitation of this approach is that there is often an imbalance between the languages. As a result one is often used more than the other (MacLeod, Fabiano-Smith, Boegner-Pagé, & Fontolliet, 2013). Furthermore, language acquisition is often born through a need to communicate in order to have one's needs met. If the child realizes they only need one language to communicate and have their needs met, it eliminates the necessity for acquiring both languages (MacLeod et al., 2013). In addition to language acquisition, children also look to adults for appropriate ways to express emotions, including verbal expression of emotion (P. Chen, Lin, Chen, Lu, & Guo, 2015). Chen et al. (2015), determined that parents who express positive emotions in their native language have a more positive influence on their child's expression of positive emotions. Relationships in childhood and experiences evidently impact children's emotional development, language acquisition, and emotional-language development.

In adults, expression of emotion especially by figures who are considered leaders, significantly influences observers' perceptions of the leader. More specifically, negative emotional expression by leaders, negatively influences the observer's perception of the leader's

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effectiveness (Lewis, 2000). In a professional setting a leader, influences co-workers' perception of the leader through the leader's emotional expression. A leader who regularly expresses negative emotions will therefore likely be perceived as an ineffective leader. As experiences in a given language influence perception of emotions in a given language, leader's emotional expression must be deliberate as it will likely influence co-workers (Lewis, 2000). In a professional setting, perceptions of co-workers are impacted by emotional expression and language, which in turn influence professional relationships.

It is evident that the relationship between language and perception of emotional expression is prominent and one worth exploring. There is currently little known about simultaneous bilinguals' perceptions of emotions and emotional expression in language. Additionally, there is a gap in the understanding of how or if the language a simultaneous bilingual elects to use in a specific relationship context is informed by their perception of emotion in that specific language. This gap illustrates the importance of understanding simultaneous bilingual's perceptions of emotion expression especially when using different languages in various relationships. This study explores simultaneous bilingual's perceptions of emotional expression in both first languages and their role across relationship contexts as well as trends between relationships, emotions and language usage.

### **Methods**

#### **Participants**

A total of 18 people began the survey. However, three participants either responded 'no' to being simultaneous bilinguals or did not complete the survey in its entirety, leaving 15 participants. The average age of participants was 25.8 years old, with a minimum age of 18 and a maximum age of 53. The reported ethnic groups of participants included Hispanic/ Latino,

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White/ Caucasian, Middle Eastern, and Native North African- Amazigh. The levels of education of participants ranged from high school diploma/ GED, some college, a bachelor's degree, and a master's degree. First languages spoken by participants included English, German, Catalan, French, Hebrew, Arabic, Spanish, Hungarian, Norwegian, Russian and Dutch. Additional languages that were acquired after their first two languages included French, Arabic, English, German, and Spanish.

Participants were required to meet two specific criteria in order to participate: (1) that they are at least 18 years old and (2) that they are simultaneous bilinguals. In the questionnaire, simultaneous bilingualism was defined as someone who has been exposed to two languages before beginning formal schooling (e.g. kindergarten). It was important to abide this cutoff point because if the individual learned the language any later, they would be considered sequential bilinguals. Moreover, it was important that participants acquired their first two languages in a less formal setting because emotional language learned in more formal setting may be perceived differently than those learned in a less formal setting. Participants who met these criteria were directed to the questionnaire after consenting to participate.

### **Questionnaire**

Upon receiving Institutional Review Board approval, an online questionnaire was administered to simultaneous bilingual participants. The questionnaire consisted of 42 questions and three sections. See Appendix A. Each section served to explore a different aspect of language history, emotional associations and usage. The questionnaire took roughly five to ten minutes. Answers were anonymous and no identifying information was collected.

The first section of the questionnaire addressed background and linguistic information. Specifically, these were open ended questions that asked for the participants' first two languages

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and any additional languages acquired. The questionnaire inquired about the nature of acquisition for each of the languages by providing multiple choice questions because the context in which a language is acquired may impact emotional perception of the language. Additionally, the acquisition context is likely associated with the relationship contexts in which the language is most frequently used. A Likert scale was also used to gauge the participants' proficiency and comfort using each of their languages.

Questions in the second section inquired about emotion and emotion-laden words that may be associated with each of their languages. Participants were provided with several subjective statements and asked to select ones they felt most accurately reflected their languages, such as "My language is... poetic, colorful, etc.". These questions revealed the individual's broad emotional perception of the language. Furthermore, this section explored participants language preferences when expressing various emotions or emotion-laden phrases and words, such as '*I love you*' or swear and taboo words, via multiple choice questions. These questions offered participants their two first languages and an additional 'other' fill-in-the-blank option as multiple-choice options. If the participant preferred one language over the other, it may indicate that the preferred language is perceived as carrying more emotional significance. For example, if the participant prefers one of their first languages for expressing feelings of love, it may indicate that the participant experiences the same language as more emotionally significant. This section also explored the individual's comfort and emotional state while speaking each language. Specifically, it inquired about anxiety while speaking in language in different contexts, such as on the phone, in person, and in public. This question also used a Likert scale. The presence of anxiety may influence where and if the individual uses the language across different settings and contexts. Anxiety while speaking a language may also result in the association of negative

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emotions with the language. Conversely, little or no anxiety while speaking a language may be associated with more positive emotions about the language. Furthermore, how comfortable a participant feels when using either language may be impacted by how frequently and in which relationship contexts they use the language.

