COMPARISON OF PROFESSIONAL IMPRESSIONS OF HIKIKOMORI ACROSS CULTURES: A SECONDARY DATA ANALYSIS

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ABSTRACT

COMPARISON OF PROFESSIONAL IMPRESSIONS OF HIKIKOMORI ACROSS CULTURES: A SECONDARY DATA ANALYSIS

Marko Lamela

This study examined the impressions of two hikikomori vignettes by professionals across different countries to determine possible similarities or differences across countries. Originally viewed as a cultural disorder, hikikomori has been observed in different countries. This study used an existing data set of a 2010 study to review diagnostic impressions using the ICD-10 and DSM-IV-TR coding systems, as well as a free response. Additionally, this study reviewed professional impressions on the best treatment for hikikomori. This study reviewed these responses based on country of origin and cultural type. A correlation was found between ICD-10 and DSM-IV-TR diagnosis, country, and cultural type. No relationship was found between free response or treatment type, country, and cultural type. This study also reviewed professional impressions on the influence of parents and the development of hikikomori. Results showed that professionals did believe parents had some influence on the development of hikikomori. Most common types of diagnosis and treatment were noted across countries and cultural types as well.

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CHAPTER I INTRODUCTION

Hikikomori- History

Since the 1980s, there has been a noticeable increase in the number of young people referred to treatment for acute withdrawal in Japan (Furlong, 2008). This came to a head in the 1990s when it became clear this trend was increasing among young adults and, occasionally, adults up to their 40s. It became a focus of considerable attention as a new social problem in Japan (Suwa & Suzuki, 2013). During this time, psychologists began to regard withdrawal as a condition requiring specific forms of psychiatric intervention.

Norihiko Kitao was the first to describe this phenomenon as *'hikikomori'* (a compound verb made of the characters for '*to pull back*'[hiku] and '*to seclude oneself*'[komoru]) in an academic context, although the term had been used in the media for some time (Kato et al., 2019; Kitao, 1986**).** The word became more widely used as a noun in the latter half of the 1990s when a Japanese psychiatrist published *"Shakaiteki Hikikomori-Owaranai Shishunki (Social Withdrawal: A Never-ending Adolescence)"* (Saito,1998).

Concerned with the rise of those not in education, employment, or training, also known as NEETs, because of the hikikomori phenomenon, the Ministry of Health, Labor, and Work (MHLW) initially classified hikikomori primarily as a labor issue. However, as time went on, pressure from mental health professionals moved the MHLW to commission research into hikikomori. This research would ultimately provide guidelines for mental health practitioners who experienced an increase in the number of patients and

their families being treated for hikikomori. As a result, Ito developed the first guidelines focused on hikikomori (Ito, 2004 as cited in Rosenthal & Zimmerman, 2012). In this text, he did not view hikikomori as a mental illness in and of itself. Instead, he viewed individuals presenting with hikikomori traits as having a psychological disorder at the heart of their withdrawal symptoms, explaining that the trigger is unclear. Ito argued that finding the cause of social withdrawal was not as crucial as reintegrating these individuals into society. He advised convincing them, gently, to reenter society, primarily through family intervention. As a result, Ito viewed the trigger for withdrawal as secondary to its presentation, meaning that the reasons were not as important as the disorder itself (Ito, 2004, as cited in Rosenthal & Zimmerman, 2012).

At the same time, Kondo (2003) provided a more detailed analysis of the condition by focusing on identifying the underlying causes and appropriate treatments, which he categorized into three groups. The first group consisted of those who suffered from an underlying psychiatric disorder (e.g., schizophrenia, panic disorder, social anxiety). In cases such as these, Kondo advised pharmaceutical interventions (i.e., Abilify, Zyprexa, and antidepressants such as SSRIs/SNRIs or Benzodiazepines). The second group described was made up of those who have comprehensive developmental and mental disorders, learning disabilities, low self-esteem, inability to adjust, victimization delusions, and so on. The suggested treatment for such cases was a supportive psychiatric and cognitive behavioral intervention with pharmacotherapy as a suggested component. The final group was composed of those who have personality disorders or schizoaffective disorders and suggested one-on-one psychological therapy or group therapy treatment.

After identifying individual psychiatric issues as a common factor in those with hikikomori, Kondo went on to explain that there was a factor that was not necessarily psychiatric in nature. He stated that most people can achieve independence without the benefit of professional services, even if some behavioral or psychiatric problem exists. He noted that the critical variable between those who achieve independence and those who do not is the family, particularly parents (Kondo, 2003).

Hikikomori-Prevalence

Studies have shown that hikikomori has appeared more frequently among Japanese adolescents since the 1990s (Ministry of Health, Labor, and Welfare, 2007-8 as cited in Rosenthal & Zimmerman, 2012; Ministry of Health, Labor, and Welfare, 2010a). Previously, the number of young adults with hikikomori was thought to be 500,000 to 1,000,000 (Saito, 2001 as cited in Suwa & Suzuki, 2013). In a more recent study of 20–49-year-olds in a community-based population, it was found that 1.2% had experienced hikikomori in their lifetime, and .5% of families (≈232,000) reported having at least one child who had experienced hikikomori (Koyoma et al., 2010). Additionally, it was found to be more prevalent in middle- and upper-class families (Furlong, 2008; Saito, 1998).

Studies have shown a significant gender difference in the presentation of hikikomori. One such study found that of 6,151 cases presented to public health centers over a 12-month period, 76.4% were male (Ito et al., 2003). Initially, Saito noted a trend that hikikomori sufferers were typically first-born males, often with highly educated middle-class parents, an unconcerned father, and an over-sensitive and highly emotional mother (Saito, 1998). Since then, research has noted the possibility that men were merely more visible as cultural expectations viewed men as expected to leave the house and set

up households of their own while women were less expected to leave the home (Rosenthal & Zimmerman, 2012).

