

CAREER DECISION-MAKING AND CULTURAL VALUES OF STUDENTS FROM THE  
NORTHEAST OF BRAZIL

by

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An Abstract

of a thesis submitted in partial fulfillment  
of the requirements for the degree of  
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## ABSTRACT

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Deciding on a career can be a challenging process for high school students, and this process might be influenced by national culture. For instance, recent cross-cultural studies pointed that family influences on career choice were far more present in students from countries in Asia than in students from England and the United States (Diguan & Santos, 2007; Fan et al, 2014; Liao & Ji, 2015). Although such research is valuable, other countries around the world are seldom investigated with a cultural focus, and this is particularly true for research conducted in developing countries. In addition, research on career decision-making usually does not involve a direct measure of cultural values. In fact, recent research on career decision-making has focused on features of collectivism, but other cultural factors do not appear to be investigated as often. With this in mind, the goal of this research was to investigate the career decision-making difficulties of Brazilian students, as this relates to measures of cultural values. An additional goal was to identify the most prominent career difficulties of a group of students in the city of Recife, Brazil. Results indicated that, as hypothesized, lack of readiness to make a decision was the most prominent difficulty among students. Cultural values such as collectivism and masculinity were significantly related to career decision-making difficulties in the overall sample. However, additional analyses revealed that the relationship between cultural values and career decision-making difficulties differed between boys and girls. Long-term orientation, collectivism, and masculinity were significantly related to career decision-making difficulties in the sample of boys, but only masculinity was significantly related to career difficulties in the sample of girls. Implications of these findings as well as future directions for research were further discussed.

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## CHAPTER 1 NATURE AND SCOPE OF THE STUDY

Choosing a career can be a challenging task for high school students. Factors such as family expectations, personal growth and job market affect students around the world (Ozlen & Arnaut, 2013; Workman, 2015). Cultural values such as collectivism might also influence the decision-making process of young adults. Collectivism refers to a tendency within a culture to emphasize the group over the individual, while individualism refers to the opposite, a tendency to value uniqueness over group membership (Hofstede, 1980). Cultural levels of collectivism could be considered important influences on career decisions, because they could potentially indicate how individuals consider themselves or their social group to be the most important influence on deciding their careers (Bacanli, 2016).

Interestingly, the literature on decision-making supports the notion that higher levels of collectivism are associated with higher confidence during the decision-making process (Li et al, 2009; Li & Fang, 2004; Meisel et al, 2016). This relationship has not yet been studied in the context of career decision-making, so one of the goals of this study was to confirm if this general notion about collectivism and decision-making also applies to career decisions.

Even though different hypotheses can be made regarding collectivism and career decision-making, there is a gap in the literature regarding other dimensions (besides collectivism) that might be influencing the career decision-making process. For instance, studies comparing different cultures or examining a single culture have a general focus on how family relations influence career decisions (Fan et al., 2014; Liao & Ji, 2015). Family relations could be linked to collectivism, but other cultural values (besides collectivism) might play a role in the

decision-making process. For instance, Hofstede (2011) described other cultural dimensions that were unrelated to collectivism, such as power distance, masculinity versus femininity, long-term orientation, and uncertainty avoidance. Such dimensions could potentially influence or be influenced by career decision-making, but so far they have not been studied in such context.

The cultural dimensions of long-term orientation and horizontalism have been linked to academic achievement (Choi, 2013; Fang et al., 2016). Long-term orientation refers to a social inclination to either focus (or not focus) on long-term goals (Hofstede, 2011), and horizontalism refers to a societal tendency to devalue hierarchies (Triandis, 2002). The notion of horizontalism is very similar to what Hofstede (2011) called "power distance," (p.8) meaning that people in cultures that have very low power distance scores tend to devalue hierarchies and power structures. One of the goals of the present work was to identify if power distance and long-term orientation also influence career decision-making in the same way that they influence academic achievement.

Other cultural dimensions, such as femininity versus masculinity and uncertainty avoidance have not yet been studied in the context of career decision-making in high school. The femininity versus masculinity cultural dimension refers to a cultural tendency to either value or devalue equality of genders and gender roles (Hofstede, 2011). The femininity versus masculinity cultural dimension might be especially important to study, since women often report to have more barriers than men in career advancement and career decision-making (Huang, 2015; Watts et al., 2015). Therefore, one of the goals of this study is to identify any existing link between the masculinity versus femininity dimension and career decision-making. The dimension of uncertainty avoidance, which refers to the cultural tendency to either seek tradition and familiarity or seek novelty (Hofstede, 2011), has not yet been studied in the context of career

decision-making, so one of the goals of the present study was to determine if there was any link between uncertainty avoidance and career decision-making difficulties.

Another issue regarding culture and career decision-making is variety in the populations studied. Most of the research that explored culture and career decision-making has focused on samples of Asian students, or on a comparison between students from English-speaking developed countries and students from countries in Asia (Diguan & Santos, 2007; Fan et al, 2014; Liao & Ji, 2015). Whenever other groups were surveyed (e.g. Latinos, African Americans), they were usually minorities living in a developed country (Mau, 2004; Gushue, 2006). In this sense, more research with a cultural focus is needed in other places, especially in developing countries (e.g. Latin America, Africa).

When investigating a country, one should consider the particularities of the high school and university systems, as how they relate to the career decision-making process. One example of how the high school and university systems might be negatively influencing students can be seen in in Brazil. Brazilian high school students are faced with a college acceptance system that relies solely on test scores. Thus, even when high schools and career counselors work hard to help students in their career decision-making by giving them the information that they need, the Brazilian university system might be influencing high school students to focus mostly on test scores, and not on their personal characteristics and decision-making in general. This could be resulting in a lack of readiness to make a decision. Due to the fact that participants in the present study had access to career exploration activities that exposed them to different career paths, it was hypothesized that difficulties related to lack of information or inconsistent information would not be as prominent as a lack of readiness. In this context, the aim of the present study was to also investigate if a lack of readiness for making a decision would be a prominent difficulty during the career decision-making process of Brazilian students.

Furthermore, one characteristic of this study is the fact that it was conducted within a single culture (Northeastern Brazilian students), so the cultural values were investigated at the individual level, in which each student was surveyed and individual differences were observed. Hofstede (2011) is against this notion, arguing that cultural values should be observed at the country level, and at least two countries should be compared. However, a questionnaire validation conducted by Yoo et al. (2012) revealed that cultural values can be observed at the individual level. Their findings also showed that cultural values could provide important insights in some variables related to marketing and consumer ethnocentrism, even when these variables were studied within a single culture, in very homogeneous samples (e.g. college students from the same school). Other works in marketing, administration and the education of engineering majors have demonstrated that the Hofstede dimensions are valuable and important for cultural studies, even when individuals from a single culture are investigated (Murzi et al., 2016; Farh et al., 2007). These cultural dimensions have not yet been studied at the individual level in the context of career decision-making. Therefore, the next objective of the present study is to understand the relationship between cultural values and career decision-making difficulties at the individual level of analysis, in a sample of Brazilian students.

In conclusion, the aim of the present study was to investigate how collectivism relates to confidence in the career decision-making process, how other cultural values related to career decision-making in general, and if lack of readiness for making a career decision is the most prominent problem among Brazilian high school students. Also, the next goal of this research was to extend the findings on career decision-making and culture to a developing country, doing so at the individual level of analysis. The findings of this research and initial insights on the relationship between cultural values and career decision-making might provide a basis for future cross-cultural comparisons or comparisons of different regions in Brazil.

## CHAPTER 2 REVIEW OF THE LITERATURE

Theories of culture and models for career decision-making are two important topics to be discussed in this literature review. Cultural models were proposed by Triandis (1971) and Hofstede (1984), and they refer to cultural syndromes and cultural dimensions, respectively. These two theories intertwine and their similar origins can be further elaborated in the context of career decision-making (Dingyuan & Santos, 2007; Guan et al., 2015). Different career-decision models can also be exposed, and their usability in different contexts can be explored. Although several models for studying career decision can be compared and contrasted (Melvin et al., 2012), the theory developed by Gati, Krauz, and Osipow (1996) will be exposed in detail because it has been used often in studies that focused on cultural aspects of career decision-making (Melvin et al., 2012). In addition, this model has been used in a few Brazilian studies (Primi et al., 2000; Cava, 2012; Campos & Noronha, 2016). Such studies will be discussed in light of the cultural characteristics of Brazilian students and other factors that might influence their career decision-making.

### **How are Cultures Different? How does Culture Affect Professional Decisions?**

In order to study the process that Brazilian students use for choosing a career and how cultural values might relate to such decision, it is important to discuss how cultures differ from each other and how they are similar. Different theorists have proposed diverse explanations as to how cultures might be similar or different (Triandis, 2002; Hofstede, 2011). Triandis proposed different "cultural syndromes" (2002, p.5). These syndromes represented specific cultural features that could be analyzed systematically. In this context, the word 'syndrome' is not to be confused with pathology. When Triandis (2002) talked about syndromes he was actually referring to categories in which cultures could be analyzed. Likewise, Hofstede (1984) presented cultural dimensions that could be useful in cross-cultural studies. Interestingly, the early work of

Hofstede (1984) was revised by Triandis (2002), which indicates that both researchers were greatly influenced by each other.

Triandis explored cultural differences when he was invited to participate in a project by the United States Navy for improving assimilation across cultures (Triandis, 1971). In this project, he was responsible for identifying which elements of culture were particularly relevant, while two other colleagues were responsible for the implementation of the program and communication with leadership figures and the public (Triandis, 2002). With further study of different cultures, Triandis (2002) identified several cultural syndromes that could potentially characterize culture. The syndromes of collectivism and individualism were one of the first discovered (Triandis, 1995), but other syndromes (e.g. verticalism and horizontalism) were also identified (Triandis & Gelfand, 1998).

The syndromes of collectivism and individualism refer to how some cultures have a tendency to either seek the objectives of their cultural group (which could also include family members) or to have a more individual orientation in life aspirations and goals. In addition, some cultures might be horizontal or vertical, meaning that they might perceive hierarchy or inequality as acceptable (vertical cultures) or that they might strive for equality and parallel relationships among people (horizontal cultures). Another syndrome refers to how passive or active cultures might be. For instance, people from an active culture might strive to change an environment to fit them, whereas those in a passive culture will tend to adapt to the environment (Triandis, 1995; Triandis & Gelfand, 1998; Triandis, 2002).

Several other syndromes were described by Triandis (2002). For instance, some cultures might be more prone to describe people by their natural qualities (e.g. gender, race, family background) while others give more value to the achievements of others instead of personal and unchangeable qualities (ascription-achievement syndrome). Some cultures might give



importance to the task at hand, while others might focus on relationships or other emotional matters (instrumental-expressive syndrome). In addition, people might express their emotions without much reservation or attempt to hide them (emotional expression-suppression syndrome).

In fact, there are other syndromes besides the ones just described, and Triandis and Gelfand (1998) admitted that it can be a challenge to classify and identify all the syndromes that exist. There is evidence that some syndromes, such as collectivism and horizontalism, exist and can be measured in an educational context (Choi, 2013; Fang et al., 2016). However, it is still hard to specify all existing cultural syndromes and measure them in a simple fashion. The theory developed by Hofstede (1984) takes this issue into account, as it provides a framework for a limited number of cultural values.