In the third section, participants were asked about their use of language in various relationship contexts. Specifically, this section addressed three relationship contexts: professional, family, romantic and friends. Multiple-choice questions in this section asked which language is used in each of the relationship contexts as well as the languages that may be spoken by people in each relationship context. Additionally, it implored the participants about how frequently they use each first language across the relationship contexts. The questionnaire concluded with an open-ended question about which language is preferable for expressing emotions and if it is effected by the relationship the participant has with the other individual.

### **Analysis**

The collected data was analyzed using qualitative measurements. Several distinct comparisons were made within and between each of the questionnaire categories. The first comparison was between the participants' first two languages and their emotional perception of each language when expressing specific emotions. The second comparison examined the comfort of each language to the language most frequently used in each relationship context. Additionally, the frequency of selected subjective statements was calculated to determine perceptions of the first languages. Language preference for vocalizing expressing emotional experiences such as love, bad or difficult memories, and swear or taboo words was also calculated.

Language preference for expressing various emotions were divided into two categories (1) language preference and (2) no language preference. A language preference indicates that the



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participant preferred one of their first two languages over the other when expressing the specified emotions. The emotions included in preference for emotion expression were love, happiness, anger and frustration as well as preference for swearing.

Participants' comfort using each language and frequency of language use across three relationship contexts were also evaluated. The three relationship contexts examined were relationships with co-workers, family, romantic partners and friends. All first languages were categorized as either language A and language B, as opposed to L1 and L2. Throughout the study language A and B remained consistent for each participant. Comfort with language A was compared with language A usage frequency in each relationship context. Similarly, comfort with language B was compared with language B usage frequency across all three relationship contexts. Results from each language, A and B, comfort and usage within each relationship context were then compared side by side for each participant and trends were observed.

Participants were provided with five subjective statements and asked to select the ones they believed most accurately captured each of their first languages. The frequency that each statement was selected for each language was calculated as well as the overall frequency for both languages. Subjective statements reveal overall trends in regard to how participants perceive their languages.

Verbal emotional expression, both positive and negative, was also examined. Positive emotional expression was measured with the phrase, '*I love you*'. Participants were asked which language had more emotional weight or if both languages carried equal emotional weight when using the phrase, '*I love you*'. Responses were divided into two categories (1) one language is more emotionally significant and (2) both languages are equally emotionally significant.

Expression of a bad or difficult memory was used to evaluate vocalization of negative emotions.

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Participants were asked which language they prefer when expressing bad or difficult memories.

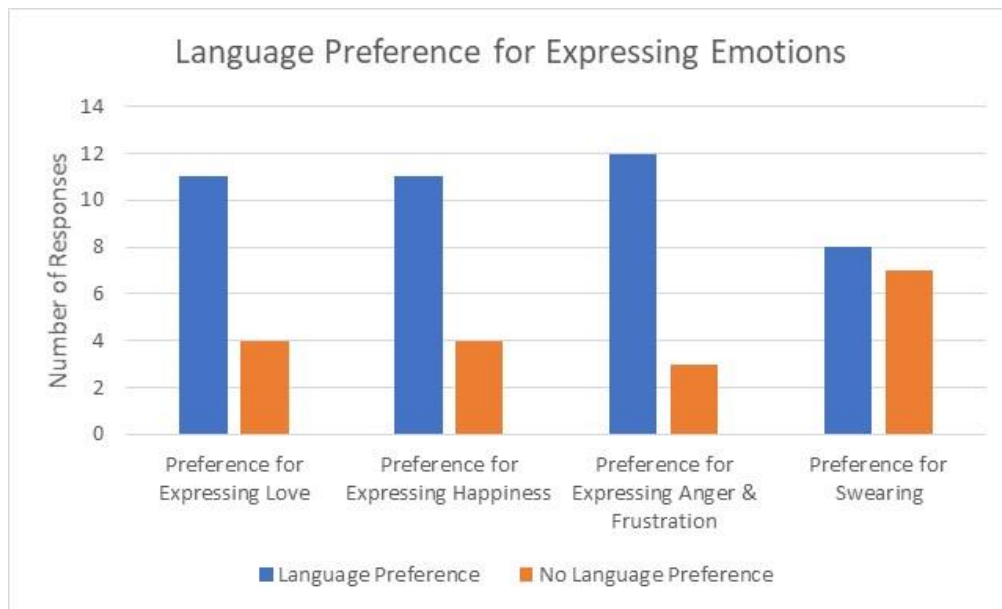
Results were separated into two categories (1) one language is preferred over the other and (2) no language is preferred.

Participants were asked which language they preferred for expressing swear and taboo words and which language carries the most emotional weight. Swear and taboo word preference was then compared to emotional weight. Two categories were produced to facilitate the comparison (1) the language that carries the most emotional weight is the same language that is most often used for expressing swear and taboo words and (2) the language that carries the most emotional weight is different from the language that is most often used for expressing swear and taboo words.

