

Learn to Cope with Hypoglycemia in Patients with Diabetes

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Abstract

Background: The fear of hypoglycemia may be an important barrier to people adopting regimens that closely control blood glucose levels and decrease long-term complications. To develop patient-centered education for people who experience hypoglycemia an understanding of their experiences with hypoglycemia is needed.

Objectives: The aim of this study was to explore people with diabetes experience of having a hypoglycemic episode from the social problem solving perspective to understand problem-solving participants make about self-management.

Methods: Design: The qualitative study using semi structured interviews.

Settings: Participants were recruited from two study sites in northern Taiwan. One site was a small urban public health clinic and the other site was a large teaching hospital.

Participants: The study population consisted of 21 participants treated with insulin and with hypoglycemic episodes in previous 3 months.

Methods: Semi-structured interviews were conducted from July 2009 to January 2010. Data were analyzed using qualitative content analysis. Open-coding methods were used to identify common concepts among participants. Common concepts were grouped into categories with similar properties and dimensions. The categories to develop themes based on the problem-solving theory.

Results: Findings are presented according to components of the social problem solving theory: problem orientation, identity cause of hypoglycemic problem, goal setting, generation and implementation of solutions, and verification that emerged on the Social Problem-Solving Model.

Conclusions: This study can help health care professionals and researchers develop educational programs to improve hypoglycemia self-management. Enhancing hypoglycemic control skills in patients whose current skills are not effective may promote a positive problem orientation.

Key words: Diabetes mellitus, Self management, Hypoglycemia, Social problem solving

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A Literature Review: Bilingualism Helps Asian Families Flourish

Some first or second generation Asian immigrants choose to teach and immerse their children in their native language, while others choose not to. This literature review investigates some possible reasons behind this decision. The advantages of immersing children in their first language will be discussed. To present a balance, it is important to present the disadvantages of doing so. In addition, the disproportionate number of advantages versus disadvantages, as evidenced by the literature, will be highlighted. For the purpose of this paper, native language is defined as the first language spoken by parents, other than English. Furthermore, references to culture will be specifically to ethnic culture. By the end of this paper, I hope to present that it would be beneficial for Asian immigrants to immerse their children in their native language due to the significant cultural and cognitive benefits this would harvest.

Advantages of Immersing Children in a Native Language

The Cultural Perspective

When immigrants come to Canada, they have to make a decision regarding the extent to which they wish to preserve their distinct cultural uniqueness (Arthur, Merali, & Djuraskovic, 2010). In addition, they need to decide how much they want to connect with others who do not share their cultural traditions. In this section, the positive cultural benefits of immersing children in a native language will be explored. One such benefit is that it may make the acculturation process of family members go more smoothly (Boutakidis, Chao, & Rodriguez, 2011; Costigan & Dokis, 2006). By being familiar with one's native language, it may help one remain bicultural (Costigan & Dokis; Kim & Omizo, 2006; LaFromboise, Coleman, & Gerton, 1993). The ability of speaking the family's native tongue, may aid one to connect more deeply with their ethnic culture (Boutakidis et al; Costigan & Dokis). It may also assist in reducing the generational gap experienced by immigrant families (Costigan & Dokis, 2006; Boutakidis et al., 2011; Wu & Chao, 2011).

The process of acculturation. Some immigrants may be more acculturated (Berry, 2005); whereas others may be slower to adapt to the greater culture. Berry defined acculturation as, "the dual process of cultural and psychological change that takes place as a result of contact between two or more cultural groups and their individual members" (p. 698). In other words, acculturation involves the progression of how one becomes comfortable with living in a new and foreign environment. The rate of acculturation is different for each individual and each family who immigrates. Costigan and Dokis (2006) found that immigrants who settle in Canada generally fair well. In this study, families were drawn from the community and acculturation was measured with independent results from parents and children. In general, the child participants reported low intensities of struggles, low depressive indicators, and high achievement incentive. This occurred despite different experiences of acculturation compared to their parents. Furthermore, immersing children in their native language strengthened the bond of the family. For instance, when children adjust to the Canadian culture at a faster rate, their parents may feel they are losing their ethnic

identity. However, with the common spoken language of Chinese, they are able to share a more collective experience, regardless of the rate of acculturation (Boutakidis et al., 2011).