The work of Hofstede (2011) provides explanations about cultural differences through dimensions that are more specific than the cultural syndromes developed by Triandis (1995, 1998, 2002). Those dimensions are: individualism versus collectivism, masculinity versus femininity, uncertainty avoidance, power distance, and long-term versus short-term orientation. Hofstede recognized these dimensions when he obtained access to over 100,000 questionnaires from IBM workers from different countries. While working with these questionnaires and conducting cluster analyses, he realized that certain questions correlated with each other only at the country level of analysis, and did not correlate when individuals were compared with each other at the individual level. This made him realize that these clusters were probably cultural values (Hofstede, 1980). Later on, he conducted his own survey with 400 workers unrelated to IBM, and his findings matched those of the IBM findings (Hofstede, 2011).

These clusters were later called cultural dimensions, and contrary to the cultural syndromes described by Triandis (2001), there are only a few of them. The dimension of *individualism versus collectivism* refers to how societies tend to give importance to family

traditions, individual sacrifice, and group goals (collectivism) or how they tend to give importance to individual concerns (individualism). In the world, western and developed nations tend to be more individualistic, and collectivism tends to be common in eastern societies. In the *masculinity versus femininity* cultural dimension, masculine societies value personal ambitions and assertiveness, whereas feminine societies are more prone to have sympathy for the weak and balance between family and work. In masculine societies, the division of masculine and feminine roles is also more evident than in feminine nations. *uncertainty avoidance* relates to the extent that a given culture tolerates difference of opinions and lack of certainty about the future. Cultures with a high score in uncertainty avoidance are prone to perceive a predictable environment and a sense of security through traditions. In addition, cultures that are high in uncertainty avoidance tend to present lower levels of subjective well-being and higher levels of neuroticism when compared to those with lower levels. *Power distance* refers to how societies understand authority. Societies with high power distance accept the differences between those who are powerful and those with less privileges, and usually have high rates of corruption. On the other hand, low power distance scores indicate that the population fights against inequality and seeks a horizontal relationship with authority figures. Societies with a *long-term orientation* focus on projects that will take a good amount of time to be accomplished. On the other hand, the members of a short-term orientation society tend to think in terms of the “here and now.” Another important dimension refers to *indulgence versus restraint*. In this sense, indulgent societies tend to place more value on pleasure seeking and instant gratification, whereas restrained societies tend to be rigid (Hofstede, 2011).

#### Levels of Measurement in Culture

One important consideration in the study of culture is the level of measurement that was used. For instance, one might be interested in how countries differ or are similar in a certain

aspect (e.g. scores on a math test or measures of personality). This would be a cultural analysis at the country level, which comprised some of the cultural research in the context of career decision-making (Dingyuan & Santos, 2007; Guan et al., 2015). Other studies investigated how culture might play an important role in career decision-making within a country (Mau, 2004; Gushue, 2006; Bullock-Yowell et al., 2011). Such studies focused mostly on comparisons between minorities living in a single country. In this case, the cultural units to be compared were race or ethnicity, not nationality.

Hofstede himself believes that meaningful comparisons in terms of culture should happen at the country level of analysis (Hofstede, 2011). His argument was based on the fact that the items in a survey comparing different countries correlate differently if they are used at the individual level or at the country level. He found evidence for his opinion for the first time when he analyzed a database of survey answers from International Business Machines (IBM) employees. The database included thousands of answers from different countries. After cluster analyses, Hofstede realized that different cultural dimensions existed, but correlations were not meaningful if observed at the individual level, that is, the cultural values (e.g. power distance, collectivism) could not be observed within countries as individual differences. In some cases, correlations between items that were positive at the country level were negative at the individual level, which led Hofstede to believe that these correlations did not represent culture if individuals, but not countries, were compared (Hofstede, 1980). When a researcher is looking for comparisons between individuals within a country, Hofstede recommended the use of personality measures instead of cultural ones, which would be more appropriate for individual comparisons (Hofstede & McCrae, 2004).

Hofstede also presented some plausible exceptions for his argument: countries in which regions varied considerably in terms of culture. For example, Hofstede et al. (2010) investigated

the cultural differences between regions of Brazil and found that the North and Northeastern regions were considerably different from the rest of the country. Such differences were probably due to the Indigenous and African heritages of the people living in these two regions. In this case, it would be relevant to make regional comparisons within a country, or study a specific population. However, the instrument that was created by Hofstede to measure cultures would not be appropriate, because the cultural dimensions expressed in the survey items could not always be found at the regional or individual level.

Research on cultural factors within a country has expanded in recent years. For instance, a study of cultural values within and between countries in Europe has yielded mixed results (Kaasa et al., 2014), with some countries showing little variability within its regions (e.g. Sweden and Norway) and other countries showing great variability (e.g. Spain, France, and Portugal). In some cases (e.g. countries in Southern Europe) there was more variability within countries than between countries. This argument certainly goes against the notion that the best practice in cultural research is to only make comparisons between countries. In some cases, the best practice would be to compare regions within a country that are vastly different.

In many cases, cultural research falls within a grey area. For instance, there might be situations in which a highly diverse population lives within a single geographical region. In this case, a local analysis would be necessary, and comparisons would inevitably happen at the individual level. Such is the case of college students from Qatar, who come from rural and urban areas that are vastly different from each other (Faquih & Jadarat, 2015). Another situation would be the behavior of tourists in a single location. The behavior of these tourists could only be studied at the individual level of analysis (Rinuastuti et al., 2014). Furthermore, some variables related to culture can be studied at the individual level and at the country level. However, the country level of analysis might be more appropriate in some situations, while the individual level

of analysis might be appropriate in other contexts. Hofstede (2011) would argue that analyses at the country level are always preferable, but not all researchers agree. For instance, Halston et al. (2014) collected data from 48 countries and found that the dimension of individualism *versus* collectivism is a better predictor of ethical behavior in organizations if measured at the individual level instead of country level.

The question arises, how is it possible to accurately measure Hofstede's dimensions at an individual level if they can only be reproduced at the country level? In order to answer this question, Yoo et al. (2012) created and validated a questionnaire called *Cultural Values Scale*, or CVSCALE (p.197). As a result, they found that the dimensions could be reproduced at both the individual and country levels. The correlations among variables did not change at different levels. In this case, the individual level of analysis was never inadequate. The instruments based on Hofstede's theory prior to this questionnaire were not suitable for individual comparisons.

During the validation process of the questionnaire, Yoo et al. (2012) studied how consumer ethnocentrism and attitudes towards marketing norms played out at the individual level. In order to study consumer ethnocentrism, the researchers surveyed 213 American adults. They made a series of predictions about the relationships between each cultural value and consumer ethnocentrism. As a result, they found significant and moderate relationships (both positive and negative) between each of the cultural values and consumer ethnocentrism. They found similar results while studying attitudes towards marketing in a sample of American college students. Such findings confirm that the cultural values are not only meaningful at the individual level, but also useful when studied in very homogeneous samples within a single country. Since then, other studies have been conducted at the individual level of analysis, within a single culture. One example was the study conducted by Kim and Coleman (2015) that linked levels of collectivism and individualism to conflict styles and satisfaction in a sample of American college

students. Another example was a study conducted by Prasertchuwong (2018) that linked preference for different sales tactics and cultural values in a sample of Thai participants with similar demographic characteristics.

Although Hofstede's theory has mostly been used in the context of marketing and business, it has also occasionally been studied in the context of education. One example of how the cultural values might play out in an educational setting was brought out by Murzi et al. (2014) who found that students in different engineering majors presented very different cultural values. Students from different engineering specialties were not only very different from each other from the beginning; they also tended to differ more over time as measured by each dimension. Such findings not only had implications for the education of engineering majors, but they also presented further evidence that the Hofstede model can be found in specific situations within a single culture.

Other studies have also explored how Hofstede's dimensions play out in the context of education. After surveying Lebanese college students, Tarhini et al. (2017) found that each of the cultural values moderated the relationship between students' opinions on technology and their actual use of technology. In another study, Fang et al. (2016) found that long-term orientation was one of the best predictors of student achievement in several different countries. In this case, researchers did not find other cultural values that influenced achievement. One important characteristic of this last study is the fact that it utilized the country level of analysis, that is, researchers used pre-existing cultural scores for each dimension, they did not gather data at the individual level. These researchers also gathered archival data from several countries. This approach is in line of what Hofstede (2011) believes to be the best use of his theory. That is, it should be used in cross-cultural comparisons, not for comparisons within a single culture. Nevertheless, this does not mean that the cultural values should never be studied at the individual

level. As previously mentioned, important insights can be made when the cultural values of one single culture is studied.

### Culture and Decision-Making

Decision-making processes of people from different backgrounds has been extensively studied in terms of collectivism and individualism, which means that decision-making research has focused on how people rely on themselves or on group opinions and contextual cues when making decisions in general (Lee et al., 1995; Li & Zhang., 2004; Li et al., 2009, Li et al., 2014; Maisel et al., 2016). An interesting finding is that members of most collectivistic societies put more cognitive effort into making decisions, which leads to a longer time for a decision to be made (Lee et al., 1995). In this aspect, collectivism can be linked to higher indecisiveness in some situations (Yates & Oliveira, 2016). However, such an effect might depend on context, and the cultural effect is not apparent in more complex decisions, such as in choosing a partner or a profession (Li et al., 2014). This probably happens because complex decisions require high cognitive effort regardless of context.

Another relevant point regarding culture and decision-making relates to a person's confidence regarding a decision. Interestingly, members of collectivist cultures tend to be far more confident about their decisions than people from individualistic cultures (Bi & Zhang, 2009; Li & Fang, 2004; Meisel et al, 2016). This probably happens because of differences in the educational systems of individualistic versus collectivistic countries. According to Lee et al. (1995), people in collectivistic countries usually receive a top-down form of education, but most individualistic countries adopt educational strategies that stimulate students to investigate both sides of an issue. Given such situations, students from individualistic cultures might tend to see several points of view when considering a single concept, which might result in less confidence about a decision.

### **Career decision-making**

So far, the Hofstede dimensions have not been directly observed in the context of career decision-making. Nevertheless, the theory developed by Triandis (2001), the precursor of Hofstede, has been utilized in this context. Choi (2013) investigated how Horizontalism and Verticalism played a role in students' career decision self-efficacy, academic achievement, and learning motivation, but the way in which such constructs were studied differed from the way Hofstede's theory treats each dimension. The concept of vertical and horizontal cultures is similar to what Hofstede (2011) would call power distance, which means that a vertical society values hierarchy and authority more than a horizontal society. The difference is that Triandis (2001) observed vertical and horizontal orientations as part of the collectivism-individualism spectrum, not as an independent dimension. In this sense, Triandis thought that societies could be either collectivistic-horizontal (or vertical), or individualistic-horizontal (or vertical).

After surveying students from the United States and South Korea, Choi (2013) found that students high in horizontal collectivism and horizontal individualism had a more intrinsic learning motivation (e.g. learning for the sake of learning), and that vertically oriented students had a more extrinsic motivation to learn. Such relationship was found in both countries. Furthermore, they found that there was a partial relationship between intrinsic motivation and academic achievement, with this relationship being more evident among Koreans than Americans. In addition, students from both countries who had high academic achievement were also more likely to be successful while preparing for their career. However, students from different countries had different strategies for preparing for a career. High achieving American students tended to pay more attention to oneself while preparing for a career (e.g. personal inclinations), while Koreans tended to consider contextual factors (e.g. job market).