Hikikomori- Defined

Initially, the term was generally used to refer to people withdrawing from their relationships with others. During this time, the term was also used as a psychiatric term to refer to the symptomatic withdrawal seen in autistic, schizophrenic, depressive, or aged patients. From the 1990s on, this term has been used mainly to refer to young adults who present with hikikomori. For this paper, the term 'hikikomori' will refer to both the phenomenon and the individuals suffering from it (Suwa & Suzuki, 2013). One problem with identifying, defining, and categorizing hikikomori is the tendency to group various behaviors under the same term. Rosenthal and Zimmerman explained that the concept of hikikomori behavior has been used to cover behaviors ranging from minor personality quirks (such as excessive hand washing or fanatical obsession with a magazine) to those who sit in their rooms playing internet games night and day, to others who sit in their rooms and do nothing whatsoever (Rosenthal & Zimmerman, 2012). Over time, studies began to show that 80.3% of individuals presenting at mental health welfare centers for hikikomori were diagnosed with a psychiatric disorder (Kondo et al., 2013). Additionally, those with hikikomori were found to have a significantly lower quality of life than those who had never experienced hikikomori (Nonaka & Sakai, 2014).

The relevance of hikikomori was made official in the first epidemiological study of the phenomenon by the Japanese Ministry of Health, which described hikikomori to be present only when a young adult shows the following:

1) Mainly stays home

2) Cannot or does not engage in social activities such as going to school or working
3) Has continued in this state for more than six months
4) Has neither psychotic pathology nor medium-to-lower-level intellectual functioning (IQ<50-55)
5) Has no close friends (Ito et al., 2003).

This was followed by a more condensed definition describing hikikomori as “the state of avoiding social engagement (e.g., education, employment, and friendships) with generally persistent withdrawal into one’s residence for at least six months as a result of various factors” (Saito, 2008 as quoted in Teo & Gaw, 2010, pp. 445). The core feature among these definitions is social withdrawal or isolation. However, these symptoms are not exclusive to hikikomori, as other psychiatric disorders such as schizophrenia, posttraumatic stress disorder, and major depressive disorder also feature withdrawal or isolation as their key symptoms (Teo & Gaw, 2010). This realization prompted the view of hikikomori to be divided into two groups: ‘Primary Hikikomori’ to refer to those who have no previous or comorbid psychiatric history, and ‘Secondary Hikikomori’ to refer to those with a history of psychiatric comorbidity, as described by the Japanese Ministry of Health, Labor, and Welfare (Frankova, 2019).

Eventually, researchers would come to view this phenomenon as a behavior in which adolescents and young adults refuse all contact with society by socially withdrawing themselves from all activities and relationships for six months or more, often isolating themselves in rooms at their parents’ homes, and engaging in solitary activities, such as playing video games and reading (Bowker et al., 2013; Furlong, 2008;

Rubin et al., 2002; Saito, 2010; Saito, 2013; Suwa & Suzuki, 2013). The phenomenon has been further described as mostly occurring in young adults who have graduated from high school or university, who had dropped out and not completed their education, do not take up employment but instead cut off contact with society, and confine their lives mainly to their family home. In some of these cases, they even refrain from speaking to family members and shut themselves in their rooms, engaging in a day-night reversal (i.e., sleeping all day and staying awake all night) and may only leave their homes for such activities as going to the library or shopping in their neighborhood (Suwa & Suzuki, 2013). Although seemingly similar, hikikomori differs from other disorders such as agoraphobia by completely rejecting society and withdrawing into their rooms; agoraphobics only express fear of specific clusters of activity and not all agoraphobics are afraid to leave home. Additionally, hikikomori differs from other disorders such as psychosis due to not having the positive or negative symptoms attributed to psychosis such as hallucinations or disordered thinking.

Primary vs Secondary

As noted above, hikikomori can be further defined as a "Primary" or "Secondary" type. Primary hikikomori is viewed as a manifestation that cannot be described using current concepts of psychiatric disease. A primary hikikomori patient has no severe diagnosable psychopathology and yet find themselves unable to enter society or adapt to their surroundings (Suwa & Suzuki, 2002). In contrast, secondary hikikomori suffers from one or more co-occurring severe mental disorders, such as affective disorder, anxiety disorder, obsessive-compulsive disorder, personality disorder, and pervasive developmental disorder (Suwa & Suzuki, 2002). Studies have found that hikikomori can

be roughly split 50/50 between Primary and Secondary manifestations (Koyoma et al., 2010).

It is essential to make this distinction because we cannot understand the basis and underpinnings of the pathology if we were to consider it in the context of other disorders. As such, it is important to be able to identify the presence of primary or secondary hikikomori independently. Focusing on primary hikikomori may help us better understand the cultural and sociological underpinnings that have led to this disorder in Japan. Finally, identifying the extent to which primary hikikomori may be present is essential when considering therapy treatment. With a co-occurring diagnosis, it is likely that the focus of treatment would shift to the co-occurring disorder. Focusing on a primary manifestation would necessitate suitable treatment methods for hikikomori itself (Suwa & Suzuki, 2013).

To address this, Suwa and Suzuki (2013) described hikikomori by adapting the definition developed by the Japanese Ministry of Health, Labour, and Welfare into five pathological features. The first feature was defined as episodes of defeat without struggle (Suwa & Suzuki, 2013). This feature was noted to be a prelude to hikikomori; often, before the person transitions to full hikikomori, there is a recognizable incident of defeat without struggle (Suwa & Suzuki, 2013). Some examples include quitting a sport because they were not selected to be a player or giving up taking an entry examination despite spending time preparing for it for fear of failure. Simply put, all competition is avoided. In such cases, the hikikomori deviates from their idealized path without ever struggling for what they want. Since they have never struggled and failed, they feel uncomfortable with themselves for not being on their idealized path (Suwa & Suzuki, 2013).

The <u>second</u> feature of primary hikikomori is that one's ideal self-image is based on what others expect from them as opposed to what and who they want to be (Suwa & Suzuki, 2013). The consequence of developing an ideal self-based on the expectations of others is that they are not motivated to work towards those ideals as they are not their own (Suwa & Suzuki, 2013).

<u>The third</u> feature is described as preserving the ideal image of the "expected" self or their developed (ideal) vision of themselves. However, as they slip deeper into the hikikomori lifestyle, they stop working towards this vision, thus avoiding struggle and failure, and lose the opportunity to learn about themselves and the other possibilities for their future. They know they have not and may not achieve their ideal self but become concerned with maintaining the image that they have of themselves (Suwa & Suzuki, 2013).

<u>The fourth</u> feature of hikikomori derives from the parent's unwillingness to recognize that the child/young adult has not and may not live up to their expectations. As a result, parents of the hikikomori continue to invest in the idealized image of their children and use financial support and psychological investment to drive the child towards their desired outcome. This in turn drives the child/young adult deeper into hikikomori (Suwa & Suzuki, 2013).