The bicultural experience. Biculturalism is, “the integration of the home and host cultures in terms of both lifestyles and interaction patterns” (Arthur et al., 2010, p. 289); the aim is to remain in the midpoint between isolation from other groups, and complete assimilation into the greater culture. Therefore, when Asian immigrants immerse their children in their native language, whilst continuing to encourage them to learn English, it could create an optimal balance. As mentioned above, Costigan and Dokis (2006) conducted a study of immigrant Chinese families; they wanted to find the relationship between parent and child rates of acculturation, and individual and family adjustment in the host country. Results of the study indicated that it is vital to offer programs to uphold immigrant children’s sustained participation in their ethnic culture, while, at the same time, they also attain the skills needed to blossom in the new country.

In addition, Kim and Omizo (2006) voiced that developing an affirmative Asian American identity is connected to engaging in Asian behavioural norms. This includes the use of the Asian language. Furthermore, they also suggested that Asian Americans should participate in European American norms to remain bicultural. Consequently, LaFromboise and colleagues (1993) concurred that it is essential to hold both cultural groups in a positive light. They relayed that, without positive views about both groups, one may be inhibited by the ability to feel good about interacting with both cultures. In essence, the teaching of a native language to preserve the ethnic culture, and the encouragement of learning English, allows children to appreciate both cultures.

The sense of connection. There are many words in Chinese that are not equivalent in English. When one speaks English with a parent, the connection is not as profound, as there are many ways he or she is not expressing the exact sentiment. A study conducted by Boutakidis and colleagues (2011) agreed with this assertion. They found that Chinese and Korean adolescents, who were able to communicate with their parents in their native language, had a better understanding of their native culture. This is because they were, “able to understand and express these values within the cultural and linguistic context in which they originated, further aiding their understanding of the parent’s values and perceptions” (Boutakidis et al., p. 130). In this light, language is more than a medium of communication; it offers a deeper level of sharing within a culture.

Moreover, when parents and children are able to share their native language, the process of learning about their customs and traditions become more ingrained. Costigan and Dokis (2006) relayed that when mothers speak Chinese, and the children do not, their difficulties in communicating with each other, make it challenging to share emotional concerns. On the other hand, children who were more analogous to their mothers in adhering to the Chinese culture, such as showing a willingness to learn and speak Chinese, may experience more support in their families (Costigan & Dokis, 2006). Hence, this study emphasized the emotional benefits of being able to communicate in a native language.

Minimizing the generational gap. The benefits of being able to speak the native language may transpire into communicating more effectively with parents. As indicated above, Berry (2005) voiced that older and younger people may acculturate at different rates. For example, parents may lag behind their children in terms of getting acquainted with the host culture. A study conducted by Wu and Chao (2011) asked participants in grades 10 to 12 to complete a 50 minute questionnaire; this measured parental warmth, parental-adolescent open communication, Chinese parent-adolescent relationships, and adolescents' internalizing symptoms. The questionnaire was completed by 249 Chinese American (95 first-generation and 154 second-generation) adolescents and 385 European-American adolescents in the greater Los Angeles region. First-generation pertains to adolescents born outside of the United States to immigrant parents; and, second-generation pertains to adolescents born in the United States to immigrant parents. The results indicated that second-generation adolescents experienced higher levels of adjustment problems when they answered questions regarding parental warmth, when compared with European Americans. The difference was not indicative when comparing first-generation adolescents and European Americans. In addition, second-generation adolescents were more prone to experience internalizing symptoms.