### **Results**

When expressing feelings of love, 11 of the 15 participants preferred one of their first languages over the other. Four participants had no preference when expressing feelings of love. Similarly, when expressing feelings of happiness, 11 participants had a preferred language of expression, while four had no preference. When expressing feelings of anger and frustration, 12 participants preferred one language. Three participants had no preference when expressing feelings of anger and frustration. Conversely, participants were almost evenly divided on whether they had a preferred language for swearing. Eight participants preferred one of their first two languages, while seven had no language preference. See Figure 1.

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*Figure 1.* The bar graph above represents participants' language preference for expressing love, happiness, anger and frustration, and for swearing. The blue bars indicate that participants preferred either language A or B when expressing the listed emotions. Conversely, the orange bars indicate that the participant swearing or had no preference for one language over the other when expressing these emotions or swearing.

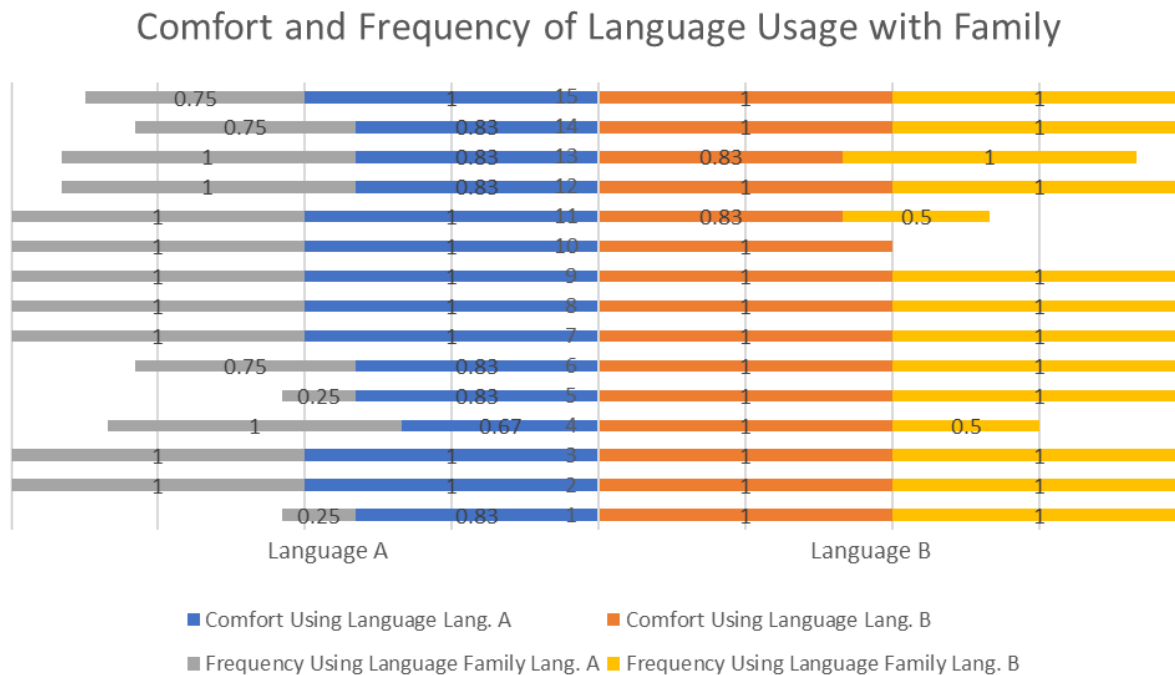
Additionally, participants reported comfort levels with each of their first languages were between 0.83 and 1. One was the highest possible score and indicates they are completely comfortable with the language. Zero was the lowest possible score and indicates they are not at all comfortable with the language. Out of 30 responses (two for each participant), 21 reported scores of one, indicating they are 'extremely comfortable' with each language. Eight reported scores of 0.83 meaning they are 'mostly comfortable'. One participant reported a score of 0.67, indicating they are 'somewhat comfortable' with their language. The supporting data can be found in Figure 2, Figure 3 and Figure 4.

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In addition to comfort, the frequency that the participants use each language with co-workers, family, as well as friends and romantic partners. Scores for each of these three categories ranged from 0 to 1. The lowest possible score 0, indicates that the participant never uses the language. Conversely, the highest possible score 1, indicates they use that language every day in that relationship context. Thirty responses were recorded for each relationship category, one for each first language, amounting to two for each participant. When speaking with co-workers, 17 of the 30 languages are used every day, two languages are used every week, three are used every month and 8 are never used. Of the 30 responses, three indicated that they use a language they are not extremely comfortable with every day when speaking with co-workers. See Figure 2. When speaking with family, 22 of the languages are used every day, three languages are used at least once a week, two are used at least once a month, two are used at least once a year, and one language is never used. Most participants who are not extremely comfortable with one of their languages do not use that language every day with family. Three responses indicate participants use one of their languages every day and are less than 'extremely comfortable' with the language. See Figure 3. When speaking with friends and romantic partners, 20 of the languages are used every day, four are used every week, one is used every month, and five are never used. Three of the responses indicate that participants use one of the languages they are not 'extremely comfortable' with every day with friends and romantic partners. See Figure 4.