<u>The fifth and final</u> feature of hikikomori is defined as avoiding behaviors which they feel will have a negative impact on how others perceive them. In other words, they will present themselves in ways which will always be agreeable to others so that others do not view them in a negative light (Suwa & Suzuki, 2013). They avoid situations in which they may be asked about their present circumstances and avoid thinking about the

possibility of starting over. Their behaviors become centered around avoiding situations that would elicit these thoughts. One theory proposed by Suwa and Suzuki (2013) was that if the hikikomori sufferer held a strong ideal centered on their desires instead, they might not adopt such a pattern of avoidance. The focus in this context was on the importance of focusing less on the feature of lack of desire to achieve something and to immerse themselves in something pleasurable. This view does not reach the level of anhedonia but indicates a level of inability to seek out pleasure.

Hikikomori as a Culture-Bound Syndrome

We find that hikikomori easily meets three of the four culture-bound syndrome criteria described by Gaw (2001), and arguably all four, as follows:

1) The disorder must be a discrete, well-defined syndrome.
2) It must be recognized as a specific illness in the culture with which it is primarily associated.
3) The disorder must be expected, recognized, and to some degree sanctioned as a response to certain precipitants in the particular culture.
4) A higher incidence or prevalence of the disorder must exist in societies in which the disorder is culturally recognized, compared with other societies (Gaw, 2001).

To begin with, the definitions provided by the Japanese government and research task force fulfills the first criterion. Also, cultural characteristics within Japan that can result in the formation of social withdrawal behavior have been explored at length in previous research on hikikomori, fulfilling Gaw's third criterion (Furlong, 2008; Kawanishi, 2004; Teo, 2010). Finally, many reported cases worldwide are in Japan, with the prevalence

rates for Japan described above as being distinctly higher than other countries (Kiyota et al., 2008), and thus fulfilling the fourth criteria.

It has often been assumed that the cultural environment of Japan has led to the development of the hikikomori phenomenon. This assumption has been rooted in the collectivistic nature of Japanese society, where social groups are formed, structures of indirect communication are emphasized, and values such as ‘*amae*,’ or culturally accepted overdependence, may significantly influence hikikomori in Japanese society. The dependent behaviors primarily associated with ‘*amae*’ assume that a parent will forgive all (Doi, 1973). This is in contrast with the Western perspective, which views dependence as something that should be overcome or corrected (Doi, 1973). Based on these views, one may assume that hikikomori is a disorder exclusive to Japan.

Hikikomori and Japanese Culture

There are two major issues to consider regarding the extent to which hikikomori is viewed through the individualistic vs collectivistic lens. Viewed from an individual level, hikikomori is considered as an egoistic and deviant behavior in Japanese culture (Husu & Valimaki, 2017). While it may be tempting to view this as a problem that started in the late 1980s and early 1990s, one must recognize that this phenomenon has been rooted in the relationship between youth and society, stemming from several social changes that started in the 1940s (Mita, 2006; Suwa & Suzuki, 2013). As such, one must review the characteristics of Japanese Society over the last few decades. In their 2006 book “Millennial Japan: Intimate Alienation and New Age Intimacies. Millennial Monsters”, Alison hypothesized that hikikomori resulted from a post-war education-obsessed society that forced its youth into a single, rigid set of values, resulting in

individuals who “killed” their own dreams and feel empty. This was echoed by Borovoy (2008), who noted that all children followed the same path based on a standardized education. Furlong (2008) affirms this by observing the rigid educational system which results in parents and children emphasizing academic success as primary without focusing on other potential paths toward the ideal self. As a result, education is viewed as the only successful pathway toward solid employment.

Despite these observations, these theories may not provide an accurate explanation for the development of hikikomori which did not appear in the 1970s or 1980s when the educational system was far more rigid and the idea of education guaranteeing success was unchallenged. It was not until the 1990s that the societal concept of education shifted, resulting in academic success no longer guaranteeing solid employment or a fulfilling life (Suwa & Suzuki, 2013). One theory proposed by Alison (2006) and Nomura and Aoki (2006) is that there was a relationship between hikikomori and the IT revolution. While possible it is unlikely as hikikomori started appearing in the 1990s, whereas internet usage in Japan did not reach 60% until 2001. Suwa and Suzuki (2013) have argued that hikikomori preceded general internet usage and found that preference for the digital world was not universal among hikikomori.

Some have viewed hikikomori as evidence of a collapse of Japanese culture. This stems from the idea of the traditional Japanese society with its rigid and collectivistic social structure. In this structure, boys are automatically singled out for familial attention and forced to conform to highly defined cultural protocols and rules as a prerequisite to personal and professional success (Rosenthal & Zimmerman, 2013).

Several factors, such as the globalization of commerce, entertainment, the use of social media, and natural and manufactured disasters, have had dramatic consequences on the collective moral power carried by the traditional behavior of the past (Rosenthal & Zimmerman, 2013). As a result, adolescent males continued to be faced with pressure from families to continue to conform to traditional Japanese cultural norms and expectations. These values are not solely rooted in the history of Japan but are especially important to families with intergenerational solid memories of their importance regarding the guided recreations of Japanese society following WW2 and the devastation it caused (Rosenthal & Zimmerman, 2013).

These contradictions between traditional family expectations and the new realities of global, post-recession society have led some researchers to hypothesize that hikikomori is an effort to reconcile two competing behavioral expectations (Rosenthal & Zimmerman, 2013). This has led some to view this clash not as a stage of perpetual adolescence but as a historic battle for the future of Japan. While some hikikomori individuals do suffer from co-occurring mental illness, many do not, as found by mental health personnel (Rosenthal & Zimmerman, 2013). These authors have noted that pressure in school, lack of acceptance of differences in Japanese society, change of the nature of work in Japan, frustration over the lack of opportunities in recession-plagued Japan, or the hikikomori's disappointment with their lack of immediate success as some contributing factors. Upon further examination, we can divide the changes in Japanese society that preceded the presence of hikikomori into (1) social changes, (2) changes in communication, and (3) changes in labor, issues elaborated below.