Overall, there was a greater degree of cultural dissonance in the second-generation group, such as in parental warmth and open communication; there was also an increased rate of behavioural problems for these Chinese youth (Wu & Chao, 2011). For this group, greater discrepancies were associated with generational gaps encompassing two types of stress. These were, "acculturative pressures and normative generational gaps" (Wu & Chao, p. 503). As indicated above, when adolescents were able to share a common native language with their parents (Costigan and Dokis, 2006), and were able to communicate fluently in the native language, it was possible for the adolescent and the parent to share a collective sociocultural perspective (Boutakidis et al., 2011). In essence, more unity may be possible, and therefore decreases the generational gap experienced by adolescents. The benefits of teaching children a native language include the possibility of bringing the rates of acculturation closer for the parent and the child. It fosters the youth's biculturalism to a greater degree. In addition, the sense of connection becomes stronger. Furthermore, it may help to close up the generational gap experienced by many immigrant families.

The Cognitive Perspective

In contrast to the early twentieth century (Hakuta & Garcia, 1989), there is presently an array of research that points to the cognitive benefits of bilingualism. First, bilinguals have more choice in language expression (Gollan & Ferreira, 2009; Rodriguez-Fornells, Balaguer, & Munte, 2006). Second, another benefit is that proficient bilinguals, ones who are equally as proficient in two languages, may perform above monolinguals in terms of mathematics and language classes (Kempert, Saalbach, & Hardy, 2011). Subsequently, they have higher functioning in executive control (Bialystok, Craik, & Luk, 2008; Kempert et al., 2011); which will be defined below. Lastly, their brains are more fit and may delay the onset of dementia (Adesope, Lavin, Thompson, & Ungerleider, 2010; Bialystok, et al., 2008; Mechelli et al., 2004).

The bilingual brain has more choice. Rodriguez-Fornells and colleagues (2006) found that fluent bilinguals interchange from one language to the other, and are able to isolate both languages entirely without much struggle. Later, Gollan and Ferreira (2009) agreed that knowing two languages offers advantages such as the ability to communicate to a wider audience, and function in a larger diversity of language situations. They also communicated that bilinguals have the power of choice when speaking with other bilinguals; they have the flexibility of selecting whichever language most straightforwardly and distinctively convey their thoughts. In essence, bilinguals enjoy more freedom of expression when it comes to language use.

Proficient bilinguals have advantages in academics. In Kempert and colleagues' (2011) study, they found that students of Turkish and German elementary bilingual schools had to keep two languages separate by recurrent usage and exposure. The students, who were proficient bilinguals, indicating that they were skillful in both languages, performed better in math problems with distractors, compared to students who were monolinguals. Furthermore, bilingual students were apt to have more attentional control than monolingual students. Positive attentional control involves the degree of flexibility in interchanging attention between, and within tasks to make the most out of performance (Derakshan & Eysenck, 2009). In Kempert et al.'s study, proficient bilinguals had higher scores compared to their monolinguals peers on these tasks. It may be significant to underscore the relationship between performing well in mathematics and also excelling in learning languages. Hence, Kempert and colleagues' study is an important one to note in regards to the benefits offered to proficient bilinguals.

Bilinguals have higher executive control. Furthermore, Kempert and colleagues (2011) found that bilingual children possess cognitive benefits such as executive control. Pessao (2009) defined executive control as a set of, "functions, typically believed to depend on the frontal cortex (and probably the parietal cortex), which are needed when non-routine behaviors are called for – namely, when 'control' is required" (p. 160). In other words, executive control provides one with the ability to set and reach goals, inhibit a tendency to do wrong, and keep focus when attention is needed (Hughes & Ensor, 2007). In Kempert et al.'s findings, even immigrant students with a weak grasp of the German language (language of instruction), performed at an equal level in executive control tasks compared to their monolingual peers. Therefore, even nonbalanced bilinguals (one's who are more proficient in one language compared to the other), profit from being bilingual.