Other studies have compared different cultures without measuring culture directly. One example was a study conducted by Guan et al. (2015) that revealed how Chinese students are more likely to consult with others and please others when trying to make career decisions (features of collectivism), whereas American students are more likely than Chinese students to consider internal locus of control and personal satisfaction (features of individualism) when choosing a career path. These findings contradict with a general idea that important decisions, such as career decision-making, do not differ between collectivistic and individualistic cultures (Li et al, 2014). However, another way of interpreting such findings is considering that what changes from one culture to another is the way in which a decision is made (e.g. focus on contextual or individual cues), but the quality of the decision remains the same. That is, members from collectivistic and individualistic cultures are equally competent in making a career decision, but the way they choose to decide differs.

In another study conducted by Dingyuan and Santos (2007) Chinese international students were compared to British university students. The results indicated that British students were more prepared than Chinese students to make professional decisions, but those differences were not related to acculturation. Researchers observed that differences were also visible between the genders, with men showing less difficulty in making professional decisions than women. Results of this research also indicated that more years of study in college (or additional years of graduate work) corresponded to more certainty about possible career paths.

Guan et al. (2015) and Dingyuan and Santos (2007) indicated that Chinese students presented different strategies for choosing a career and they were also less likely to be prepared to make career decisions when compared to their British counterparts. These findings are surprising, because according to Hofstede (2011) Chinese people tend to be more long-term oriented than people from the United States and United Kingdom. However, this uncertainty

could be due to the fact that the Chinese students were the ones living abroad in this study (not the British or Americans), which could contribute to their unfamiliarity with the environment. In addition, Chinese people are less avoidant of uncertainty than British and Americans, which could indicate that Chinese students could be more open about expressing their uncertainty about career paths than American and British students.

### **A Model for Career Decision-Making**

In order to further examine how various cultures differ in terms of career decision-making, a solid theoretical background (e.g. a career model) is necessary. Different models and instruments for decision-making have been presented throughout the years (Krumboltz, 1994; Gati, Krauz, & Osipow, 1996; Melvin et al. 2012). Some of these models have better suitability than others in the context of cultural research (Melvin et al., 2012). A model created by Gati, Krauz, and Osipow (1996) has been applicable in several countries around the world (Melvin et al., 2012), which could indicate its suitability for research with a cultural focus. This model was based on the normative approach to thinking (Baron, 1994) as one of the theoretical frameworks in its construction. An explanation of normative thinking will be provided along with its relationship to the model proposed by Gati et al. (1996).

### **Normative Thinking in Decision Theory**

Baron (1994) proposed three different approaches to the study of thinking. These were: "descriptive models," "prescriptive models" and "normative models" (p.16). Descriptive approaches refer to the process of decision-making (e.g. how people solve problems or make decisions). The prescriptive models refer to how people ought to decide. For example: composition books give frameworks for people to write well, and teachers might use rules of thumb in order to guide students. The normative approaches are related to a person's goals. In this sense, a standard for achieving a specific goal is created, so that an ideal prescriptive model

can be identified and applied. Baron (1994) expanded on the normative approach, stating that the best decision to be made is not just the one that facilitates goals, but is also the most useful. This is called the "utility theory" (p. 312). According to this approach, one should think actively and be open-minded in order to maximize utility while making choices. In this sense, when a person neglects important aspects of decision-making, like missing possible consequences of a decision or is biased in weighting evidence, then a less useful option is chosen, as opposed to the best one for any given situation.

### **Career Decision Difficulties**

Although normative thinking is a useful framework in the study of career decision-making (Gati, Krauz & Osipow, 1996), there are some problems with this approach. For instance, the normative theory states that one should consider the most useful option when making decisions (Baron, 1994). However, people do not have the capacity to process all possible career decisions. Hence, Gati (1986) proposed an elimination approach to career decision-making in combination with the utility approach of the normative theory. The elimination approach would simplify the process by reducing the possible professions to be chosen to a few options. Later, Gati, Fassa, and Houmier (1994) applied the use of the elimination process to career counseling sessions. The elimination consisted of narrowing down career options during different phases of the counseling process. With the development of this new procedure, Gati et al. (1996) created a model of career decision-making that took into account the different phases of decision, the source of information obtained by the client, and the types of intervention that might be needed.

Gati (1986) proposed a set of suggestions for counselors to help people with career decision-making difficulties. These suggestions were based on two different theories: the theory of elimination developed by Tversky (1972) and the expected utility model (Pitz & Harren,

1980). The theory of elimination consists of selecting aspects that are important for a decision and eliminating career options that do not have these aspects, until the decision-maker reaches a few or a single option (Tversky, 1972). The expected utility model consists of considering general principles that are important for the decision-maker and considering two aspects of the possible options: the utility that they might have, and the probability that such a choice is likely to happen. For example, if one decides to choose leisure time and high pay as utilities to be considered in a job, then they should also consider the probability that a particular job will provide sufficient leisure time and high pay (Tversky, 1972).

Gati (1986) stated that the use of these two approaches might depend on the needs of the counselor and counselee, as well as the level of expertise of the counselor. For instance, the elimination approach appears to be easier to apply and conceptualize, so it would be recommended for more inexperienced counselors. In addition, the elimination approach might be more appealing for those who seek the most satisfying choice, whereas the utility model can be useful for those who are seeking the optimal choice. Gati (1986) also emphasized that the elimination approach might be more useful in the beginning of the career decision-making process, whereas the utility model can be more useful at the end, when a few options are left. Gati (1986) gave a few suggestions for counselors wishing to use the elimination approach, and these recommendations were sequential in nature. The first recommendation regards recognizing the problem of the counselee. In respect to this suggestion, the following aspects were considered:

The problem might be a lack of information (regarding the career decision maker him- or herself or the educational or occupational alternatives, or both), the absence of a framework for combining the information, an inability to accept and deal with the

uncertainty involved, a general indecisiveness, a much more deep, personal problem, or some combination of these. (Gati, 1986, p. 414)

In order to identify the difficulties that a client might have, Gati, Krauz, and Osipow (1996) developed a career model. This model refers specifically to career decision-making, and was based on the difficulties that people face when making professional decisions. This model was based on a normative approach to career-decision-making, so a standard for career decision-making was created. In this sense, Gati, Kraus and Osipow (1996) proposed the 'ideal career decision maker' as a standard. The ideal career decision-maker is aware of the need to make a decision, is willing to make this decision, and is able to make the decision properly. In this sense, deviations from this ideal consist of career decision-making difficulties.

After interviewing 10 experts in career counseling and 200 counselees, Gati, Kraus and Osipow (1996) identified ten difficulties that were hierarchical in nature. Three major categories relate to problems with decision-making, and they can be described as follows:

***Lack of readiness.*** This difficulty refers to how ready someone is for making a career decision. Four difficulties branch off this first item. They refer to lack of motivation for career decisions, general indecisiveness, difficulties with being realistic about choices, and lack of knowledge about the steps that have to be taken in career decision-making.

***Lack of information.*** The "lack of information" (p. 512) difficulty includes three other subcategories: "lack of information about self, lack of information about occupations, and lack of information about ways of obtaining additional information" (p. 512).

***Sources of Information.*** Another major category refers to the sources of information that a person receives. In this difficulty, the subcategories are; "unreliable information," which includes difficulties related to unreliable or fuzzy information, "internal conflicts," which include conflicts within the individual, and "external conflicts" (p.512).

Based on such difficulties, Gati, Krauz, and Osipow (1996) created the *Career Decision Difficulties Questionnaire* (CDDQ). Several studies both in and outside of the United States have included this instrument and have used the model of career difficulties to study career decision-making (Lehmann & Konstam, 2011; Liao & Gi, 2015; Shin & Kelly, 2015) indicating that the model developed by Gati et al. (1996) is suitable for research in different cultures.

Lehmann and Konstam (2011) utilized the model of career difficulties in order to study the decision-making process of young adults. In this study, participants were surveyed regarding their levels of perfectionism (adaptive or maladaptive), problematic Internet usage, and career indecision. As a result, young adults who showed high levels of problematic Internet use tended to have decision-making problems. In addition, maladaptive perfectionism was also linked to indecisiveness. Researchers indicated that more Internet use could be linked to fewer difficulties in the decision-making process, but results were contrary to this idea.

A study conducted by Shin and Kelly (2015) also utilized the model proposed by Gati, Kraus and Osipow (1996) in order to investigate how resilience and decision-making strategies might predict difficulties in career decision-making. In order to do so, 365 university students from the United States were surveyed with a questionnaire including career difficulty items as well as questions referring to levels of resilience and different decision-making strategies. As a result, resilience was negatively related to difficulties in career decision-making and certain decision strategies were also related to career difficulties. For instance, procrastination was closely related to increased difficulty in career decision making, whereas an internal locus of control was related to less difficulties. In addition, independence (e.g. not focusing on the opinion of others) appeared to facilitate the decision-making process. In this case, research in other cultures might be necessary because independence might not be equally important in collectivist versus individualist cultures.

Fan, Cheung, Leong, and Cheung (2014) took a different approach to analyzing career difficulties. In a set of two studies, they explored how family intrusiveness related to career decision-making in samples of students from Hong Kong and the United States. Two important factors emerged as predictors of career decision-making difficulties: the extent to which students perceived their families to be intrusive in their decisions, and how participants were dealing with relationships with family members (e.g. how responsible they felt for their relatives). As a result, the way that participants were dealing with relationships was a mediator between perceived family intrusiveness and difficulties with career decision-making. In this case, students were more likely to be undecided when they perceived their family to be more intrusive in decision-making. Interestingly, this effect was only found in the sample of students from Hong Kong, but not in the United States. Overall, students from Hong Kong were less ready to make independent career decisions, which could be tied to their perception of intrusiveness.

The influence of family on career decision-making was also evident in a sample of Taiwanese college students (Liao & Ji, 2015). The findings of Liao and Ji (2015) are supported by Fan et al. (2014) in the sense that a greater perceived family involvement (e.g. the notion that one should pursue a career because of family pressure) might result in lack of readiness for career-related decisions. Unlike Fan et al. (2014), Liao and Ji (2015) focused on a single sample of Taiwanese students without cross-cultural comparisons. In addition, Liao and Ji (2015) explored the tendency of students to commit to a particular major and the factors that might influence this choice. Once again, when majors were a personal matter instead of a family decision, students were more likely to commit to a major and take their education seriously. It was concluded that Taiwanese counselors should focus on the personal efforts of students and educate families about the importance of personal preferences in career decision-making.

Although Asian students appeared to consider family matters and the opinion of others important factors in career decision-making (Guan et al. 2015), this does not mean that students exhibit high levels of career indecision in Asia. In fact, they appear to show relatively adequate (average) levels of career-decision readiness and self-efficacy in making professional and educational choices (Liao & Gi, 2015). This aptitude is contrary to the notion that perceived family intrusiveness and the externalization of decisions (e.g. following family norms instead of focusing on personal aptitudes) are negative influences in the decision-making process (Fan et al., 2014). However, research focusing on Asian students living abroad showed that they appeared to be less prepared to make professional choices than the students from the home country, England (Dingyuan & Santos, 2007). Such mixed results might indicate that those who live abroad might be facing different challenges in their career decisions when compared to students who stay in their home countries. In addition, the instruments used and the aspects of family involved might differ from one study to another, which might result in mixed findings.

Overall, the focus of research using the model of career difficulties appears to differ between studies conducted in cross-cultural contexts and in the United States only. For instance, when surveying a sample of Americans, Shin et al. (2015) focused almost exclusively on personal factors, such as decision-making strategies and resilience. In the studies conducted by Fan et al. (2014), participants from Hong Kong and the United States were compared with a focus on familial relationships. In this context, this difference in approach might as well reflect career counseling and research strategies both in the US and abroad. Fan et al. (2014) pointed out that career counseling in the US might be emphasizing more personal attributes and strategies as opposed to focusing on context (e.g. family). This difference in approach might have implications for counseling centers as well as to how research is conducted internationally.