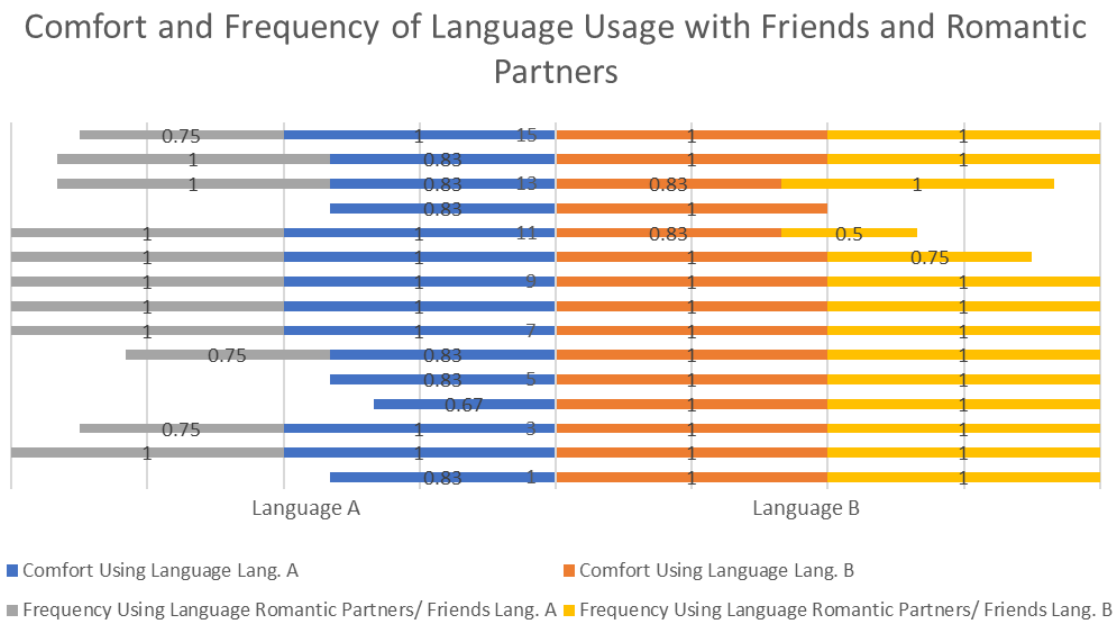


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*Figure 3.* The bar graph above represents how comfortable participants feel using each of their first languages and how frequently they use each of these languages with their family. The blue and gray bars on the left represent language A, while the orange and yellow bars on the right represent language B. The blue and orange bars in the center are participant's comfort level with each language on a scale of zero to one, with zero being not at all comfortable and one being extremely comfortable. The outer gray and yellow bars represent participant's frequency using each language on a scale of zero to one. One indicates the language is used every day; zero indicates the language is never used.

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*Figure 4.* The bar graph above represents how comfortable participants feel using each of their first languages and how frequently they use each of these languages with their friends and romantic partners. The blue and gray bars on the left represent language A, while the orange and yellow bars on the right represent language B. The blue and orange bars in the center are participant's comfort level with each language on a scale of zero to one, with zero being not at all comfortable and one being extremely comfortable. The outer gray and yellow bars represent participant's frequency using each language on a scale of zero to one. One indicates the language is used every day; zero indicates the language is never used.

Participants were asked to select subjective statements that they feel best represent each of their first languages. Participants were able to anywhere from one to five statements. Possible responses to the statement included "My language is... practical, colorful, poetic, emotional, or cold". Seventy-six statements in total were selected. Of the statements selected 26% indicated that their language was practical, 21% said their language was colorful, 29% said their language

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was poetic, 17% said their language was emotional, and 7% said their language was cold. Of the 76 responses recorded, 38 statements were selected for each first language. Table 1 reflects these data.

Table 1. Frequency of selected subjective statements for participants' first languages and total percentage of the frequency of selected statements.

### *Subjective Statements*

Statement	Language A	Language B	A and B
Practical	8	12	26%
Colorful	9	7	21%
Poetic	12	10	29%
Emotional	7	6	17%
Cold	2	3	7%
Total Responses	38	38	76

Participants were asked if the phrase, '*I love you*' had more emotional significance in one language or the phrase has the same emotional significance in each language. Of the responses, 73% said that one language has more emotional significance than the other. Therefore, 27% felt that the phrase, '*I love you*' has the same emotional significance in both languages. See Figure 5. Moreover, when expressing a bad or difficult memory, 80% of participant preferred using one language over the other. Conversely, the remainder of the participants, 20% use both first languages equally when recalling bad or difficult memories. See Figure 6.