In another study, Bialystok et al. (2008) also found that bilinguals performed better in tasks that require executive control compared to monolinguals. This study incorporated the Stroop task. Miller et al. (2001) indicated that the Stroop task incorporates, "asking the subjects to either read words or name the colour in which they were written" (p. 168). For example, if the word is green, however, is written in red, the reader would be asked to name the colour; this requires one to focus on only one attribute at a time. In Bialystok and colleagues' study, bilingual subjects fared better than monolingual subjects in these tasks. In combination with other tests, they were found to have higher executive control in general. Hence, both Kempert and colleagues' (2011) and Bialystok and colleagues' studies pointed toward the positive benefits in terms of having higher functioning in executive control tasks.

The bilingual's brain is more fit. Mechelli and colleagues (2004) indicated that when one learns a second language, the grey matter in the left inferior cortex becomes

bigger. This may help in the postponement of dementia for an average of four years. Furthermore, Bialystok and colleagues' (2008) study found that knowing two or more languages enhances the progress, as well as defers the decline, of executive control on a number of tasks; this was evident across the lifespan. Specifically these results were found in nonverbal tasks as well, which were not knowingly related to language processing.

In addition, Adesope et al. (2010) performed a meta-analysis research of 63 studies and found that balanced bilinguals were, "associated with several cognitive outcomes, including increased attentional control, working memory, metalinguistic awareness, and abstract and symbolic representation skills" (p. 207). Therefore, they exceeded monolinguals in metalinguistic and metacognitive awareness. In addition, in this project, attentional control was strongly correlated with bilingualism. Subsequently, Adesope and colleagues found that these advantages were present regardless of participants' socioeconomic status (SES). Therefore, the bilingual brain may benefit from being exercised beyond the ones that are only exposed to one language.

The bilingual brain has shown to be more flexible in that it may function in multiple language environments. In proficient bilinguals, they were found to perform more effectively in certain mathematical concepts. In regards to executive control tasks, bilinguals also outperformed monolinguals in certain tasks. Furthermore, being proficient in two or more languages may help suspend the arrival of dementia.

Disadvantages of Immersing Children in a Native Language

The Cultural Perspective

Although the cultural benefits are apparent, as presented earlier; still, some studies found some drawbacks of insisting children speak a native language (Costigan & Dokis, 2006; Hwang, Wood & Fujimoto, 2010). This includes that the parent and child may disagree on the value of retaining the language (Costigan & Dokis, 2006; Hwang et al., 2010). Young people may be self-conscious to speak it and fear being judged by people from the host culture (Weyant, 2007). When people from different ethnic cultural backgrounds unite and form a family, they may decide to only teach English to their children. (AhnAllen & Suyemoto, 2011; Hynie, Lalonde, & Lee, 2006; Mok, 1999).

Differences in values. Insisting children to speak a native language may cause rift in the family if the child resists doing so. Some young people may not see the value in keeping their native language. Hwang et al. (2010) introduced the term *acculturative family distancing* (AFD). This is the distancing that transpires among immigrant parents and their children; it is triggered by breakdowns in communication and cultural value differences. This may be due to the different degrees with which parents and children obtain characteristics of the host culture at different rates (Berry, 2005). This study indicated that larger numbers of youth and mothers reports of AFD were associated with higher depressive symptoms and risk for clinical depression. Therefore, enforcing the native language to be spoken may cause further distancing between the parent and child.

Furthermore, Costigan and Dokis (2006) relayed that when Chinese Canadian parents were more adamantly in favour of the Chinese culture and desired to speak Chinese, a decreased level of Chinese cultural and linguistic participation by the children was related to instability in the relationship. When parents and children do not assign the same value to learning and speaking Chinese, disagreements may ensue. In the long run, these disagreements may cause the family to be divided.