So far, it is inconclusive how cultural values might relate to difficulties in making career decisions. For instance, some studies point out that career decision-making occurs similarly in collectivistic and individualistic countries (Guan et al., 2015; Liao & Gi, 2015), while others indicate that collectivism might increase indecision (Fan et al., 2014; Diguán & Santos, 2007). Still, the literature on this theme is broad, and the studies that focused on culture included mostly university students. Although the present study has a cultural focus, the participants surveyed will be enrolled in high school. In this case, it is important to emphasize how the model of career difficulties described by Gati et al. (1996) can be applicable to the reality of high school students.

### **The Career Difficulties of Adolescents**

Gati and Saka (2001) were one of the first to attempt to reproduce the career difficulties model in a population of adolescents. In their research, they surveyed Israeli students from ninth through eleventh grade in an attempt to reproduce the model of career decision-making difficulties. As a result, they discovered that all ten difficulties described by Gati et al. (1996) were found in a sample of teenagers. However, they had to omit a few questions from the original questionnaire developed by Gati et al. (1996) in order to fit the model. Interestingly, Gati and Saka (2001) found a gender difference, in which boys reported higher difficulties in two subcategories of the taxonomy: external conflicts and dysfunctional beliefs. This means that, according to the model of career difficulties, boys presented more distorted perceptions of the career decision-making process and they also perceived a bigger gap between their professional preferences and the preferences voiced by others. Although such results have implications for career counseling, this gender difference could have been specific to the Israeli population.

Bacanli (2016) also found a gender difference when studying Turkish adolescents. However, this study yielded slightly different results because adolescent girls were the ones showing more career decision-making difficulties. More specifically, they had much higher

scores in the Dysfunctional Beliefs subscale. However, Turkish boys had higher levels than girls in the Lack of Motivation scale. In addition, Bacanli (2016) found a developmental trend, in which students from the ninth grade had the highest career difficulties compared to subsequent grades.

Although the results obtained by Bacanli (2016) were valid, the career difficulties model was not replicated exactly how Gati et al. (1996) intended. For instance, after surveying Turkish students, Bacanli (2016) found that the lack of readiness subscale presented low reliability ( $\alpha=.45$ ). In addition, the external conflicts subscale was found to be in a different broad scale than what was originally described by Gati et al (1996). Gati et al. (1996) explained that the external conflicts scale should be included in the inconsistent information category, but Bacanli (2016) placed it under the lack of readiness category after conducting a cluster analysis. In fact, the study conducted by Bacanli (2016) was not the only one indicating low reliability of the Lack of Readiness scale. While validating the career difficulties model in Brazil, Cava (2012) found low levels of reliability of this same subscale. Therefore, although the instrument tended to be valid in its totality, findings related to the Lack of Readiness subscale should be interpreted with caution.

Although Cava (2012) found low reliability for one of the categories in the model, other studies in Portuguese-speaking countries utilized the full model described by Gati et al (1996). One example was a study conducted by Königstedt and Taveira (2010) that consisted of an intervention with Portuguese students from the 9th grade. This intervention was carried out by a school psychologist and a teacher in the course of ten sessions. In these sessions, students were encouraged to reflect on their preferences for extracurricular activities, school performance, and the roles of different professions. In addition, the psychologist met with the parents of students in order to understand family contexts and how they were affecting the adolescents. At the end of

the intervention, it was concluded that students had fewer overall career difficulties, especially when the difficulties were related to lack of information. Although such results were promising, they could have been the result of students' natural maturation throughout the school year, and not a result of the intervention. In this case, it is impossible to know how confounding variables affected such results because there was no control group.

In another Portuguese study, Mota, Taveira, and Araujo (2012) administered different questionnaires to high school students. One of them corresponded to the model developed by Gati et al. (1996) and two other models were used for additional support in understanding the profile of these students. After a cluster analysis, researchers found that students fell into one of four different decision-making profiles. Students that fell in the first category tended to be well-informed and decisive about their career choices. Those who fell in the second category tended to be self-exploratory but lacked contextual information, so they felt undecided. The third group of students tended to be well-informed and self-exploratory, but they felt that they were receiving conflicting information about professions, so they were informed, yet undecided. The last group included students who were ill informed and also undecided. Based on such results, the authors argued that the identification of students in one of these profiles should aid in the career counseling process.

### **Career Decision-Making in Brazil**

In Brazil, a few studies that utilized the model developed by Gati et al. (1996) included high school students (Primi et al., 2000; Campos & Noronha, 2016). However, the only case in which the original questionnaire created by Gati and Saka (2001) was utilized was for its validation with Brazilian college students (Cava, 2012). Thus, there is some information available regarding the decision-making profile of Brazilian adolescents according to the career decision difficulties model, but studies have been conducted more often in specific areas of

Brazil, such as the South and the South East (Primi et al., 2000; Campos & Noronha, 2016). Some of the findings of these studies are further discussed.

In Brazil, Primi et al. (2000) created an inventory to assess the career difficulties of high school students. They based their inventory on the taxonomy of difficulties described by Gati et al (1996). They created 155 items based on difficulties that students might have before and while choosing a career. Later analyses led to 83 items that constituted the final version of the IDDP, which stood for “Inventário de Levantamento das Dificuldades da Decisão Profissional” (Primi et al. 2000, p. 455). Unlike Gati et al. (1996), who found 10 sub-difficulties that branched off 3 broader difficulties, Primi et al. (2000) found 17 sub-difficulties that branched off 4 broader categories. The broader difficulties of Lack of Readiness and Lack of Information were also found in the Brazilian inventory, but only one sub-difficulty of the Inconsistent Information category described by Gati et al. (1996) was found in the Brazilian sample: the difficulty of external conflicts. The additional broader category described by the Brazilian authors related to economic factors and social prestige, a factor that was not originally described by Gati et al. (1996). Social inequality in Brazil might be one of the realities influencing the emergence of this additional factor. So far, it is not known whether or not this one factor is exclusively found in Brazil, or if it is generalizable to other cultures.

In order to further investigate how social inequality interfered with career decision-making difficulties, Cattani, Texeira, and Ourique (2016) conducted a study with teenagers from the city of Porto Alegre, Brazil. In order to do so, they surveyed students from private and public high schools regarding their career maturity, family income, and level of education of family members. Although it was hypothesized that there would be a relationship between sociodemographic factors and career decision difficulties as previously pointed out by Primi et al. (2000), no difference was found. The researchers concluded that other variables should be

studied, such as the quality of family relationships, which might be a better indicator than sociodemographic status. They also emphasized that such results could be due to the limited number of students. Furthermore, this result could be specific to the city of Porto Alegre and not generalizable to other parts of Brazil.

In an attempt to understand career decision beyond social inequality, Bardagi and Albanaes (2015) studied the relationship between adaptability to a chosen career and personality traits. In order to do so, they surveyed freshmen college students and found that, as expected, students with high scores on Neuroticism were likely to have a harder time adapting to their chosen career. A surprising result of this survey was the fact that extroverted students tended to be more concerned about their decision than their introverted counterparts.

Other Brazilian studies have taken into account personal attributes as they relate to career decision. In order to study how working during adolescence and optimism interfered with difficulties in career decision-making, Campos and Noronha (2016) administered questionnaires to two groups of Brazilian high school students: one group of students from a school with career orientation programs (group 1) and another group from an institution in which students enrolled in an after school work program (group 2). Results indicated that optimism was inversely related to indecisiveness for both groups and that students from group 2 were more undecided than those from group 1. A gender difference was found in group 1 only, with boys reporting more indecisiveness than girls. Such results indicated that orientation programs might be effective in guiding students for choosing a profession. However, this approach might be more effective for girls than for boys.

One important aspect of career decision-making refers to how the university system works in Brazil and how it affects high school students. Brazilian students choose their major area of study prior to entering university, which does not grant much flexibility once the student

is enrolled. This means that Brazilian students do not have the option to be ‘undecided’ about their major, and liberal education credits are taken in the chosen department, which promotes even less interaction with students and professors from other areas. Another aspect of the Brazilian high school education is the fact that it is mostly focused on test-taking, with little room for more practical activities that would aid in the process of career decision-making. Therefore, the decision-making process of Brazilian students is probably quite different from Americans, for example. Thus, the decision-making process of Brazilian students would probably occur earlier than in some other countries, and it could be that students are not prepared to take on such a decision when it is time to do so.

### **Purpose of the Study**

Some considerations should be taken into account when analyzing studies that used the model of career difficulties. For instance, although several studies conducted in Brazil with high school students used the model proposed by Gati et al. (1996), none of them used the original questionnaire developed by Gati and Saka (2001). In this sense, Brazilian research using the career difficulties model differs from other countries in North America, Europe and Asia (Mota et al., 2012; Liao & Ji, 2015; Bacanli, 2016). Furthermore, most of these studies have been conducted in the South or Southeast of Brazil, which are somewhat culturally different from the Northeast of the country (Hofstede, 2010). As a result, there is little information as to how high school students from other parts of the country deal with career decision difficulties. Therefore, it would be valuable to study how the difficulties presented by Gati et al. (1996) play out in a sample of high school students from the Northeast of the country, for example.

One would imagine that, because of regional and social differences, students from poorer areas of Brazil, or from schools in more disadvantaged neighborhoods of a metropolitan area, would prioritize monetary compensation above all else in their career decision-making. In fact,

there is evidence that this was the case a few years ago (Primi et al., 2001), but recent evidence suggests that the career decision-making process of teenagers from different socioeconomic backgrounds has become more similar throughout the years (Cattani, Texeira, & Ourique, 2016). Nevertheless, there is one commonality among all Brazilian students: they have to choose their area of study prior to entering university, and the application process relies solely on test scores. In this context, the high school years are more focused on test-taking skills than on knowing oneself and the current market place. In this sense, it could be that Northeastern Brazilian students, as well as students from other parts of Brazil, are not quite ready to make a career decision at the end of high-school. Therefore, it could be hypothesized that students would have high scores in the Lack of Readiness scale of the Gati (1996) model, if compared to the other difficulties.

Another important point regarding the model developed by Gati et al. (1996) is that the taxonomy of difficulties did not replicate equally in different countries. Although the model was validated successfully in different countries, the reliability was not acceptable for all scales. More specifically, the Lack of Readiness subscale was found to be unreliable in more than one study (Cava, 2012, Bacanli, 2016). This subscale only reached an acceptable level of reliability when some items were excluded (Cava, 2012). Thus, it is important to interpret results regarding the Lack of Readiness subscale only after a careful analysis of the subscales within it.

Several studies have attested that culture is an important factor in career decision-making (Fan et al., 2014; Liao & Ji, 2015; Bacanli, 2016). However, most studies with a few exceptions (e.g. Choi, 2013) did not measure cultural values directly. Instead, most of them focused on how family relations took place, as well as other relational factors (Fan et al., 2014; Liao & Ji, 2015). One exception was the study conducted by Choi (2013), in which students completed a questionnaire based on the Triandis (2001) model. Nevertheless, the questionnaire focused only

on aspects of collectivism, which is certainly an important aspect of culture (Hofstede, 2011). Still, there could be other cultural aspects that influence career decision-making. Other cultural values (e.g. long-term orientation, uncertainty avoidance) appear to not be studied as often as collectivism in the context of career decision-making. Thus, this study will include collectivism, as well as other cultural values based on the work of Hofstede (2011).