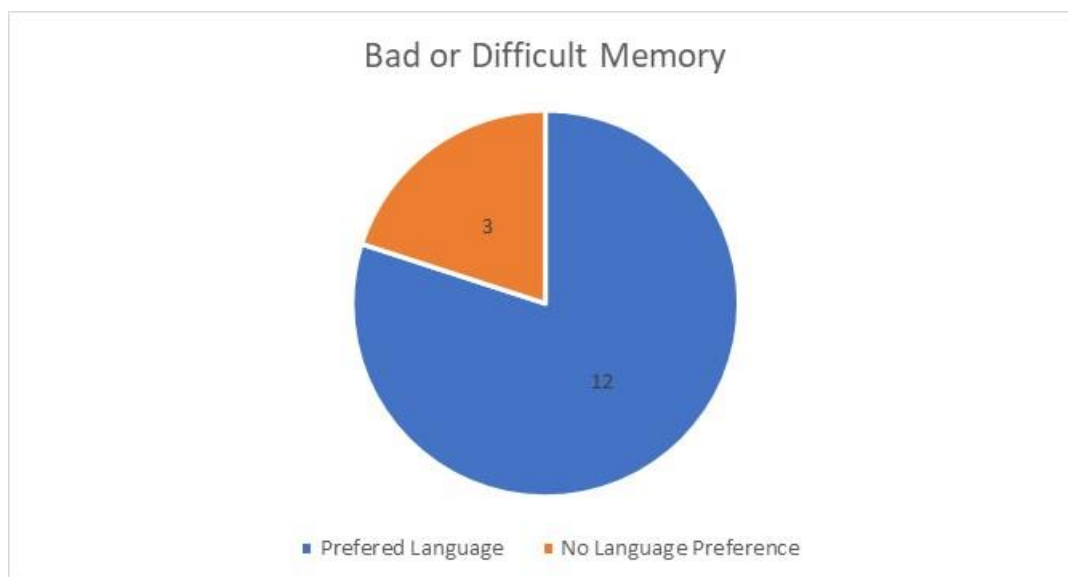


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*Figure 5.* The above pie chart represents participant's perception of the phrase '*I love you*'. The blue section indicates that when using the phrase '*I love you*', the participant perceives one language as being more emotionally significant than the other. Conversely, the orange section indicates that the participant perceives both languages as equally emotionally significant when using the phrase '*I love you*'.

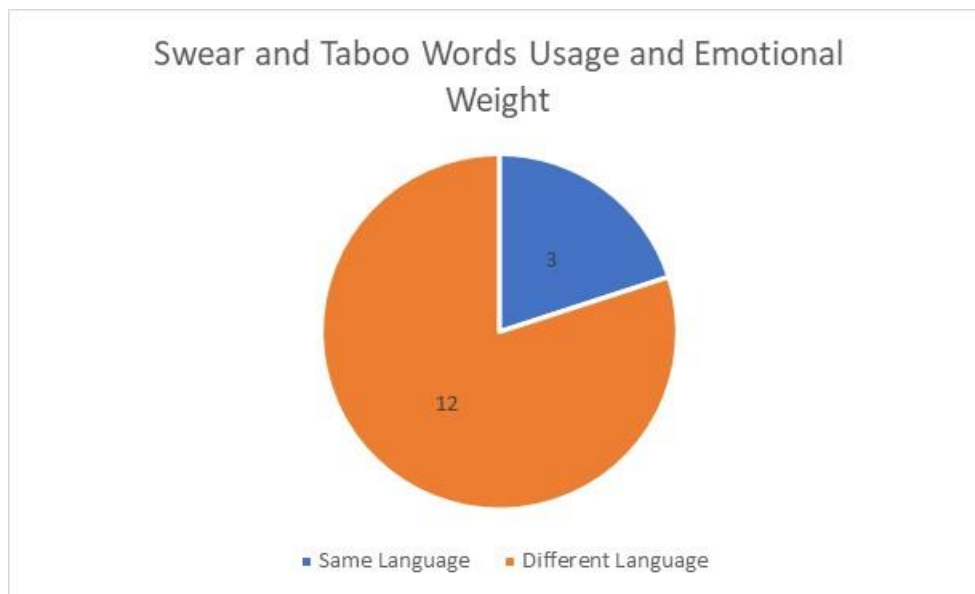
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*Figure 6.* The pie chart above represents participants' language preferences for expressing bad or difficult memories. The blue section indicates the participants preferred one language over the other. Orange indicates the participant does not prefer one language over the other or uses the languages equally when expressing bad or difficult memories.

When using swear and taboo words, eight participants preferred one first language over the other, seven had no preference. Seven participants reported that the emotional weight of swear and taboo words are equal in both languages. Twelve participants reported that the language they feel has more emotional significance when using swear and taboo words, is not the language they use most frequently when swearing. In contrast, three participants reported that the language that carries the most emotional significance is also the language they use most often when swearing. Figure 7 represents these data. For two of these three participants they use both first languages equally when swearing and both first languages have equal emotional weight.

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*Figure 7.* The pie chart represents a comparison between the language that has more emotional significance when using swear and taboo words and which language is used for expressing swear and taboo. The blue section represents participants who reported that most emotionally significant language is also the one they use when swearing or using taboo words. The orange section represents participants that reported using a different language when swearing or using taboo words than the one they feel is most emotionally significant.