Being self-conscious. Children may not desire to speak a native language due to not wanting to digress from the host culture. The younger generation may feel that speaking a native language may not be the prevalent thing to do. Weyant's (2007) study found that participants favoured people who speak English without an accent. After listening to an audiotape of various speakers with different accents, they rated the pure English speaker higher in areas of ability and accomplishment. Hence, participants thought they were more intelligent than the speakers who spoke with an accent. Young people may pick up on this negative stigma and feel self-conscious about their native language. Therefore, when parents push too hard for them to learn and use the language, they may further resist doing so.

Interracial relationships. In unions in which one partner does not speak the language, the couple may choose not to teach their children one of the parent's native languages. This may be due to thinking that a language barrier between one parent and the children may be unfair. A study conducted by AhnAllen and Suyemoto (2011), found that when Asian women and White men date, they experience barriers such as reconciling how to communicate effectively, facing unacceptance by family members, and the weight of having to challenge racism. When marriage becomes a reality, it may be more difficult to navigate whether to teach children a native language, since one partner would not understand the language.

According to Costigan and Dokis' (2006) study mentioned earlier, Chinese women were more likely to teach language. Hence, when a Chinese man marries outside of his ethnic culture, the likelihood of preserving the native language may be lower. However, women may still have the tendency to immerse their children in the language, due to wanting to preserve the culture. In interracial relationships, the dynamics are different since one partner would not speak Chinese (AhnAllen & Suyemoto, 2011). Again, it becomes more challenging to decide whether to teach the Chinese language, out of consideration for the spouse who does not speak or understand it.

Furthermore, Hynie and colleagues (2006) study suggested that Chinese immigrant parents and children may be at odds with one another about their choice of partners. Parents in this study preferred their children to marry someone with traits related to the traditional family construction, function, and role. Subsequently, they wanted their daughters to marry someone with a higher status. Many children in this study aligned with their parent's views, and when this occurred, conflict was absent. In addition, Mok (1999) found that the probability of Asian Americans dating White Americans is partial to higher levels of acculturation rather than lower levels of ethnic identity. One may question, if an individual is more acculturated, then would he or she be less likely to appreciate their native language? Further studies may be needed to address this point. In essence, these studies speak to the conflict that may arise in

interracial families when deciding whether or not to introduce, teach, and immerse children in a native language.

In families where the parent speaks a native language, and is diligent in enforcing this spoken language to their children, the children may feel less need to comply, since mainly English is spoken in the host culture. This may cause conflict of interest in the family. Some young people may feel self-conscious when others hear them speak another language; they may feel that they are not blending in with the host culture. In addition, in interracial relationships, one partner may not want to enforce a native language due to not wanting to exclude the other partner.

The Cognitive Perspective

Studies have also shown some cognitive drawbacks to bilingualism. Bilinguals who are more proficient in one language (dominant bilinguals) may lag behind their peers in the performance of lexical tasks (Bialystok et al., 2008; Gollan & Ferreria, 2009); of which will be defined below. When two languages differ in their linguistic structure, students may be more challenged to learn the language of instruction (Kempert et al., 2011; Yeong & Rickard Liow, 2011). The fluency of the chosen spoken language may also suffer (Gollan & Ferreria, 2005).

Dominant bilingual children and lexical tasks. Hakuta and Garcia (1989) proclaimed that in the early 1900s, the performance on standardized tests highly disfavoured bilingual children; bilingualism was interpreted as a mental burden that caused inferior levels of intellect. Over a century later, Bialystok and colleagues (2008) also found that bilinguals may fall behind monolinguals in lexical tasks including verbal fluency. These tasks include the Peabody Picture Vocabulary Test (PPVT), Boston naming task, and category fluency task from the verbal task battery. David E. Meyers and Roger Schvaneveldt worked together in the 1970s to determine whether lexical-decision tasks affect reaction times (RT) in cognition. It was found that, “lexical-decision RTs are significantly shorter for words (e.g., butter) immediately preceded by other associated words (e.g., bread)” (David E. Meyers, 2002, p. 833). In Bialystok and colleagues’ study, the subjects who were bilinguals were slower in these lexical-decision tasks compared to the monolinguals. In essence, lexical tasks have shown to be more challenging for bilinguals because both languages are active; this creates the need to attend and select during these tasks, thus decreasing retrieval time.