Social Changes

Suwa and Suzuki theorized that changes in Japanese social foundations started in the 1990s, but some argue that they occurred long before (Mita, 2006; Suwa & Suzuki, 2013). The post-WW2 period can be divided into three distinct eras each new era, societies' expectations becoming progressively more unrealistic Mita (2006). The first era, "the time of ideals," was the period between 1945 and the 1960s when Japan was in its pre-rapid economic growth following WW2. This period was further characterized by the Japanese working hard to achieve post-war rehabilitation, seeking material wealth, and idealizing American freedom and economic success.

The next era, "the time of dreams," is the period between the 1960s and 1970s, when rapid economic growth occurred. During the time of dreams, the Japanese people were confident of a hopeful future and that their dreams would be realized. During this time, Japanese society underwent a significant change due to the breakdown of agricultural collaboration and the rapid development of industry. Among these changes were family relationships, male-female relationships, the lives of women, the love of men, child-rearing, the formation of personality, and the aims of life (Mita, 2006).

Finally, "the time of fiction" describes the period following the rapid economic growth from the mid-1970s onward (Mita, 2006). Ohsawa (2008, as cited in Suwa & Suzuki, 2013) expanded upon the time of fiction by describing it as characterized by a mentality wherein "reality is viewed as one type of fiction, structured and framed by words and symbols so that reality is reduced to something relative" (pg. 196). This, in turn, led to the rise of a youth called '*Shin-Jinrui*' (translated to 'New Human Beings'),

who viewed everyday life as more than fiction. This eventually led to another group of youth emerging: the '*Otaku*', which placed "anime" and the virtual world above reality.

Ohsawa (2008, as cited in Suwa & Suzuki, 2013) suggested that the time of fiction led to a new era in the mid-1990s, or the time of "the impossible". He described this as a time in which the agency of the third person or those external forces, i.e., such as parents, that impact who we become, was diminished. Ohsawa explained that the third person was the transcendental 'other' who could make judgement about the appropriateness of social standards. Ohsawa continued by explaining that the 'transcendental other' socializes youth and can take the form of an authority figure, organization, established rules, or even disasters. Without this structure, there are no standardized norms for the overall functioning of society. As a result, individuals must choose the particulars of their lives for themselves, without input from others.

During the socialization process, it is usual for adolescents to resist authority. The way Japanese youth express their resistance changed with time. During the time of ideals, youth conflict manifested in the formation of gangs of hoodlums or Yakuza, the drop-outs from society. In the time of dreams, conflict manifested as a rejection of American capitalism, resisting the order of politics, violent campus activism, and embracing communism. The time of fiction saw youth conflict narrow in its scope from society to those in closer proximity, such as parents or teachers. This led youth to become involved in domestic and school violence, as well as motorcycle gangs "bosozoku," known for disrupting traffic and disturbing neighborhoods. Finally, in the time of the impossible, when the object of resistance, such as the transcendental other, crumbled, and the youth turn their resistance inwardly, possibly resulting in hikikomori. The action of becoming

hikikomori both protects one's present condition and results in injury to the self through internally acting out during a critical of initiation or socialization. As such, Ohsawa theorized that hikikomori stands in a state of contradiction between protecting and injuring oneself (Mita, 2006; Ohsawa, 2008; Suwa & Suzuki, 2013).

Changes in Communication

The form of interpersonal relationships among the Japanese has significantly changed in recent years. The traditional form of interpersonal relations in Japan has been *'conformism'*, which the local community, relatives, and company organizations maintain. In these structures, relationships are developed like family. However, after the time of dreams, the importance of the local community, relatives, and company was diminished. While conformism has seen a marked decline in Japan, this has not meant individualism has taken over. According to Toivonen et al. (2011), it has resulted in hikikomori youth becoming "disempowered victims of the elites' hot reaction to globalization" (pg.8). This new type of relationship among the Japanese has been given different names, with Allison and Takeda referring to it as '*orphanism*' and Miyadai referring to as *'Synchronal Communication'* (Allison, 2006; Miyadai, 1996; Takeda, 1998).

Takeda explained that a new type of individualism has been formed amid rapid changes in Japanese society, which has led to a social situation in which there is no orientation towards belonging to groups (Takeda, 1998). In this new individualism, the orientation is towards physical and mental isolation, the orphanism previously mentioned. Allison noted that this orphanism may manifest in various ways and that hikikomori was only one type of such manifestation (Allison, 2006).

Miyadai noted that these phenomena may be due to environmental changes, such as increased social mobility, which causes commitment to disappear (Miyadai, 1996). This can result in a lack of necessity for personal communication. As a result, face-to-face communication may become less common, and online communication is increasing in importance. Miyadai hypothesized that the concept of offline meeting, a term used by Japanese youth, may be considered to describe clearly their form of existence in which indirect online communication takes precedence over actual relationships (Miyadai, 1996).

Additionally, Miyadai observed that personal communication in which there was a mutual understanding of emotional experience existed not only among family and close friends but also extended to more extensive group affiliations, such as company or race (Miyadai, 1996). He described Western Civil Society to have the overall assumption that people with different values and norms defer to a universal rule or principle; however, this has not yet become mainstream in Japan. As such, Miyadai commented that since Japanese people cannot trust others or feel the support of their group, they have instead adopted synchronal communication in which people do not connect through emotion but rather through *'similar tastes'* (i.e., common interests) to feel at ease (Miyadai, 1996). In the case of the hikikomori, they cut off personal relationships with friends when they leave school or work, exacerbating their internal conflict. They lack any organizational relationship or any interest which would concentrate their attention. As a result, hikikomori sufferers lack *'personal communication'* supported by group affiliation and *'synchronal communication'* supported by sharing similar interests (Miyadai, 1996).

Changes in Labor

From the 1960s onward, Japan experienced unprecedented economic growth until a sudden collapse in the 1990s (Suwa & Suzuki, 2013). Since then, young adults in Japan have experienced a change in work life marked by high rates of youth unemployment (Furlong, 2008; Toivonen et al., 2011). What was formerly a labor market that offered steady careers for employees changed into an insecure system in which the individual's capacity to navigate the labor market successfully is far more central (Toivonen et al., 2011). As a result of the increasing uncertainty this job market embodies, a tendency has developed among young males in Japan to respond by withdrawing from the stressful conditions of work, the competitive education system, and society as a whole (Furlong, 2008).