### Discussion

The results indicate that, generally, simultaneous bilinguals prefer one language over the other when expressing emotions such as love, happiness or anger and frustration. These findings are congruent with research regarding sequential bilinguals' languages preferences when expressing emotions. Sequential bilinguals often prefer their first language when expressing emotions (Dewaele, 2008; Harris et al., 2006; Pavlenko, 2005). Despite simultaneous having two first languages, they generally prefer one first language over other, similar to sequential bilinguals. A possible explanation for simultaneous bilinguals' preference for one first language over the

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other when expressing emotions is exposure to the language used for emotional expression in childhood. Children are significantly influenced by the language adults use, especially in instances of self-expression (S. H. Chen et al., 2012). Often, bilinguals do not use both languages equally across all contexts which may influence language preference (Grosjean, 1997).

Sequential bilinguals often prefer their first language over their second language in matters of emotional expression (Dewaele, 2008; Harris et al., 2006; Pavlenko, 2005). Therefore, if the individual was raised in a bilingual household where a parent favored one language over the other when expressing emotions, the parent would likely impart these preferences on their child. As a consequence, the simultaneous bilingual would acquire a similar preference for language when expressing emotions.

When asked to select subjective statements the most frequently selected statement was “My language is poetic”. The second most frequently selected adjective was “practical”, followed by “colorful”, “emotional” and “cold”. Describing a language as poetic or colorful has positive connotations, indicating the language is perceived positively. Thus, those who selected either or both of these statements to describe their language or languages likely perceive their language as having positive emotional associations. The adjective “cold” has negative associations and may indicate that participants who selected this adjective feel the individual may harbor negative feelings about the language. Affiliating each language with these subjective statements provides insight into the positive or negative associations the participant forms with each first language.

Frequently, positive and negative emotional experiences are conveyed through phrases or the recollection of a memory associated with emotions. For example, the phrase ‘*I love you*’ is a vocalization of positive emotions. In contrast, expressing a bad or difficult memory is the

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vocalization of negative emotions that resulted from a negative experience (Kheirzadeh & Hajiabed, 2016). Although all participants acquired both first languages concurrently, many of the participants feel one language is more emotionally significant. Most participants indicated that the language they feel is more emotionally significant when using the phrase, *'I love you'*, is also the language they prefer to use when expressing negative emotions. These findings contradict the trends exhibited by sequential bilinguals who frequently prefer using their first language for positive emotional expression and their second language for negative emotional expression (Dewaele, 2008; Kheirzadeh & Hajiabed, 2016).

Interestingly, participants were almost evenly divided on their preference, or therefore lack of, when swearing. Approximately half of the participants reported that the language they use most frequently when swearing is not the same language that has the most emotional weight. Individuals who do not use the most emotionally significant language when swearing may do so because it creates emotional distance between the individuals emotional experience and language that is culturally charged as negative, bad or taboo (Harris et al., 2003). Participants who reported differences between the language used most often for swearing and the language with the most emotional weight, may feel a certain degree of removal from the language they use to swear. Simultaneous bilinguals' preference for a less emotionally significant language with less emotional weight when swearing is consistent existing research other forms of bilingualism (Harris et al., 2003).

Simultaneous bilinguals reported being extremely to mostly comfortable with both of their first languages. A few participants are slightly more comfortable with one language than the other. High comfort scores are unsurprising as simultaneous bilinguals have been using both languages for the entirety of their lives. Comfort may also be influenced by the relationship

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contexts in which participants primarily use each language. Most participants use both languages on a daily or weekly basis with their families. Given that all participants are simultaneous bilinguals who learned each language in an informal setting, it is plausible that they learned one or both languages with family. Subsequently, they would likely use those languages most frequently with family. Similarly, most participants use both languages with friends and romantic partners. Although there is slightly more variation in frequency of usage with friends and romantic partners compared to family, both languages are used almost on a daily or weekly basis. One possible explanation for dual language usage with friends and romantic partners is that people tend to form close relationships within their cultural communities which includes language (Ożańska-Ponikwia, 2012). As language carries considerable culture associations and exists within cultural contexts, it is likely that simultaneous bilinguals are involved in cultures associated with both of their first languages and would form relationships with others affiliated with the associated cultures.

Language usage when interacting with co-workers differs from family and romantic partners and friends in that many participants use one language notably more than the other in a professional setting. Most of the participants who do use both languages with their co-workers, use one language every day and the other language is not used as frequently. The language that individuals use in their professional lives is likely influenced by the dominant language of the culture in which they work. Bilingualism is prevalent across countries and contexts, therefore, it is likely that participants would encounter others who do not speak the primary language of that culture and would have to use the other language (Grosjean, 1997).

Several participants indicated that the primary language of the person they are speaking with takes precedence when selecting a language to communicate emotions. In one of the

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responses that participant reported that their relationship with the person they are speaking to is irrelevant. Rather, the dominant language of the person they are conversing with determines the language they use. However, when the person the participant is conversing with speaks both languages, the participant still preferred one language. Often the preferred language is the one that is used most within that relationship context. The preferred language is dictated by the existing relationship context and emotional associations form as a result.