Some hypotheses could be formulated when considering career decision-making and culture, and in order to do so, different cultural values should be considered. In this aspect, collectivism can be linked to indecisiveness in some situations (Yates & Oliveira, 2016). That is, the more collectivistic the culture, the more undecided people tend to be. However, this is more likely to happen when simple decisions are being made (e.g. which piece of clothing to buy) and less likely to happen when decisions are complex (Li et al., 2014). Because the present study will focus on career decision-making, which is a complex decision, it is not expected that collectivism will be an important factor in career decision-making difficulties. Nevertheless, collectivism appears to be an important factor when it comes to confidence. Indeed, people from collectivist nations tend to be more confident about a decision than people from more individualistic backgrounds (Bi & Zhang, 2009; Li & Fang, 2004; Meisel et al, 2016). In this sense, it could be expected that the relationship between confidence in choosing a career and collectivism will be found in a population of Brazilian students, even though a relationship between collectivism and career difficulties is not expected to be found.

Other cultural values could also be related to career decision-making. For instance, long-term orientation, which is the tendency to focus on long-term plans and aspirations, has been linked to higher academic achievement in several countries (Fang et al., 2016). In addition, high-achievers are more likely than low-achievers to be more decisive during the career decision-making process (Choi, 2013). If these two findings are put together, it could be hypothesized that



high levels of long-term-orientation are probably related to low levels of career decision-making difficulties.

Power distance could also be related to career decision-making difficulties. In this context, Choi (2013) found that students who had a more horizontal cultural orientation also had more intrinsic motivation, and intrinsic motivation was related to higher academic achievement, which in turn resulted in less difficulty during the career decision-making process. The concepts of horizontalism and verticalism are similar to what Hofstede (2011) called power distance, or the cultural tendency to value strong power hierarchies (high power distance) or a preference for equality (low power distance). Based on such findings, it could be hypothesized that the link between low power distance and less difficulty during the career decision-making process will also be found in a sample of Brazilian students.

The next cultural value that could be measured in the context of career decision-making is the dimension of masculinity versus femininity. Hofstede (2011) defined masculinity as the extent to which people are culturally inclined to accept gender roles as the norm, and are inclined to prioritize money, wealth and conflict-solving through force, and femininity as an inclination to prioritize relationships, flexible work structure and gender equality. It is widely known that women are more likely than men to report barriers in career growth and professional decisions (Huang, 2015; Wattz et al., 2015), and a cultural tendency towards femininity or masculinity could be influencing the career decision-making process of women. In this case, it can be hypothesized that high levels of femininity in a culture are linked to less career decision-making difficulties for young women.

The next aspect that could be measured is the fact that Brazilian students make career decisions very early in life because they have to focus mostly on test scores during the high school years, overlooking more practical activities that could aid in their development as

decision-makers. This could be resulting in lack of readiness for making a decision. In addition, participants from the institution studied had access to career exploration activities in which different professions were exposed, so lack of information and inconsistent information are probably not such a problem in this sample. Finally, there is plenty of evidence that having dysfunctional beliefs about making a decision is a pervasive problem among students (Gati, Ryzhik & Vertsberger, 2013; Gati et al., 1996; Mau, 2001), and dysfunctional beliefs is one of the components of career readiness in the taxonomy developed by Gati et al (1996). When the literature on this difficulty is combined with the context of Brazilian students, one can hypothesize that career readiness would probably be the most prominent difficulty in this sample.

In sum, it was expected that certain career difficulties would be more prominent than others in a sample of Brazilian students, and different cultural values were also expected to influence levels of career decision-making difficulty. The most prominent difficulty among Brazilian students was hypothesized to be lack of readiness for making a career decision, because students from Brazil are in an environment that emphasizes test-taking and an early decision for a major area of study. Cultural values were also expected to be related to career decision-making difficulties. For instance, collectivism is expected to influence how confident students are when it comes to making a career decision, but it is not expected to relate to career difficulties in general. Other cultural values are expected to be linked to levels of career decision-making difficulties. The following hypotheses can be made regarding cultural values and career decision-making difficulties in a sample of Brazilian students:

H1- Students will have higher levels of lack of readiness for making a career decision when compared to other career difficulties.

H2- There will be a positive relationship between confidence about making a career decision and collectivism.

H3- There will be a negative relationship between long-term orientation and career decision-making difficulties.

H4- There will be a positive relationship between power distance and career decision-making difficulties.

H5- For young women, high levels of masculinity will be related to high levels of career decision-making difficulties.

## CHAPTER 3 METHODOLOGY

### **Participants**

The data utilized in this study were collected during a career exploration activity conducted in a private school in the city of Recife, Brazil. During the activity, 80 students responded voluntarily to questions sent to them online about career decision-making and cultural values. Five students had incomplete responses, so the final sample consisted of 75 participants. Approximately 53% of the participants were girls and 47% of them were boys. Their age group ranged from 15 to 18 years ( $M = 16.07$ ,  $SD = .93$ ). Among participants, 31 of them were in the first year of high school, 29 were in the second year, and 15 were in the third year.

### **Materials**

The first page of the link sent to students contained an assent form with information on the questions that were about to be asked, and the students had the option to stop there or continue to the questions (See Appendix C for English and Appendix E for Portuguese). Following the first page, two instruments were included, the *Individual Cultural Values Scale* (CVSCALE) and the *Career Decision Difficulties Questionnaire* (CDDQ). At the end of the questionnaire, there were demographic questions. Although the survey link with these instruments and the assent form was created and presented to the school with psychological research in mind, the school utilized the link as a classroom career exploration activity in which the data collected were not identifiable. In this context, this was considered to be a normal classroom activity and the data collected were anonymous. Because this research was conducted with the use of non-identifiable existing data from a normal educational activity, there was no need for a parental consent form. The initial submission to the Institutional Review Board (IRB) included a parental consent form, as this was initially considered a requirement. However, an

amendment explaining that a parental consent form would no longer be used was eventually approved by the IRB (See Appendix A).

***Individual Cultural Values Scale (CVSCALE)*** The *Individual Cultural Values Scale* (CVSCALE) developed by Yoo et al. (2011) identified the cultural values of students. These cultural values were proposed by Hofstede (1980) and they refer to five different dimensions: power distance, uncertainty avoidance, masculinity, collectivism, and long-term orientation. Although Hofstede (2011) considered cultural dimensions to be measurable at the country level only, Yoo et al. (2011) were able to develop a scale that measured individual inclinations with respect to culture. In order to do so, they slightly modified items created by Hofstede (1980, 1994, 2001) that were only measurable at the group level in business settings and added items that they considered relevant. With a pool of 230 items to measure culture, the authors consulted other scholars who were familiar with the model. After a revision, 125 items were left to measure culture. With these items, the first version of the questionnaire was created and tested with a sample of American students in order to check for wording. The researchers replicated the data collection with other students and considered their input in order to increase face validity. At the end of this process, researchers retained 39 items with reliabilities ranging from .74 to .91 for the cultural dimensions. The process of validation continued when the authors compared answers from Koreans and North Americans, and then replicated the study in several other countries, including Brazil and Poland. During the initial cross-cultural comparison between Koreans and Americans, the author conducted a factor analysis using orthogonal rotation. During this process, five factors emerged. After careful analysis and exclusion of cross-loaded and weak items, the CVSCALE emerged with 26 items. This scale explained 44.5% of variance in answers from the overall sample, 49% for the American sample, and 40.7% of the Korean sample. In addition to the exploratory factor analysis, the authors also conducted a confirmatory factor analysis. As a

result, the items loaded correctly in each factor. The scale was also validated in Brazil and Poland. As in previous studies with this scale, the original version was translated to Brazilian Portuguese and Polish, and then back translated to its original English version. The confirmatory factor analysis produced the pattern of five cultural dimensions in both countries. The reliability alpha for Brazilians and Poles were .84 and .79 respectively for power-distance, .76 and .70 for uncertainty avoidance, .85 and .76 for collectivism, .78 and .72 for long-term orientation, and .71 and .71 for masculinity.

The Cronbach alphas in the present study were .56 for power distance, .78 for uncertainty avoidance, .74 for collectivism, .72 for long-term orientation, and .78 for masculinity. Removing items from the power distance subscale would not result in better reliability.

This instrument uses a 5-point Likert scale that has intervals ranging from 1 (*strongly agree*) to 5 (*strongly disagree*). The 26-item scale has four subscales that measure the dimensions of Power Distance, Uncertainty Avoidance, Long Term Orientation, and Masculinity. Power Distance and Uncertainty Avoidance include five items each (items 5 to 25), the Collectivism and Long term Orientation include six items (items 6 to 30), and the Masculinity dimension has four items (scores 4 to 20). The statements on the CVSCALE relate to each of the cultural dimensions. One example of an item included in the dimension of collectivism would be: “individuals should sacrifice self-interest for the group” (Yoo et al., 2011, p. 210).

***Career Decision Difficulties Questionnaire (CDDQ)***. In order to examine the career difficulties of students, a new version of the *Career Decision Difficulties Questionnaire (CDDQ)* developed by Gati, Krauz, and Osipow (1996) was utilized. Although the original version of the questionnaire included 44 items, a reduced version was created in which only 34 items were included. This version was created based on the exclusion of the least reliable items of the scale,

and a comparison between items administered as paper and pencil and online. The new version was called *Career Decision Difficulties Questionnaire- revised (CDDQ-R)* and was developed by Gati and Saka (2001). The items in the CDDQ-R are listed on a 9-point scale ranging from 1 (*does not describe me*) to 9 (*describes me very well*). The three broad categories of difficulties are; lack of readiness (items 1-11), lack of information (items 13-24), and inconsistent information (items 25-34). Ten subcategories branch out of those three areas. Under lack of readiness, the following subcategories are included: lack of motivation (items 1-3), general indecisiveness (items 4-6), and dysfunctional beliefs (items 8-11). Under lack of information, the following subitems are included: lack of information about the stages of career decision-making process (items 13-15), lack of information about self (items 16-19), lack of information about occupations (20-22), and difficulties with ways of obtaining additional information (23-24). Under inconsistent information, the subcategories are as follows: unreliable information (items 25-27), internal conflicts (28-32), and external conflicts (33-34). Items 7 and 12 are validity items. In addition, the instrument has three additional questions that are not included in the 34-item scale. One of them is in the beginning of the survey, and asks if the participant has already chosen a field of occupation. The following question is a 9-point Likert scale referring to how confident the participant is about the choice if the answer to the previous question was "yes". A third question is a 9-point item at the end of the instrument that asks about the participant's overall level of difficulty in making a career decision.

The original CDDQ questionnaire with 44 items was validated using a sample of American and Israeli students, but was later validated in other countries (Gati & Osipow, 1996). The new version of the instrument (CDDQ-r) had 10 items deleted and was validated in English and Hebrew. The reliability alpha for each scale was as follows: .91 for the total scale; .62 for the difficulties related to lack of readiness; .88 for lack of information, and .87 for inconsistent

information (Gati & Saka, 2001). Cava (2012) validated the instrument in Brazil with college students. The validation process in Brazil occurred in two steps, which included semantic validation and statistic validation. The semantic validation included a translation from English to Portuguese, a back-translation from Portuguese to English by a research assistant fluent in both languages, an analysis of items, and experimental testing. During the testing phase, 11 students responded to the questionnaire and gave their opinion on text comprehension. The students indicated that the questions were comprehensible, but one of the items (item 30) of the questionnaire was considered to be only appropriate for high school students, not for young adults in college.