In fact, Gollan and Ferreira’s (2005) study demonstrated this specific retrieval time. For instance, they indicated that Spanish-English bilinguals, where English was usually the stronger language, named pictures in English at a slower rate than English monolinguals. This may have to do with needing to draw from a bank of two languages, thus, slowing down the retrieval time. Therefore, it is significant to note that dominant bilingual children may spend more time on lexical tasks.

Bilingual students may experience difficulty when two languages are dissimilar.

Kempert and colleagues (2011) conveyed that, when ESL students have a weak understanding of the language taught in school, their academic success will be negatively affected. A six-month longitudinal study by Yeong and Rickard Liow (2011) can attest to this, as they found that children with Mandarin, as their first language, favoured syllable awareness as opposed to phoneme awareness. For

instance, in Mandarin, each character forms a word, and knowing each syllable, by memorization, helps in reading, whereas in English, children are encouraged to sound out the letters of the alphabet that form words (phoneme system); these differences are fundamental to note when teaching Mandarin-speaking students the English language. This aforementioned study incorporated 50 kindergarten participants, whereby English was their first language, and 50 kindergarten participants, whereby Mandarin was their first language. During the first trial, the children were administered the parallel version of the English and Mandarin tasks; subsequently, the second time around, their spelling intricacy scores were computed from a 52-item experimental task. Since English is phoneme-based, this makes it more difficult for the Mandarin speakers to learn to spell in English. This points to the importance of Chinese ESL learners being exposed to aural English in the early years, as opposed to children who have a grasp of language with a comparable linguistic organization, such as Spanish and French. In essence, one may decide to not teach children Mandarin due to this disadvantage during primary school age years.

The fluency disadvantage. Gollan and Ferriera (2009) found that bilinguals face the challenge of needing to choose to only speak one language when conversing with monolinguals or multilinguals (with different language combinations), although both languages may be useful to communicate the envisioned meaning. In this study, 73 Spanish-English undergraduate bilinguals contributed for course credit, the goal was to name as many pictures as possible, shown on a computer, without making mistakes. The Spanish group was allowed to name the pictures in Spanish only, the English group, in English only, and there was one group who was allowed to choose the language of choice. Results showed that bilinguals may have a more difficult time when needing to retrieve synonyms. Whereas a monolingual needs to access words for which may not be commonly spoken in everyday language usage, the bilingual has to do so with almost every word they speak because they have to completely eliminate one language when speaking the other. The cost of voluntarily switching from one language to another was substantial in that retrieval time was slower. In this light, bilinguals may have an obvious disadvantage, in terms of fluency, when required to only speak one specific language at a time.

Bilinguals, who are not balanced (more proficient in one language, compared to the other), have a more difficult time completing lexical tasks. Furthermore, when the native language, such as Mandarin, is completely different in syllabic and phonemic organization compared to English, the Mandarin speaker may lag behind in learning English. In addition, bilinguals may fall behind compared to monolinguals in terms of language fluency skills. Despite these drawbacks, in the next section, the reasons for the advantages to overshadow the disadvantages of teaching children a native language will be discussed.

Reasons for the Advantages to Outweigh the Disadvantages

The Cultural Perspective

The literature presented so far, has indicated the various benefits, which are worth the time and care, of teaching children a native language. In this section, the emphasis of the benefits of bringing up a well-rounded bilingual individual (Knafo & Schwartz, 2001; LaFromboise et al., 1993) will be explored. In addition, the strategy of perspective taking may help alleviate the fears of adolescent's becoming embarrassed to speak their native language (Weyant, 2007). Furthermore, the level of

communication may prosper when the parent and child both view the importance of preserving the native language (Hwang et al., 2010).