Another common trend in participant's explanations of their language preference is that the language they favor is determined by the existing relationship context. One participant reported that the language they use within a relationship is contingent on the environment of their first meeting. Another participant said that they prefer using Hebrew when conversing with friends and family, provided they speak Hebrew because they associate the language with a cultural history. Additionally, the participant's emotional expression is associated with experiences and memories that are more emotionally significant in Hebrew. A Dutch-English simultaneous bilingual stated that they found it easier to express childhood experiences in the Dutch, the language primarily used within their family. The participant also preferred to express emotions in Dutch when speaking with family members. These explanations and examples support language specificity theory which states that memories are often recalled in the same language as the language used in the event (Kheirzadeh & Hajiabed, 2016). The language memory is encoded in impacts the language used when recalling the memory. When recalling emotional memories, the language the event occurred in my influence the individual's emotional perceptions. Bilingual individuals may tailor their emotional expression to the language they are using to capture the emotion within the appropriate cultural and linguistic parameters.

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### **Limitations**

One limitation of this study is the small sample size. Only 15 participants met the criteria and completed the survey, thus making it difficult to generalize the results. Additional research is needed to determine if the results are representative of the majority of the simultaneous bilingual population.

Another limitation is that only five possible statements were offered when participants were asked to select subjective statements that best reflect their first two languages. Only one of the available options has negative associations, two are neutral and two are positive. The limited options and uneven distribution of positive, neutral and negative statements may account for the elevated scores for the neutral and positive options.

Additionally, the questionnaire choices were limited in that they were multiple choice, with one exception, an open-ended question at the end. The multiple-choice questions offered the participants first two languages and a neutral option as possible answers. However, it is possible that participants preferred an additional language that was acquired later and consequently not offered as an option in the questionnaire.

### **Future Research**

As this is an exploratory study additional research on simultaneous bilingual's perceptions of emotions is necessary to continue developing the field. One potential avenue for future research would be to explore if simultaneous bilinguals prioritize one of their first languages over the other. Although the literature defines simultaneous bilinguals as having two first languages, it would be beneficial to the field and to explore if simultaneous bilinguals perceive one of the languages as being a first language and the other as a second language. Moreover, if simultaneous bilinguals rank their first languages as one being first and the other



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second, it would be critical to explore factors that influence this perception of the individuals first languages.

### **Implications and Conclusion**

This exploratory study offers more insight into simultaneous bilinguals' perceptions of emotional language in their two first languages and how emotional perception and usage is influenced by relationships. Simultaneous bilinguals generally preferred one language over the other when expressing feelings of love, happiness, or anger and frustration. When describing their first languages using subjective statements, most of the simultaneous bilinguals associated their languages with positive emotion laden words, indicating most participants have a positive emotional perspective of their first languages. When expressing positive or negative emotional laden experiences, many simultaneous bilinguals also preferred one of their first languages to the other. A high number of participants reported that the language they feel carries the most emotional weight is not the language they prefer to use when swearing. Simultaneous bilinguals tend to be extremely comfortable with both of their first languages. There is variation in how frequently participants use each language in relationship contexts. Most use one language more than the other when speaking with co-workers. When speaking with family, friends and romantic partners, most participants use both languages almost equally. The determining factor in deciding which language the individual selects to use in relationship contexts is the primary language of the person the participant is interacting with according to participant responses.

Clinical psychological professionals may benefit from these findings in that it may provide them with greater insight into understanding simultaneous bilinguals' perceptions of emotions in their first languages. Based on this study simultaneous bilinguals have preferences for expressing positive and negative emotions as well as feelings of love, happiness, anger and

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frustration. Furthermore, simultaneous bilinguals have likely encoded several significant memories in each of their first languages and some may find it more comfortable to express feelings or memories in the language in which they occurred. If a clinical professional understands a simultaneous bilingual's emotional perceptions of first languages, he or she may be able to better assist the individual. Additionally, under these circumstances, a bilingual therapist may prove beneficial as the individual would be able to express feelings in the language that most completely captures their emotions. Thus, the individual would have more flexibility in expressing emotions, hopefully resulting in more effective therapy.

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Appendix A

**Bilingualism and Emotions Questionnaire**

**Background and Linguistic Information**

Note: L1 signifies first language entered, L2 is second language entered

1. Did you begin learning two languages from early childhood or before starting formal schooling (e.g. Kindergarten)?
  - a. Yes
  - b. No (selecting this option will terminate the survey)
2. Gender
  - a. Male
  - b. Female
  - c. Other (fill in the blank)
3. Age (fill in the blank)
4. Ethnic group/ Community
  - a. African American
  - b. Hispanic or Latino
  - c. While/ Caucasian
  - d. Naïve American
  - e. Asian
  - f. Pacific Islander
  - g. Middle Eastern
  - h. Other (fill in the blank)
5. Highest level of education
  - a. Some High School
  - b. High School Diploma or GED
  - c. Some College
  - d. Associates Degree
  - e. Bachelors Degree
  - f. Masters Degree
  - g. Doctorate Degree
6. What were the first two languages you learned?
  - a. L1 (fill in the blank)
  - b. L2 (fill in the blank)
7. Do you speak any additional languages?
  - a. (fill in the blank)
8. How did you learn L1?
  - a. Outside of school/ at home
  - b. At school with instruction
  - c. At school without explicit instruction
9. How did you learn L1?
  - a. Outside of school/ at home
  - b. At school with instruction
  - c. At school without explicit instruction

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10. What language do you use most at your job?