The second phase of validation in Brazil included a factor analysis. It was observed that the items loaded correctly in each of the three broader difficulties. However, only 4 of the 10 items created by Gati and Saka (2001) loaded correctly in the lack of readiness difficulty. Thus, the Brazilian version of the instrument has only four items in the lack of readiness subscale. This version of the CDDQ had the following alpha values: .58 for the lack of readiness subscale, .92 for lack of Information, and .86 for inconsistent information. The overall Brazilian version of the scale had a .92 alpha value.

In the present study, the Cronbach's alpha values of the three main scales were .57 for lack of readiness, .90 for lack of information, and .83 for inconsistent information. For the subscales, the alpha values were .80 for lack of information about the stages of the career decision-making process, .86 for lack of information about self, .81 for lack of information about occupations, .58 for difficulties in ways of obtaining information, .52 for unreliable information, .72 for internal conflicts, and .82 for external conflicts. The overall scale had an alpha of .89. Although some items could be removed in order to increase reliability in scales with low



reliability, the scales would end up with not enough items, which would interfere with the meaning of such constructs.

Although six items of the scale were not validated in Brazil, Gati (see Appendix F) asked researchers who intend to use his instrument to include all items during research. For this reason, all of the items from the original instrument were included in the questionnaire. However, the items that were not validated in Portuguese were not included in analysis.

***Demographic Questions.*** At the end of the questionnaire, students were asked about their age, gender, and grade (see Appendix B for English and Appendix D for Portuguese).

### **Procedure**

Initially, this research was presented to a high school in Brazil as a psychological study, and indeed, the instruments were included with psychological research in mind. However, the school principal along with teachers decided that a more appropriate use of the questionnaire would be as part of a career exploration activity. The school that participated in this research often hosts informal career exploration events such as presentations by professionals in various fields, so completing a questionnaire on career decision-making and culture was considered a normal educational activity at this institution. During this specific activity, the school principal went in each classroom and, with the help of each teacher, invited students to answer some questions about career decision-making and culture. Students were informed that the questions would be sent as a Google Forms link through the Google Classroom application to their cellphones. After responding to the questions, students would have the opportunity to talk about their own career decision-making difficulties as it related to their cultural assumptions. Students were also informed that participation in this activity was voluntary and that their responses would be available to researchers, but they would not be individually identifiable. Students were also given the option to answer the questions at home if they did not wish to do so in class. The

anonymous data used in the present study was extracted from a Google Forms link that included all of the questions from the activity.

## CHAPTER 4 RESULTS

Prior to analyzing each hypothesis, the means and standard deviations of the CDDQ scales and CVSCALE were calculated (see Table 1). Additional analyses comparing boys and girls were conducted after testing for each hypothesis, so the means and standard deviations of CDDQ and cultural values were also calculated by gender.

Table 1

Means and standard deviations of scores from boys, girls, and the total sample						
Scales	Total (N = 75)		Boys (n = 35)		Girls (n = 40)	
	M	SD	M	SD	M	SD
<b>1. Readiness</b>	4.98	1.70	4.90	1.66	5.09	1.70
<b>2. Inconsistent Info (II)</b>	3.07	1.50	2.99	1.37	3.13	1.61
3. II - Unreliable Info	3.31	1.62	3.22	1.62	3.39	1.58
4. II – Internal Conflicts	3.39	1.69	3.44	1.61	3.40	1.80
5. II – External Conflicts	2.50	2.00	2.40	1.76	2.61	2.22
<b>6. Lack of Info (LOI)</b>	3.80	1.68	3.68	1.59	3.89	1.78
7. LOI- CDM Process	4.01	1.94	3.93	1.78	4.13	2.09
8. LOI - Self	3.53	2.07	3.30	1.66	3.79	2.37
9. LOI - Occupations	4.31	2.23	4.43	2.32	4.16	2.22
10. LOI – Ways	3.32	1.93	3.04	1.86	3.50	2.01
<b>11. CDDQ Total</b>	3.95	1.04	3.88	1.07	4.04	1.02
<b>12. Collectivism</b>	3.74	.59	3.72	.67	3.72	.59
<b>13. Masculinity</b>	2.27	.98	2.54	1.12	2.03	.83
<b>14. LTO</b>	4.48	.45	4.59	.35	4.42	.49
<b>15. UA</b>	4.03	.67	4.21	.61	3.95	.71
<b>16. Power - Distance</b>	1.80	.60	1.93	.64	1.65	.53

Note: The bold scales represent the main scales of the CDDQ and the cultural values. LTO = Long-Term Orientation, UA= Uncertainty Avoidance, CDDQ = Career Decision-making Difficulties Questionnaire.

In order to test H1, that Lack of Readiness would be the most prominent career difficulty among students, a repeated measures ANOVA was conducted in which scores from the three main scales of the CDDQ (Lack of Readiness, Lack of Information and Inconsistent Information) were compared. Prior to testing results, the ANOVA assumptions were checked. Although the distribution was not normal, the sample size was sufficiently large (greater than 30) enough to

proceed with analysis. The Mauchly's test indicated that the assumption of sphericity had been violated  $\chi^2(2) = 47.9, p < .001$ , therefore the Greenhouse-Geisser correction was utilized ( $\epsilon = .68$ ). Results revealed that there was a significant difference among the three main scales of the CDDQ, Wilk's Lambda = .516,  $F(1.35, 99.91) = 30.26, p < .001, \eta^2 = .484$ . Post-hoc pairwise comparisons using the Bonferroni correction revealed that values on the Lack of Readiness scale were significantly higher than values on the Lack of Information scale, with a difference of 1.19 points ( $p < .001$ ). In addition, the values of the Lack of Readiness scale were also significant higher than the values on the Inconsistent Information scale, with a difference of 1.91 points between the scales ( $p < .001$ ). Therefore, hypothesis H1 was supported. An additional finding was that there was a significant difference between the Lack of Information scale and the Inconsistent Information scale, with scores on the Lack of Information scale being, on average, .73 points higher than scores on the Inconsistent Information scale ( $p < .001$ ).

In order to test H2, that there would be a positive relationship between confidence about making a career decision and collectivism, a Pearson correlation between the item: "to what extent are you confident of your choice?" on the CDDQ ( $M = 6.66, SD = 2.23$ ) and levels of collectivism on the CVSCALE was conducted. Only students who reported that they had already considered a major or career were included, because this item was only available to those who were decided. Results showed that these items were not significantly related,  $r(73) = -.04, p = .73$ , so H2 was not supported.

In order to test H3, that there would be a negative relationship between long-term orientation and career decision-making difficulties, a Pearson correlation was conducted between the long-term orientation subscale of the CVSCALE and the overall CDDQ score. Results revealed that there was no relationship between these variables,  $r(73) = .01, p = .96$ , so H3 was initially not supported. However, when additional correlations were conducted between long-

term orientation scores and the three main subscales of the CDDQ, a significant, positive relationship between Lack of Readiness and long-term orientation was found (see Table 2), which was contrary to the direction expected,  $r(73) = .24, p = .035$ . However, when correlations between long-term orientation and all CDDQ subscales were conducted separately in a sample of boys and girls, negative relationships between several CDDQ scales and long-term orientation scores were found in the sample of boys (see Table 3). No relationship between any of the CDDQ scores and long-term orientation scores was found in the sample of girls.

Table 2

## Correlations between CDDQ scales and cultural values (boys and girls)

Scales	Col	Mas	LTO	UA	PD	Age
<b>Readiness</b>	*.28	-.06	.24*	.24*	.16	.02
<b>Inconsistent Info (II)</b>	.04	.22	-.19	.09	-.02	.05
II - Unreliable Info	-.01	.24*	-.21	-.02	-.04	-.06
II – Internal Conflicts	.08	.27*	-.12	.19	-.14	.03
II – EC	.04	.08	-.16	.04	.1	.14
<b>Lack of Info (LOI)</b>	-.06	.21	-.07	.04	-.08	-.02
LOI- CDM Process	-.08	.22	-.16	.12	.04	.02
LOI - Self	.14	.1	.04	-.01	-.16	-.11
LOI - Occupations	-.05	.15	.03	.05	-.11	-.04
LOI – WOI	-.23	.23*	-.14	-.03	-.01	.08
<b>CDDQ Total</b>	.14	.19	.01	.19	.03	.03

*Note.* \*  $<.05$ ,  $N = 75$ , Col = Collectivism, Mas = Masculinity, LTO = Long-Term Orientation, UA = Uncertainty Avoidance, PD = Power distance, EC = External Conflicts, WOI = Ways of Obtaining Information. The main CDDQ subscales and the total CDDQ score are bold.

Table 3

## Correlations between CDDQ scales and cultural values (boys)

Scales	Col	Mas	LTO	UA	PD	Age
<b>Readiness</b>	.26	-.06	.27	.23	.21	-.03
<b>Inconsistent Info (II)</b>	.22	.16	*-.37	.28	-.01	*-.38
II - Unreliable Info	.15	.22	*-.31	.28	-.04	**-.47
II – Internal Conflicts	.05	.20	*-.35	.27	-.14	*-.35
II – EC	*.31	-.05	-.27	.13	.14	-.09
<b>Lack of Info (LOI)</b>	.09	.2	*-.34	-.07	.06	-.24
LOI- CDM Process	.1	.17	*-.35	-.04	.21	-.19
LOI - Self	.18	.05	-.09	.09	.02	**-.41
LOI - Occupations	.07	-.06	*-.35	-.11	-.06	-.15
LOI – WOI	-.04	*.29	*-.32	-.13	.06	-.12
<b>CDDQ Total</b>	.22	.22	-.16	.25	.12	*-.34

*Note.* \* <.05, \*\* < .01,  $n = 34$ , Col = Collectivism, Mas = Masculinity, LTO = Long-Term Orientation, UA = Uncertainty Avoidance, PD = Power distance, EC = External Conflicts, WOI = Ways of Obtaining Information. The main CDDQ subscales and the total CDDQ score are bold.

In order to test H4, that there would be a positive relationship between power distance and career decision-making, a Pearson correlation was conducted between the power distance subscale of the CVSCALE and the total value of the CDDQ. Correlations between power distance and all of the CDDQ subscales were also conducted. Results revealed that there was no relationship between power distance and any of the CDDQ scores (see Table 2), so H4 was not supported. Furthermore, power-distance was not related to any of the CDDQ scales even when boys and girls were analyzed separately (see Table 3).

In order to test H5, that there would be a positive relationship between masculinity and career decision-making difficulties in a sample of girls, Pearson correlations were conducted between all CDDQ scores and masculinity, and only girls were included in the analyses. Neither the CDDQ total score nor the three main subscales of the CDDQ correlated significantly with masculinity. However, the internal conflicts subscale of the CDDQ ( $M = 3.40$ ,  $SD = 1.80$ ) correlated positively with masculinity ( $M = 2.03$ ,  $SD = .83$ ),  $r(38) = .38$ ,  $p = .015$ , so this hypothesis was partially supported.

In order to further understand how career decision-making difficulties took place in this sample, additional correlations between CDDQ and CVSCALE scores were conducted and reported in correlation matrices for the overall sample and for boys separately (see Tables 2 and 3). Although the same correlations were conducted in a sample of girls, no significant relationships between CVSCALE and CDDQ values were found in this group (with the exception of the H5 findings). Results indicated that there was a significant relationship between masculinity and the Ways of Obtaining Information subscale of the CDDQ in the boys' sample,  $r(33) = .29$ ,  $p = .034$ . Scores for other cultural values were also analyzed. Correlations between uncertainty avoidance and CDDQ scores were also conducted but were not significant (see Tables 2 and 3). Some of the correlations between collectivism and CDDQ scores were significant, such as the positive relationship between collectivism and the readiness subscale of the CDDQ in the overall sample,  $r(73) = .28$ ,  $p = .016$ . In addition, collectivism was positively associated with the external conflicts subscale of the CDDQ in a sample of boys (see Table 3),  $r(33) = .31$ ,  $p = .035$ .