The bilingual as a whole person. LaFromboise et al. (1993) found the multicultural model to be a positive representation of one who is bicultural. This model deems that an individual can uphold an affirmative identity as a participant of his or her ethnic culture of origin, while concurrently cultivating a positive identity by engaging and partaking in activities with other cultural groups. In addition, the pressure to resolve internal struggles caused by bicultural stress does not need to result in undesirable psychological impacts, but could, instead, lead to personal and emotional development. Therefore, one may reason that keeping two languages active makes it easier to achieve this growth.

It is important to note that parents who want their children to learn their native language do not negate the importance of learning English. Knafo & Schwartz (2001) found that many immigrant parents want their children to succeed; this includes their encouragement for children to master a host language, and be familiar with the host culture. This could be done simultaneously with speaking the native language at home. Moreover, LaFromboise et al. (1993) suggested that, to successfully meet the demands of the majority culture, one should have the ability to communicate in both cultures. This underscores the significance of keeping the native language alongside learning English.

Perspective-taking. Furthermore, Weyant (2007) tested a hypothesis of whether a technique called perspective-taking would help reduce the negative stigma associated with perceiving people who speak English with an accent. He found when participants took the speaker's perspective, when listening to an audio tape, he or she rated the speaker more favourably even when an accent was present. In the absence of this technique, many rated the speaker as less intelligent than that of the native English speaker. Since Canada is a multicultural society, people are exposed to different cultural groups on a daily basis; some may appreciate this technique to fully acknowledge the diversity of our country. When adolescents are taught to take on the perspective of others, prejudice and discrimination, are likely to decrease.

The united family. In 2010, Hwang and colleagues found that programs that target the improvement of parent-child communication barriers may help decrease family struggle. When adolescents take the initiative to learn more about their ethnic culture, family conflict was likely to decrease. Moreover, when a spouse in an interracial marriage teaches children Chinese, it provides a greater opportunity for the other spouse to learn a new language. As Rodriguez-Fornells et al. (2006) indicated, language acquisition is possible across the lifespan.

From the lens of the cultural perspective, these benefits derived from teaching children a native language are immense. The literature indicates that the family is more united and young people profit from speaking the native language, as well as learning English.

The Cognitive Perspective

The cognitive benefits also outweigh its drawbacks. When children learn two languages, simultaneously at a young age, their brains become more flexible (Adesope et al, 2010). The benefits are well-established, even for those students from a lower SES (Kempert et al., 2010).

The critical period. Adesope et al. (2010) indicated bilinguals who learn a second language, at an earlier age, have greater metacognitive and metalinguistic traits than those who learn it at a later age. In addition, bilinguals fared better than monolinguals in both domains. This points to the significance of immersing children in a native language, from a young age. Children are more prone to learn the language because they feel that it is natural to speak it. When they get older, they may be more self-conscious about speaking a new language.

Cognitive rewards. In several studies (Hakuta & Garcia, 1989; Kempert et al., 2011), the authors discussed the drawbacks of being bilingual, however, in these same studies, the conclusion communicated that the benefits outweighed the costs of teaching children a native language. For example, in Kempert and colleagues' study, the summary section communicated that the, "cognitive advantages of speaking two languages may compensate for some of the disadvantages that occur with lower skills in instructional language as well as with low SES" (p. 551). In other words, with the advantages indicated in the above section, it is worth the time to teach children a native language, since it also benefits this group regardless of the family's SES. In addition, the results indicated that children who speak two languages, and who are immigrants should be considered a resource rather than an encumbrance. This is due to the many cognitive benefits that bilinguals encompass, as indicated earlier. Furthermore, Hakuta and Garcia's literature review concluded that two languages do not contend for mental resources with one another; on the contrary, there are numerous cognitive rewards for bilingualism.