Hikikomori - Possible reasons for development

One possible way of understanding the development of hikikomori cases is to view a proportion of these cases as resulting from an interaction between individuals, family, and society as opposed to a psychiatric disorder (Koyoma et al., 2010). As a result, young hikikomori may be reluctant to compete in modern Japanese society, which may be exacerbated by a lack of communication between the hikikomori and their parents (Rosenthal & Zimmerman, 2012-2013). Additionally, the hikikomori sufferer is shown to experience a higher level of peer rejection than others, an aspect associated with loneliness. The lack of peer relationships significantly impacts the individual's psychosocial development and adjustment. This would lead to difficulties in acquiring social skills and forming intimate relationships, which may exacerbate the hikikomori's isolation due to feelings of social anxiety, low self-esteem, and self-perceived difficulties

with social skills and relationships (Bowker et al. 2013; Cacioppo & Hawkley, 2011; Heinrich & Gullone, 2006; Krieg & Dickie, 2013; Rubin et al., 2002; Rubin et al., 2009).

Family Interactions

One possible cause for the development of social withdrawal evident in the hikikomori sufferer may be parenting styles. Research indicates that an insecure parent-child attachment (due to rejection by parents) may predict the lack of social competence manifested as fear of rejection that is typical of hikikomori families (Krieg & Dickie, 2013; Rubin et al., 2009). As a result, it has been suggested that parenting styles such as authoritarian, controlling, rejecting, and overprotective attitudes may influence the development and stabilization of hikikomori, specifically social withdrawal (Borovoy, 2008; Yajima & Nemoto, 2002; Yamamoto, 2005). Parental pressure, control, and unlimited financial support can all serve to prevent the child's health development through puberty and adolescence, creating a communication breakdown that results in the family being unable to help each other and eventually push one another into withdrawal from society (Kondo at al., 2007). Some research has also noted hikikomori to be more prevalent in families with low socioeconomic conditions and maternal personality disorders (Kondo at al., 2007). In fact, since 2003, the MHLW has acknowledged the dual importance of individual psychological disorders and family dynamics in the underlying etiology of hikikomori (Ito et al., 2003).

In this context, assessment of the nature of familial interactions in families of hikikomori could provide important information about the extent of all family members' cohesion, adaptability, conflict, and flexibility, as well as the frequency of conversations and avoidance of communication (Beavers & Hampson, 2000; Hamilton & Carr, 2016;

Olson, 2011). Assessments could also provide information about how conflicts are solved within the family and determine the level of achievement of the ideal figure of the family (e.g., a family with well-balanced cohesion and adaptability) (Nonaka et al., 2019).

These are the features of the family examined by Nonaka et al.(2019) and whose observations were organized along the *'three-term contingency theory'* using behaviorist concepts such as positive reinforcement (where the parent tries to increase desirable behaviors by presenting reinforcement situations), negative reinforcement (where the parent increases desirable behaviors by removing a punishing situation), positive punishment (whereby parents decrease undesirable behaviors by presenting a punishing situation), and negative punishment (whereby parents decrease undesirable behaviors by removing a reinforcing situation) (Skinner, 1969). They found that families of hikikomori were less effective in reducing problem behaviors using positive punishment and negative punishment than unaffected families (Nonaka et al., 2012).

Nonaka and colleagues indicated that any intervention to address issues of hikikomori has to include family intervention as it is through their families, especially during the initial stages, that we will have access to the hikikomori sufferers and also because these individuals are unable to seek help for themselves due to the characteristics of their conditions (Nonaka et al., 2019). Additionally, family members face difficulties caring for individuals with hikikomori, a sentiment shared by Funakoshi and Miyamoto (2015). Often, the family seeks initial help for the hikikomori, with only 6.6% of cases where the hikikomori themselves seek help (Ito et al., 2003). It should be noted that Sakai and Sakano showed that maladaptive cognition concerning hikikomori increased the family's psychological stress, whereas self-efficacy decreased it (Sakai & Sakano, 2009).

A special note should be made that this is far from confirmed despite evidence suggesting a connection between family and hikikomori. Nonaka et al. (2019) found that familial interaction may not affect the expression of hikikomori but express that it would still be essential to review how the family interacts with the hikikomori sufferer and whether their interactions may reinforce maladaptive behaviors.

Societal Processes

Hikikomori can also be viewed as a response to societal progress. Specifically, as society progresses, hikikomori may be a form of social exclusion that can damage individual development (Bowker et al., 2013; Rubin et al., 2009). Social exclusion can vary between countries and is context-dependent. One example provided in research is that of Finland, where the factors that increase the likelihood of social exclusion were found to include a low level of education, which limits job opportunities due to educational inflation and the lack of low-skilled jobs; it is also found that low socioeconomic status of one's parents increases exclusion and impacting on their low-level education, economic disadvantage, and health concerns, as well as a family history of single parenthood or divorce, immigration and many different types of social challenges, such as having been in custody at a young age (Mascherini et al., 2012; Paananen et al., 2012; Sipilä et al., 2011; Vanttaja & Järvinen, 2006). Social withdrawal entails reflexive choices, even when an individual decides not to do something or not to go somewhere; these decisions are processes that tend to produce a specific social reality. Thus, this withdrawal can be viewed not as an individual deficiency but as a complex set of relationships between self and society (Colley & Hodkinson, 2001; Husu & Valimaki, 2017).

Additionally, hikikomori can be viewed through Merton's functionalism, which sees the socially withdrawn as rejecting both culturally shared goals and the means to achieve those goals (Merton, 1968). Through this lens, hikikomori can be viewed as related to the conformist and conservative Japanese cultural values in which young adults conform to dominant life expectations (with emphasis on adjustment, maintenance of harmony, and the affirmation of interdependence with others) without having sufficient means to fulfill those expectations due to the growing insecurities of the labor market (Toivonen et al., 2011).

Among the hikikomori sufferers are several common themes. The first is that of society being viewed as demanding and unjust. These stem from hikikomori sufferers who are found to have a lack of education and income, and incapable of accessing valuable resources and social positions, thus implying that they are failing to integrate into society in general. They encounter a loss of income status and meaning in a society that values work. Second, hikikomori sufferers view their withdrawal as deriving from mental health problems, often viewing themselves as lacking the social skills to manage social settings. They view their psychological states as preceding their social positions, indicating a solid emphasis on failure. Finally, they view their lack of self-efficacy as linked to exerting influence to control one's life circumstances, well-being, and ability to affect outcomes. This feeling of lacking control over these important aspects of their lives leads to a withdrawal from society.