In order to examine if an individual factor (age) would be related to CDDQ scores in a similar way as the CVSCALE values, correlations between age and CDDQ scores were conducted. Although a relationship between age and CDDQ scores was not found in the overall

sample (Table 2), significant, negative relationships between age and some CDDQ scores were found in the sample of boys, including the overall CDDQ score (Table 3). No relationship between the girls' CDDQ scores and age was found.



## CHAPTER 5 DISCUSSION

The aim of this study was to identify the most prominent career decision-making difficulties of Brazilian students, and the relationship between cultural values and career decision-making in this sample. In addition, the relationship between cultural values and career difficulties was analyzed in a sample of girls and boys separately. Additional analyses also included the relationship between age and career difficulties. The results indicated that Lack of Readiness was the most prominent difficulty in this sample, and the relationship between cultural values and career decision-making difficulties did not occur the same way for boys and girls. In addition, age was negatively related to career decision-making difficulties only in the sample of boys.

The first hypothesis of this study, that Lack of Readiness would be the most prominent difficulty among students, was confirmed. When compared to the other two main scales of the CDDQ, Lack of Readiness presented the highest scores, followed by Lack of Information, which had the second highest scores, and Inconsistent Information. These results revealed that the students in this sample had the most difficulty in being ready to make a decision prior to the career decision-making process. The second highest score was found in the Lack of Information scale, indicating that another problem that students are facing might be the limited information about oneself, existing careers, ways of obtaining information about careers, and a lack of knowledge about the career decision-making process. Students had the least difficulties in obtaining consistent information, meaning that they presented little internal and external conflicts, and they appeared to be receiving reliable and consistent information about oneself and possible career paths.

Although it was expected that students would present lack of readiness for making career decisions, this result should be interpreted with caution. During the validation process of the

CDDQ in Brazil, Cava (2012) indicated that the Lack of Readiness subscale presented low reliability and several items of this subscale were not validated in Portuguese. In fact, the general recommendation after the validation of the CDDQ was to avoid reaching conclusions about the Lack of Readiness subscale without considering other CDDQ scales. Originally, the Lack of Readiness subscale was composed of three smaller scales: Lack of Motivation, Indecisiveness, and Dysfunctional Beliefs (Gati et al., 1996), but only items in the Dysfunctional Beliefs subscale were validated in the Portuguese version of the CDDQ. This means that the Lack of Readiness scale in Brazil corresponds only to the Dysfunctional Beliefs subscale of the original taxonomy.

Generally, having dysfunctional beliefs prior to making a career decision is a widespread, pervasive problem faced by young adults from diverse backgrounds (Gati, Ryzhik & Vertsberger, 2013; Gati et al., 1996; Mau, 2001), so it was not surprising that this was also the most prominent difficulty found in the present study. This means that students in this sample had distorted perceptions about the career decision-making process (e.g. thinking that there is only one possible career for the rest of their lives). In addition, the Brazilian school system makes it difficult for students to have practical work and extra-curricular experiences, which could potentially diminish this difficulty. However, because the validation of the Lack of Readiness subscale had several limitations in Brazil, the best interpretation of such result would be to conclude that more research in terms of dysfunctional beliefs is needed in order to confirm that this is in fact the most prominent problem among students.

The next difficulty found among students was Lack of Information. When looking at the averages for the Lack of Information subscales, the Lack of Information about Occupations subscale presented the highest average of all categories. This result was surprising, since the students from the institution investigated had access to workshops with professionals and career

exploration activities. Nevertheless, the absolute results of this scale indicated only a moderate level of difficulty. Students scored on average 4.31 points in the Lack of Information About Occupations subscale. Current guidelines for score interpretation for the CDDQ indicate that salient difficulties present a score over 6.34, moderate difficulties range from 3.33 and 6.34, and negligible difficulties present a score below 3.33 points (Itamar Gati, Personal Communication, October, 5, 2016). Based on such interpretation, even the most salient difficulties in this study would be considered moderate, indicating that lack of information in this population and other prominent difficulties existed, but were not pervasive.

The next goal of this study was to investigate how cultural values relate to career decision-making difficulties. Not all cultural values related to CDDQ scores as expected. In some cases, a relationship between cultural values and CDDQ scores only existed when boys and girls were analyzed separately (such was the case with long-term orientation). In general, the relationships between cultural values and CDDQ scores were low to moderate, indicating that although some trends might exist, a cross-cultural investigation or a study with a more diverse population would be necessary in order to reach more definite conclusions.

The second hypothesis stated that students with higher levels of collectivism would tend to be more confident about their career decision. That is, students who gave more importance to group goals and societal values would also tend to be more confident about making career-related decisions. This hypothesis was refuted, because no relationship between collectivism and confidence was found. However, additional analyses revealed that students with high levels of collectivism tended to have more difficulties in being ready to make a decision, and a relationship between collectivism and external conflicts was found in a sample of boys. This result is in accordance with the assumption that collectivism might be positively related to career decision-making difficulties (Mau, 2011). In the sample of boys alone, the relationship between

collectivism and External Conflicts indicated that higher levels of collectivism were related to a greater gap between personal preferences and the preferences voiced by others (External Conflicts). No such relationship was found in a sample of girls.

The third hypothesis stated that there would be a negative relationship between long-term orientation and career decision-making difficulties, which means that students who focused on long-term goals would experience less career decision-making difficulties. This hypothesis was initially refuted, because a positive, but weak relationship was found between long-term orientation and readiness to make a career decision in the overall sample. However, when boys and girls were analyzed separately, a clear negative relationship between long-term orientation and career difficulties appeared in the sample of boys only. The more long-term oriented the boys in the sample were, the less difficulties they experienced. This pattern was found in two of the three main CDDQ scales, Inconsistent Information and Lack of Information. Several subscales within these two difficulties were also negatively related to long-term orientation. Interestingly, no relationship between long-term orientation and CDDQ scores was found in the sample of girls.

The findings of the present study do not indicate why there was such a difference between boys and girls. One explanation could be the difference between men and women in regard to the variation of scores. There is evidence that men's personality profiles are more varied than women, especially in individualistic cultures (Borkenau, McCrae & Terraciano, 2013) so something similar could be happening with long-term orientation and career decision-making. In this case, more varied responses from boys would make correlations between long-term orientation and career decision-making difficulties more apparent at the individual level for boys. Thus, a more varied sample of girls would be necessary for the same findings to be true.

The problem with such an explanation is that differences in variation between genders in personality traits are usually found in observational studies and informant reports, but not in self-reporting measures (Cross et al., 2011). In addition, the standard deviations for long-term orientation and several CDDQ subscales in the present study were actually greater for girls than for boys, indicating that boys' scores were not more varied than girls' responses. An alternative explanation is that this result could reflect a difference in the development of girls and boys. Perhaps a relationship between long-term orientation and CDDQ difficulties exist at a different point in life for girls, such as in middle school. The fact that such difference cannot yet be fully explained is an indicative that more research on culture at the individual level of analysis and from a developmental perspective is necessary.

The next hypothesis stated that power distance would be positively related to CDDQ scores. That is, students who gave more importance to hierarchy and distanced themselves from authority figures would also tend to have more career decision-making difficulties. This hypothesis was not supported, because no relationship between these two variables was found. Even when girls and boys were analyzed separately, the relationship between these two variables was negligent. It could be the case that such relationship only exists at the country level of analysis or if Brazilian regions are compared, so a more comprehensive, multi-level approach to this cultural value could be necessary.

The next hypothesis was that girls with high masculinity scores, that is, girls with more traditional ideas about gender, would tend to have higher levels of career decision-making difficulties. Although most CDDQ subscales did not correlate with masculinity, this pattern was found in the Internal Conflicts subscale in a sample of girls. That is, girls who had high scores in masculinity also tended to experience more internal confusion during the career decision-making process. Additional analyses showed that a relationship between the Ways of Obtaining

Information subscale of the CDDQ related positively to masculinity in the sample of boys, which means that boys with higher scores in masculinity also presented a higher level of difficulty in obtaining help during the career decision-making process. In general, these findings reveal that higher levels of masculinity are related to more career difficulties for both boys and girls in this sample, but they differ in what specific aspects of career decision-making are related to masculinity. These findings support some of the current literature, in the sense that too much traditionalism and a patriarchal way of experiencing the world can be detrimental to the career decision-making process of adolescents (Guan et al., 2016; Huang, 2015; Wattz et al., 2015).

Finally, additional correlations between the age of students and CDDQ scores were conducted. Results revealed that age was significantly correlated with several CDDQ subscales in the sample of boys, but such relationship was not found in the sample of girls. A careful observation of these correlations would suggest that in the boys' sample, the Inconsistent Information scale of the CDDQ, age and long-term orientation related to CDDQ scores in similar ways. That is, age and long-term orientation were negatively related to the Unreliable Information and Internal Conflicts subscales contained in the Inconsistent Information main scale. In the Lack of Information scale, age was only related to Lack of Information about Self subscale. This relationship to a more "personal" subscale was contrary to the findings on long-term orientation. When considering the Inconsistent Information scale of the CDDQ, long-term orientation was only negatively related to contextual subsequent difficulties, not personal ones (e.g. Lack of Information about Occupations).

In sum, the results of this study revealed that Lack of Readiness to make a career decision was the most salient career decision-making difficulty among the adolescents studied, followed by Lack of Information. When it comes to cultural values, collectivism, long-term orientation, and masculinity were related to different aspects of career decision-making. Contrary to what

was hypothesized, power distance was not related to career decision-making difficulties, and although collectivism related to a few career difficulties, it was unrelated to confidence about making a decision. Interestingly, additional analyses revealed that age was negatively related to CDDQ values only in the sample of boys, and the relationship between long-term orientation and CDDQ scores was also found exclusively in the sample of boys.

These results fit into the framework of the current literature only to some extent. The fact that Lack of Readiness was the most prominent difficulty among students confirms that the Dysfunctional Beliefs subscale, which corresponded to Lack of Readiness in this study, should be further studied in the Brazilian context. At least in this sample, this result supports current findings that having dysfunctional beliefs can be a pervasive difficulty among students (Gati, Ryzhik & Vertsberger, 2013; Mau, 2001). However, we do not know if this result is a reflection of the Brazilian context in general, if it is specific to the Northeast of Brazil, or if it reflects a problem that students have regardless of culture and context, because this particular difficulty was not fully validated in Brazil. In this case, a better investigation of Dysfunctional Beliefs and Lack of Readiness could take place in the future.

When it comes to cultural values and CDDQ scores, some of the correlations could indicate particular characteristics of the Northeast of Brazil. Regions in Brazil vary when it comes to cultural characteristics (Hofstede, 2010), so there could be a difference in some values such as masculinity and collectivism between the Northeast and Southeast of Brazil. Perhaps if the same study was conducted in the South or Southeast, the cultural values would correlate differently with CDDQ scores, so it is important not to generalize the present findings to the entire country. In general, the correlations between CDDQ scores and cultural values reflect findings in the current literature only to some extent. For instance, masculinity and long-term orientation did correlate to CDDQ values, but only for very specific subscores, and they

correlated differently in the samples of boys and girls. In some cases, a relationship did not exist at all. Such was the case for power distance and CDDQ scores and the relationship between collectivism and confidence. The literature in which hypotheses were drawn from included mostly cross-cultural studies, so perhaps some of the expected relationships did not occur because there was not enough variation among participants. Perhaps some cultural values, such as power distance, are only relevant at the country level, so a multilevel approach would be necessary for more definite conclusions regarding the relationship between cultural values and CDDQ scores. Based on such findings, the strengths and limitations of this study can be discussed, along with future directions for study.