The research shows that language acquisition at a young age removes the barriers associated with learning it later in life. Even when people are in different SES categories, the benefits of knowing two languages is present. Contrary to the belief in previous years, the brain does not compete for resources when speaking two languages. It is apparent, that the cognitive advantages outweigh some of the struggles of learning two languages.

Conclusion

As is presented in this literature review, there are numerous benefits in teaching and immersing children in a native language. Within the cultural perspective, this includes confronting the challenges in different rates of acculturation experienced by the parent and the child. It helps foster a bicultural identity in that both the Asian and Western cultures become important to one's development. The feeling of connection becomes more ingrained when parents and children share a common language that celebrates their tradition. It also works to close the generational gap. From a cognitive perspective, the brains of bilinguals are offered more choice in ways to communicate. Bilinguals, who are proficient in both languages, have shown to fare better in mathematics. They also perform better in executive control tasks compared

to monolinguals. With the added benefit of slowing down the onset of dementia, these cognitive advantages may be well desired.

On the other side, the drawbacks are also supported by research. The parent and the child may have different views in what each party values, thus disagreements may ensue. The young person may feel uncomfortable and awkward when speaking the native language in public. In interracial relationships, one partner may not pursue this teaching with the child, due to not wanting to leave out the spouse. In relation to the cognitive framework, students who are less proficient in one language, such as the language of instruction, may fall behind in performing lexical tasks. When the two languages are quite different in syllabic and phonemic structure, students may experience a more difficult time when learning to spell in English. In situations where the individual is only required to speak one language, it may inhibit the fluency of conversations.

Above all, however, the advantages compensate for the disadvantages. An individual may feel more whole when he or she is able to communicate and connect with both cultures. When individuals learn to be less self-conscious about how society, at large, views their spoken language, there is more room for growth. The family would bond more intricately when the parent and child are able to share more than one language. In the cognitive realm, the child would think it is natural to speak the native language when exposed to it at a young age. In essence, the cognitive rewards are paramount and outweigh the drawbacks in many respects.

One limitation of this literature review is that not all studies are specific to Asian immigrants. In addition to studies specific to Asian families (AhnAllen & Suyemoto, 2011; Boutakidis et al., 2011; Costigan & Dokis, 2006; Hynie et al., 2006; Kim & Omizo, 2006; Mok, 1999; Wu & Chao, 2011, Yeong & Rickard Liow, 2011), in several sections, bilinguals who speak Spanish-English (Gollan & Ferreira, 2009; Rodriguez-Fornells et al., 2006), German-Turkish (Kempert et al., 2011), and Hebrew-Russian (Knafo & Schwartz, 2001), were included. The reason for including these studies pertains to the fact that the bilingual experience and bilingual brain may have similarities. On the other hand, there are also differences such as the language structure of Chinese and English are completely different from one another. Therefore, one may not completely take this review and generalize it to the Asian experience.

In several studies (AhnAllen & Suyemoto, 2011; Gollan & Ferreira, 2009; Hwang et al., 2010; Hynie et al., 2006; Kempert et al., 2011; Yeong & Rickard Liow, 2011; Wu & Chao, 2006), the sample size may not be sufficient to make the findings generalizable. For instance, in Wu and Chao's project, there was a relatively smaller sample size of the Chinese American youths, particularly the first generation group. In addition, this was a questionnaire based on the adolescents' reports and negated to ask the parents for their perspective. In the future, both sides should be attained to gain a better picture of the parent-child relationship. Moreover, further longitudinal studies may benefit in addressing age-related variations.

Future studies need to address some strategies for parents who want to teach, and help their children retain, their native language. In addition, gender differences need to be acknowledged, since there is an assumption that females acquire language at faster rate than males. The learning of differences between genders would help parents

foster a positive learning experience for both girls and boys. Furthermore, there lacks research on whether bilingualism benefits children with special needs. One may come to question whether adding another language would support or hinder children's development if they already have learning challenges. In light of these limitations and future directions, this literature review explored and presented numerous advantages of teaching and immersing children in a native language.

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