Hikikomori in other countries

Initially seen as a social problem in Japan for the past three decades, it has recently been recognized in other countries, mainly European (Suwa & Suzuki, 2013).

In these cases, there are degrees of social withdrawal (Aguglia et al., 2010; Kato et al., 2012; Saito et al., 2001; Teo et al., 2015; Watts, 2002). The first such example is Internet Addiction, which has been reported in several countries. For example, South Korea has found it to be a severe problem among adolescents, with one researcher noting the psychological similarities with hikikomori (Park et al., 2008). Kim reported that *'recluse type'* internet addicts do not leave home, not only because they are absorbed by the internet but also because they have a tendency to avoid communication with others. The difference in these presentations is that the hikikomori aspect results from being absorbed by the internet (Park et al., 2008).

In England, NEETs are the subject of public policy concern. Similarities have been identified with hikikomori in that both do not work or study. However, the difference lies in how society views them. England views NEETs as a labor-related problem and is not concerned with the individual's mental tendencies, contrasting Japan's hikikomori views (Bynner & Parsons, 2002). In Finland, a similar concept, *'Perakammarin Pika'*, exists and refers to adult males living in the parental home who have not married or gained independence from their parents (Valaskivi & Hoikkala, 2006). Other case reports have indicated that hikikomori has been observed in other eastern countries such as South Korea, Hong Kong, China, Bangladesh, Taiwan, Thailand, and India as well as western countries such as Australia, Spain, Italy, France, Austria, Canada, Brazil, and the United States (Chong & Chan, 2012; Furuhasi et al., 2013; García-Campayo, 2007; Gondim et al., 2017; Guedj-Bourdiau, 2011; Kim et al., 2008; Lee et al., 2013; Malagón-Amor, 2014; Ovejero et al., 2013; Stip et al., 2016; Tajan, 2015; Teo, 2013; Teo et al., 2015; Wong, 2009; Wong et al., 2014; Yong &

Kaneko, 2016). In these reports, the number of cases and insufficient information made it difficult to determine whether the psychological features were the same as those seen in Japanese hikikomori.

To better understand these disparate presentations, Kato et al. surveyed psychiatrists in eight other countries, asking if they believed hikikomori existed in their own country based on two typical case reports of hikikomori (Kato et al., 2012). A total of 124 psychiatrists from these countries said that hikikomori could be diagnosed in the people of their country (Kato et al., 2012). From this, Kato and colleagues determined that hikikomori cases existed not only in Japan but in other parts of Asia, Australia, Hong Kong, Spain, and the US (Chan & Lo, 2014; Malagon et al., 2010; Teo, 2013; Wong & Ying, 2006). Further, Kato and colleagues even identified differences regarding diagnosis and treatment between Japanese psychiatrists and their international contemporaries (Kato et al., 2012). One possibility noted was varying interpretations of features and pathology evoked by the case reports presented. Due to this, it has remained difficult to directly conclude that the same type of hikikomori was found in Japan as in other countries.

Although there may be differences in cultural norms (e.g., individualistic vs. collectivistic), there may still be pressure to meet social expectations. In both types of cultures, escapes may exist from the societal pressure of everyday encounters. Some escapes, such as the internet, replace those everyday encounters with virtual networks in chat rooms and activities such as gaming and entertainment (Valaskivi & Hoikkala, 2006).

CHAPTER II METHODS

Study Aim

This study will explore what common trends may exist in hikikomori presentation in countries with different cultural backgrounds. The study will compare the impressions of psychiatric residents and psychiatrists of varying ages in nine countries to determine whether common cultural trends exist when interpreting and diagnosing hikikomori. Here are several hypotheses that will explore: It is hypothesized that cases in countries with individualistic cultures, more diagnoses of personality disorders (or conditions reflecting disorders that are inherent to the person) will be observed (Hypothesis 1). Additionally, it is hypothesized that countries with collectivistic cultures will have more cases of hikikomori, as well as adjustment, phobic, or traumatic disorders (or reflecting of disorders that suggest a rejection of society out of fear or negative experiences) will be observed (Hypothesis 2). Thirdly, we expect to see differences in treatment approaches between individualistic and collectivistic cultures (Hypothesis 3). In individualistic cultures tends to focus on treatment types where the individual receives treatment alone, whereas collectivistic cultures tend to involve community support or treatment groups. Finally, we will observe professionals' impressions of parents' influence on the disorder's development. We hypothesize that collectivistic cultures would see a more significant influence from the family than individualistic cultures (Hypothesis 4). We are seeking to examine the extent to which symptoms specific to hikikomori are more widespread even in Western societies, with the difference being primarily in its interpretation and treatment approach.

Study Design

This study will conduct a secondary data analysis using the data collected by Kato et al. (2010) from their initial nine-country investigation on whether patients with typical hikikomori syndrome were perceived as occurring in Japan as well as other countries and how the cases were evaluated and treated. The data was collected by surveying psychiatrists and psychiatric residents in nine countries. They were presented with two case vignettes based on hikikomori syndrome. They were asked to fill out an anonymous questionnaire about the causes, diagnosis, and other issues related to their understanding of the syndrome.

Kato et al. (2010)' study was conducted in two waves. The first was conducted from May to July 2010 in Japan and was administered by local coordinators who belonged to two psychiatric hospitals and six university hospitals and their affiliated hospitals across Japan. The survey was administered to a convenience sample of psychiatrists and residents, but coordinators were encouraged to randomly distribute the recruitment among psychiatrists of varying ages and years of experience. The survey was conducted either in person or via mail.

The second wave of the survey was administered across the remaining eight countries. This was done by back-translating the survey between Japanese and English. Local coordinators in the eight countries were identified with the help of the international section of the Japanese Society of Psychiatry and Neurology (JSPN) and the network of Young Psychiatrists Organization in each country. These local coordinators were then provided the exact instructions for administration as the Japanese cohorts were given.

Surveys were collected in their local communities and returned to the principal investigator (Takahiro Kato) by August 2010.

Vignettes

The vignettes described two cases, one of an adolescent and one of an adult, and presented as follows:

Clinical Case A

"Mr. A, a 15-year-old junior high school student. (His parents say) He obstinately refuses to see us and never leaves his room.