### **Strengths and Limitations**

Some strengths and limitations can be noted for the present study. Among the strengths was the fact that this study was conducted in a sample of teenagers, which remediates one of the most common problems in psychological studies: the fact that research is often conducted in samples of college students. Another positive aspect was the fact that the students lived in South America, in a region of Brazil that is often neglected when it comes to psychological research, since most studies are conducted in the South and South East portions of the country, while this study focused on participants from the Northeast region of Brazil. Finally, to the best of my knowledge, this study appears to be the first to utilize the Hofstede dimensions in the context of career decision-making, which offered a new perspective on the relationship between culture and career decision-making difficulties.

Among the limitations was the fact that participants were from a single institution, which limited any generalizations to the Brazilian context. In addition, participants were students from a private school with considerable resources, so the cultural values and career difficulties of these students probably differ from the values and difficulties of students in less privileged areas



of the city. Also, no comparisons between the South and North of the country were made, and no cross-cultural comparisons occurred. In this case, the findings from this study are only preliminary and do not represent broader cultural assumptions. Also, all additional analyses were exploratory. It is not known if age and cultural values would relate to CDDQ scores the same way as they did in this study if participants from other backgrounds were surveyed.

The instruments used were also limited. The Lack of Readiness scale of the CDDQ had a low reliability in this study, and it also had a low reliability when it was validated in Brazil (Cava, 2012), so any conclusions regarding this scale were very limited. When it comes to cultural values, the CVSCALE created by Yoo et al. (2012) did not contain all of the Hofstede dimensions. It lacked the indulgence and restraint cultural values. According to Hofstede (2011) these values regard how people focus on having fun and enjoying the moment (indulgence), or how they suppress the gratification of needs and have strict social norms (restraint). These could certainly be important factors in career decision-making, but they could not be measured in the present study because they were not included in the instrument used.

### **Future Directions**

As this study had a cultural focus, a useful way to proceed investigating this topic would be to make cross-cultural or intersocietal comparisons, such as between socioeconomic groups in Brazil. As the sample of this study was limited, it is not known if the cultural values would relate the same way to CDDQ scores as they did if cross-cultural comparisons were made. In this sense, more research with other groups should be conducted. In addition, students from other schools in the same city could be included, as it is not known if the pattern of correlations found also exist in other institutions.

When it comes to career decision-making difficulties, career readiness could be observed more closely in the Brazilian context. In the Brazilian version of the questionnaire, not all career

difficulties of the Readiness scale were validated. In fact, the career Readiness scale only contains one subscale in the Brazilian version: Dysfunctional Beliefs (Cava, 2012). Because having dysfunctional beliefs is such a widespread problem in different contexts, an entire questionnaire dedicated to this difficulty has been recently created (Hechtlinger, 2017). Such instrument could be used in the South American context along with other Brazilian instruments and qualitative methodologies in order to confirm if dysfunctional beliefs is a problem for Brazilian students in general, and which aspects of these beliefs are particular to the Brazilian context or widespread across cultures.

Finally, after additional exploratory analyses, it remains unclear if the cultural and age differences between boys and girls are universal, or if they only occurred in the institution studied. Age appeared to be a very important factor in the career decision-making process of boys, but not girls. It could be that a similar relationship between age and CDDQ scores also occurs in girls, but at a different time, such as middle school. In this case, the CDDQ difficulties could be studied in Brazil from a developmental perspective. In addition, the relationship between cultural values and CDDQ scores also differed between girls and boys in this study. In this sample, the relationships between cultural values and CDDQ scores was stronger and more frequent in the sample of boys, whereas masculinity appeared to be the only factor that correlated with a CDDQ subscale in the sample of girls. Considering that this portion of the study was only exploratory, more studies observing the relationships between CDDQ scores and cultural values could be conducted, so that there could be a better understanding of such relationships. In addition, studies of the Hofstede dimensions could have a developmental focus, which would contribute to the current knowledge on how boys and girls develop their cultural preferences.

In conclusion, this study provided a new perspective on the relationship between cultural values and career decision-making difficulties by investigating students from Recife, Brazil.

Different cultural values related to specific aspects of the career decision-making process, and such relationships also differed when girls and boys were analyzed separately. Because the sample was limited to a single institution, more studies including participants from different backgrounds are still necessary for a more comprehensive understanding of the relationship between career decision-making and cultural values of the Hofstede model.

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APPENDIX A  
HUMAN SUBJECTS APPROVAL



Office of Sponsored Programs and Research Integrity  
Administration 315  
Warrensburg, MO 64093  
Office: 660-543-4264  
Grants/Contracts: osp@ucmo.edu  
Compliance: researchreview@ucmo.edu

Amendment  
2/22/2018  
Protocol Number: 894

Dear Michele Sa:

Your request to amend your research project, 'Career Decision-Making and Cultural Values of Students from the Northeast of Brazil', was approved by the University of Central Missouri Human Subjects Review Committee on 2/22/2018. You may collect data for this project until 10/19/2018. Your informed consent is also approved until 10/19/2018.

**If an adverse event (such as harm to a research participant) occurs during your project, you must IMMEDIATELY stop the research unless stopping the research would cause more harm to the participant. If an adverse event occurs during your project, notify the committee IMMEDIATELY at researchreview@ucmo.edu.**

The following will help to guide you. Please refer to this letter often during your project.

- If you wish to make changes to your study, submit an "Amendment" through Blackboard under the "Amendment and Renewals" tab. **You may not implement changes to your study without prior approval of the UCM Human Subjects Review Committee.**
- If the nature or status of the risks of participating in this research project change, submit an "Amendment" through Blackboard under the "Amendment and Renewals" tab. **You may not implement changes to your study without prior approval of the UCM Human Subjects Review Committee.**
- If you are nearing the expiration date for collecting data for this project (10/19/2018) and you have not finished collecting data:
  1. submit your project application via Blackboard under the "Amendment and Renewals" tab (include any revisions and/or amendments approved since you submitted your application initially)

AND

  2. submit a "Renewal Report" through Blackboard under the "Final/Renewal Report" tab.
- **When you have completed your collection of data, please submit the "Final Report" found on Blackboard under the "Final/Renewal Report" tab.**

If you have any questions, please feel free to contact me at researchreview@ucmo.edu.

Sincerely,

Kathy Schnakenberg

APPENDIX B  
DEMOGRAPHIC QUESTIONS

Please answer the following questions:

What is your age in years? \_\_\_\_\_

What is your gender:

- Male
- Female
- Other
- Prefer not to answer

What is your grade?

- First year
- Second year
- Third year

APPENDIX C  
ASSENT FORM

**Researcher:** This research is being done by Michele Lima Sa, a graduate student at the University of Central Missouri, in the United States.

**Purpose of the Study:** The purpose of this study is to find out more about the professional decision-making processes of high school students from the Northeast of Brazil.

**Request for Participation:** We are inviting you to participate in a study on professional decision-making and cultural values. It is up to you whether you would like to participate. If you decide not to participate, you will not be penalized in any way. You can also decide to stop at any time without penalty. If you do not wish to answer any of the questions, you may simply skip them. Once you submit an anonymous survey, we will not know which survey or test is yours.

**Research:** This study involves completing a survey about your thoughts on your future career and some of your personal values. This survey will take about 15 minutes to finish.

**Privacy:** All of the information we collect will be anonymous. We will not record your name or any information that could be used to identify you. Your confidentiality will be maintained to the degree permitted by the technology used.

**Risks:** There are no known risks in participating in this study. The risks associated with participating in this research are similar to the risks of everyday life.

**Benefits:** You will benefit from participating in this study by getting firsthand experience in psychological research and reflecting on your future profession.

**Questions:** If you have any questions about this study, please contact Michele Sa at mls80490@ucmo.edu. If you have any questions about your rights as a research participant, please contact the UCM Research Compliance Officer at +1 (660) 543-8562.

Please click the following indicating your choice to be in this study:

[Yes](#) I agree to participate in the study.

[No](#) I do not want to participate in the study



APPENDIX D  
DEMOGRAPHIC QUESTIONS (PORTUGUESE)

## Escolha Profissional

### Dados pessoais

1. Em que ano do ensino médio você está?

- Primeiro
- Segundo
- Terceiro

2. Quantos anos você tem?

Your answer

---

3. Qual é o seu gênero ?

- Masculino
- Feminino
- Outro
- Prefiro não opinar

BACK

NEXT

Never submit passwords through Google Forms.

APPENDIX E  
CHILD ASSENT (PORTUGUESE)

## Escolha Profissional

### ASSENTIMENTO

**Investigador:** Esta pesquisa está sendo realizada por Michele Lima Sá, uma estudante de pós-graduação da Universidade Central do Missouri, nos Estados Unidos.

**Objetivo:** O objetivo deste estudo é descobrir mais sobre os processos de tomada de decisão profissional dos estudantes do ensino médio no Nordeste do Brasil.

**Pedido de participação:** Estamos convidando você a participar de um estudo sobre escolhas profissionais e valores culturais. Sua participação é voluntária. Se você decidir não participar, não haverá penalidade. Você também pode decidir parar a qualquer momento sem penalidade. Se você não deseja responder a nenhuma das perguntas, pode ignorá-las. Depois de enviar uma pesquisa anônima, não saberemos qual pesquisa ou teste é seu.

**Pesquisa:** Este estudo envolve perguntas sobre sua decisão profissional e alguns de seus valores pessoais. Esta pesquisa levará cerca de 15 minutos para terminar.

**Privacidade:** todas as informações que coletamos serão anônimas. Não registraremos seu nome ou qualquer informação que possa ser usada para identificá-lo. A sua confidencialidade será mantida no grau permitido pela tecnologia utilizada.

**Riscos:** Não há riscos conhecidos na participação neste estudo. Os riscos associados à participação nesta pesquisa são semelhantes aos riscos da vida cotidiana.

**Benefícios:** Você terá experiência em primeira mão numa pesquisa psicológica e poderá refletir sobre sua futura profissão.

**Perguntas:** Se você tiver alguma dúvida sobre este estudo, entre em contato com Michele Sá através do seguinte e-mail: [mils80490@ucmo.edu](mailto:mils80490@ucmo.edu). Se você tiver alguma dúvida sobre seus direitos como participante da pesquisa, entre em contato com o UCM Research Compliance Officer em +1 (660) 543-8562.

Por favor, indique se você concorda em participar desta pesquisa:

- SIM, concordo em participar desta pesquisa.
- Não, eu não concordo em participar desta pesquisa.

**Clique PRÓXIMA para responder o questionário**

Se você não quiser participar, feche esta janela.

APPENDIX F  
PERMISSION TO USE THE CDDQ

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**Hamar Gati, Ph.D.**  
**School of Education, Hebrew University, Jerusalem, ISRAEL**


e-mail: [hamar.gati@huji.ac.il](mailto:hamar.gati@huji.ac.il) Fax: (+972)-2-5882084

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Name: Michele Lima Sa Date: 10/05/2016 e-mail: [mis80490@ucmo.edu](mailto:mis80490@ucmo.edu)  
 Signature:  Fax: \_\_\_\_\_ Tel: (1)8164623820  
 Address: 108 W South St, Warrensburg, MO 64093

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Sincerely,

Hamar Gati, Ph.D.

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