- a. L1
- b. L2
- c. Other (fill in the blank)

11. How comfortable do you feel using L1?

- a. Extremely comfortable
- b. Moderately comfortable
- c. Slightly comfortable
- d. Neither comfortable or uncomfortable
- e. Slightly uncomfortable
- f. Moderately uncomfortable
- g. Extremely uncomfortable

12. How comfortable do you feel using L2?

- a. Extremely comfortable
- b. Moderately comfortable
- c. Slightly comfortable
- d. Neither comfortable or uncomfortable
- e. Slightly uncomfortable
- f. Moderately uncomfortable
- g. Extremely uncomfortable

13. How proficient are you in L1?

	Not Very proficient	Proficient	Somewhat Fluent	Fully Fluent
Speaking				
Listening				
Reading				
Writing				

14. How proficient are you in L2?

	Not Very proficient	Proficient	Somewhat Fluent	Fully Fluent
Speaking				
Listening				
Reading				
Writing				

15. How frequently do you use L1 with each of the following people?

	Never	Every Year	Every Month	Every Week	Everyday
Co-workers					
Family					
Romantic Partners/ Friends					

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16. How frequently do you use L2 with each of the following people?

	Never	Every Year	Every Month	Every Week	Everyday
Co-workers					
Family					
Romantic Partners/ Friends					

17. Do you switch between L1 and L2 when speaking with certain people?

	Never	Sometimes	Half of the Time	Most of the Time	Always
When Speaking with Friends and Family					
When Speaking with Strangers					
At Work					

**Emotional Perception of Language**

1. The following are subjective statements about L1, select all that apply
  - a. My L1 is practical
  - b. My L1 is colorful
  - c. My L1 is poetic
  - d. My L1 is emotional
  - e. My L1 is cold
2. The following are subjective statements about L2, select all that apply
  - a. My L2 is practical
  - b. My L2 is colorful
  - c. My L2 is poetic
  - d. My L2 is emotional
  - e. My L2 is cold
3. Which language do you prefer to use for expressing happiness?
  - a. L1
  - b. L2
  - c. No Preference
4. Which language do you prefer to use for expressing love?
  - a. L1
  - b. L2
  - c. No Preference



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5. Which language do you prefer to use when expressing emotions such as anger or frustration?
  - a. L1
  - b. L2
  - c. No Preference
6. If you swear, which language do you most often use?
  - a. L1
  - b. L2
  - c. I use both equally
  - d. Not Applicable
7. Do swear and taboo words have the same emotional weight in both languages?
  - a. No, L1 carries more emotional weight
  - b. No, L2 carries more emotional weight
  - c. Yes, they are equal
8. What language do you prefer to express you deepest or strongest feelings in each scenario?

	L1	L2	No Preference
When alone			
When talking to Family			
When talking to your romantic partner			
When talking to friends			
In writing (text, email, letters)			

9. When you are thinking or talking to yourself, which language do you use most?
  - a. L1
  - b. L2
  - c. I use both equally
10. Does the phrase "I love you" have the same emotional weight for you in both languages?
  - a. No, L1 carries more emotional weight
  - b. No, L2 carries more emotional weight
  - c. Yes, it is the same in both languages
11. Do you prefer to use one language's terms of endearment more than the other language?
  - a. I prefer to use L1's terms of endearment
  - b. I prefer to use L2's of endearment
  - c. I use them equally
  - d. I do not use terms of endearment
12. If you were going to keep a personal diary or personal blog, what language would you use?
  - a. L1
  - b. L2
  - c. I would use both equally

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13. If you were discussing a bad or difficult memory, which language would you use?

- a. L1
- b. L2
- c. I would use both equally

14. How anxious do you feel when speaking L1 with different people?

	Not at All	A Little Anxious	Very Anxious	Extremely Anxious
When speaking with friends				
When speaking with colleagues				
When speaking with strangers				
When speaking in public				

15. How anxious do you feel when speaking L1 with different people?

	Not at All	A Little Anxious	Very Anxious	Extremely Anxious
When speaking with friends				
When speaking with colleagues				
When speaking with strangers				
When speaking in public				

16. Which language is it easiest for you to discuss emotion in?

- a. L1
- b. L2
- c. They are equal

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**Language and Relationships**

1. What language(s) do(es) your parent(s) speak?
  - a. L1
  - b. L2
  - c. Additional languages (fill in the blank)
2. What language do you most frequently speak to your parent(s) in?
  - a. L1
  - b. L2
  - c. I use both languages equally
3. What language(s) does your romantic partner speak?
  - a. L1
  - b. L2
  - c. Other (fill in the blank)
4. What language do you prefer to speak to your romantic partner in?
  - a. L1
  - b. L2
  - c. I use both equally
5. What language do you prefer using when talking to friends?
  - a. L1
  - b. L2
  - c. I have no preference
6. What language do you prefer using when talking to strangers?
  - a. L1
  - b. L2
  - c. I have no preference
7. Open ended: Do you prefer to use one language more than the other for expressing emotions? Does it depend on who you are talking to? Why?