Social History

He is the first son, with a younger brother. He is brought up by his father, who is a company employee, and his mother, who works part-time. His father, a salesman, has been transferred every 2-3 years and moved with his whole family, but when he entered junior high school, his father moved by himself, so he now lives with his mother and a brother 3 years his junior. There was nothing particularly problematic during his development and his school grades were medium but not bad. He naturally found it hard to make friends and he would prefer reading books rather than sports. Half a year after entering junior high school, he suddenly stopped going to school. At home, he is absorbed in PC games and Internet, he hardly ever leaves his room, and his day and night are reversed.

Past Psychiatric History

None.

Family History

None.

History of Present Illness

After 2 years of his school absenteeism when his entrance exams for senior high school were near at hand, his father returned home and warned him: ‘Why don’t you go to school once in a while? Can’t you be serious about your future?’, to which he yelled: ‘I don’t need you to tell me that!’ and he suddenly used violence on his father. While his father was dumbfounded, he headed back to his room. A few days later, his parents made their mind to force him to come with them to the nearby psychiatric faculty where he is examined by you.

Drug History

None.

Mental Status on First Interview

Mr. A, just standing between his parents kept silent, with his head hung down. His parents bowed and described his life history and problematic situations. From beginning to end, he just kept looking downwardly. His attitude does not imply any psychotic experience, such as delusion/ hallucination. He just seems to be withdrawn into his own shell. Even when you addressed him: ‘Mr. A’, he did not replay at all.”

Clinical Case B

“Mr. B, a 24-year-old male living with his parents. (His parents say) He never comes out of his own room. (Mr. B) just keeps saying ‘I don’t know’.

Social History

He is an only child. He is brought up by his parents in a two-bedroom urban apartment. There was nothing particularly problematic during his development until elementary school. In junior high school, he often skipped school and avoided mingling with peers, which he linked to experiences such as being bullied by classmates in elementary school. His academic performance was historically good, and he directly entered a middle-class university of engineering faculty, but 3 years ago (third grade, 21 years old) Mr. B dropped out of university for lack of motivation.

Family History

None.

History of Present Illness

For the last 3 years, he has hardly ever left his room, spending 23 hrs a day behind its closed door. He eats food prepared by his mother who leaves trays outside his bedroom. He sleeps all day, then awakes in the evening to spend his time surfing the Internet, chatting on online bulletin boards, reading manga (comic books), and playing video games. Despite parental encouragement, he has repeatedly resisted going to vocational school or taking a job.

Past Psychiatric History

Since last year, his parents have taken him to several local hospitals where he was variously diagnosed with depression and latent schizophrenia. On mental status exam, he had a flat affect, denied depressed mood or anxiety, and answered most questions saying ‘I don’t know'. Neuro-psychological testing revealed no cognitive abnormalities. Brain imaging and standard screening laboratory studies for altered mental status were

unremarkable. He failed trials of psychotropic medications including antidepressants and antipsychotics.

Mental Status Exam on First Interview

Expecting a possible solution of his social withdrawal, his parents brought him to the psychiatric faculty where he is examined by you. Mr. B, just standing between his parents kept silent politely. His attitude does not imply any psychotic experience, such as delusion/ hallucination. He just seems to be a quiet person. Even when you addressed him, he just replied ‘I don’t know’.

Development of the Questionnaire

Kato et al. (2010) developed their questionnaire based on two case vignettes of hikikomori in Japan. These vignettes were developed by reviewing the literature and experts’ comments. As a result, an emphasis on prolonged cases with problematic behaviors was incorporated into the vignette. Also, clinical and historical correlations observed in hikikomori by researchers and clinicians, such as being bullied in school, poor academic performance, and intermittent violent outbursts, were included. The second case vignette was adapted explicitly from one previously published by Teo (2010). Kato et al. refrained from providing a complete mental status examination and follow-up data to stimulate the imagination of the surveyed participants.

The questionnaire was self-administered, and participants evaluated the following on a 5-point Likert scale after reading a vignette: The frequency of the case in one’s country, cause, diagnosis, suicide risk assessment, and treatment plan. Participants also separately scored their impression on the influence of the mother and their impression of the father on the development of hikikomori. As such, N was the same for both responses

unless otherwise noted. The participants' demographics, including their experience and length of training in psychiatry, were also noted.

Coding procedure

All information was provided via an Excel spreadsheet, including the following information: Country of participants, reason for diagnosis, ICD diagnosis, DSM diagnosis, free written diagnosis, and optimal intervention when treating the patient. Data was converted into a SPSS spreadsheet, and ICD/ DSM diagnoses were recoded to standardized answers. Additional coding defined countries as individualistic or collectivistic in a culture based on the Hofstede Cultural Dimensions scores for individualistic vs. collectivistic dimensions. Countries with a score of 50 or below were coded as collectivistic (e.g., Bangladesh, Chile, India, Iran, Taiwan, and Thailand). Countries with a score of 51 or higher were scored as individualistic (e.g., Australia, Japan, South Korea, and the United States).

Statistical analysis

Statistical analysis was performed using SPSS 29.0.2. A Chi-Square Test of Independence determined the frequency of diagnoses across countries and cultural types. Additionally, percentages of the diagnoses based on the country and culture were examined to determine the weight of the diagnosis in the group. The top three diagnoses were recorded and compared against the hypothesis.

CHAPTER III RESULTS

Clinical Case A

A Chi-Square Test of Independence was executed to evaluate the professional impressions of ICD-10 diagnosis across countries. The observed frequencies are presented in Table 1. The frequencies observed in Table 1 did not provide support to hypothesis 1 as personality disorders were only chosen once in a collectivistic country. The frequencies also did not provide support for hypothesis 2 as most adjustment disorders were observed in individualistic countries.

Country Name		No Diagnosis	Adjustment Disorder	Asperger's Syndrome	Autism Spectrum	Bipolar Disorder	Childhood Disorder of Social Functioning	Childhood Emotional Disorder	Conduct Disorder	Dysthymia	Major Depressive Disorder	Oppositional Defiance Disorder
Australia	Count	14	0	0	0	0	0	0	0	0	3	0
	Expected Count	11.6	1.1	0.3	0.2	.1	0.5	0.2	0.6	0.3	1.4	.1
	% Within Country	73.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	15.8%	0.0%
Bangladesh	Count	2	0	0	0	0	0	0	1	3	2	1
	Expected Count	6.1	0.6	0.2	0.1	0.1	0.3	0.1	0.3	0.2	0.7	0.1
	% Within Country	20.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	10.0%	30.0%	20.0%	10.0%
Chile	Count	6	0	0	0	0	0	0	0	0	0	0
	Expected Count	3.7	0.4	0.1	0.1	0.0	0.2	0.1	0.2	0.1	0.4	0.0
	% Within Country	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
India	Count	0	0	0	0	0	0	0	1	0	1	0
	Expected Count	3.1	0.3	0.1	0.1	0.0	0.1	0.1	0.2	0.1	0.4	0.0
	% Within Country	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	20.0%	0.0%	20%	0.0%
Iran	Count	3	0	0	0	0	0	0	0	0	2	0
	Expected Count	3.7	0.4	0.1	0.1	0.0	0.2	0.1	0.2	0.1	0.4	0.0
	% Within Country	50.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	33.3%	0.0%
Japan	Count	46	9	3	2	1	5	2	2	0	2	0
	Expected Count	49.5	4.7	1.3	0.9	0.4	2.2	0.9	2.6	1.3	6.0	0.4
	% Within Country	56.8%	11.1%	3.7%	2.5%	1.2%	6.2%	2.5%	2.5%	0.0%	2.5%	0.0%
South Korea	Count	26	0	0	0	0	0	0	1	0	2	0
	Expected Count	20.8	2.0	0.5	0.4	0.2	0.9	0.4	1.1	0.5	2.5	0.2
	% Within Country	76.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.9%	0.0%	5.9%	0.0%
Taiwan	Count	10	0	0	0	0	0	0	0	0	1	0
	Expected Count	6.7	0.6	0.1	0.1	0.1	0.3	0.1	0.4	0.2	0.8	0.1
	% Within Country	90.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	9.1%	0.0%
Thailand	Count	4	2	0	0	0	0	0	0	0	0	0
	Expected Count	4.9	0.5	0.1	0.1	0.0	0.2	0.1	0.3	0.1	0.6	0.0
	% Within Country	50.0%	25%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
USA	Count	4	0	0	0	0	0	0	1	0	1	0
	Expected Count	4.9	0.5	0.1	0.1	0.0	0.2	0.1	0.3	0.1	0.6	0.0
	% Within Country	50%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	12.5%	0.0%	12.5%	0.0%
Total	Count	115	11	3	2	1	5	2	6	3	14	1
	Expected Count	115.0	11.0	3.0	2.0	1.0	5.0	2.0	6.0	3	14.0	1.0
	% Within Country	61.2%	5.9%	1.6%	1.1%	0.5%	2.7%	1.1%	3.2%	1.6%	7.4%	0.5%

Table 1. ICD-10 Diagnostic Impressions Across Countries

Country Name		Other Impulse Disorder	Personality Disorder	Prodromal Schizophrenia	Schizoid Personality	Schizophrenia	Separation Anxiety Disorder	Social Phobia	Unspecified Disorder of Psychological Development	Unspecified Mood Disorder	Unspecified Psychosis	Total
Australia	Count	0	0	0	0	0	1	0	0	0	1	19
	Expected Count	0.1	0.1	0.1	0.5	0.6	0.2	0.2	0.2	0.1	0.4	19.0
	% Within Country	0.0%	0.0%	0.0%	0.0%	0.0%	5.3%	0.0%	0.0%	0.0%	5.3%	100.0%
Bangladesh	Count	0	1	0	0	0	0	0	0	0	0	10
	Expected Count	.1	0.1	0.1	0.3	0.3	0.1	0.1	0.1	0.1	0.2	10.0
	% Within Country	0.0%	10.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%
Chile	Count	0	0	0	0	0	0	0	0	0	0	6
	Expected Count	0.0	0.0	0.0	0.2	0.2	0.1	0.1	0.1	0.0	0.1	6.0
	% Within Country	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%
India	Count	0	0	0	3	0	0	0	0	0	0	5
	Expected Count	0.0	0.0	0.0	0.1	0.2	0.1	0.1	0.1	0.0	0.1	5.0
	% Within Country	0.0%	0.0%	0.0%	60.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%
Iran	Count	0	0	0	0	1	0	0	0	0	0	6
	Expected Count	0.0	0.0	0.0	0.2	0.2	0.1	0.1	0.1	0.0	0.1	6.0
	% Within Country	0.0%	0.0%	0.0%	0.0%	16.7%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%
Japan	Count	1	0	0	0	5	0	0	2	1	0	81
	Expected Count	0.4	0.4	0.4	2.2	2.6	0.9	0.9	0.9	0.4	1.7	81.0
	% Within Country	1.2%	0.0%	0.0%	0.0%	6.2%	0.0%	0.0%	2.5%	1.2%	0.0%	100.0%
South Korea	Count	0	0	0	0	0	2	2	0	0	3	34
	Expected Count	0.2	0.2	0.2	0.9	1.1	0.4	0.4	0.4	0.2	0.7	34.0
	% Within Country	0.0%	0.0%	0.0%	0.0%	0.0%	5.9%	5.9%	0.0%	0.0%	8.8%	100.0%
Taiwan	Count	0	0	0	0	0	0	0	0	0	0	11
	Expected Count	0.1	0.1	0.1	0.3	0.4	0.1	0.1	0.1	0.1	0.2	11.0
	% Within Country	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%
Thailand	Count	0	0	1	1	0	0	0	0	0	0	8
	Expected Count	0.0	0.0	0.0	0.2	0.3	0.1	0.1	0.1	0.1	0.2	8.0
	% Within Country	0.0%	0.0%	12.5%	12.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%
USA	Count	0	0	1	1	0	0	0	0	0	0	8
	Expected Count	0.0	0.0	0.0	0.2	0.3	0.1	0.1	0.1	0.0	0.2	8.0
	% Within Country	0.0%	0.0%	12.5%	12.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%
Total	Count	1	1	1	5	6	2	2	2	1	4	188
	Expected Count	1.0	1.0	1.0	5.0	6.0	2.0	2.0	2.0	1.0	4.0	188.0
	% Within Country	0.5%	0.5%	0.5%	2.7%	3.2%	1.1%	1.1%	1.1%	0.5%	2.1%	100.0%

ICD-10 Diagnostic Impressions Across Countries (Continued)

The analysis resulted in a Chi-Square statistic *(χ^2)* of 299.925, with 180 degrees of freedom. The p-value was less than 0.001, below the alpha level of 0.05, suggesting a statistically significant association between ICD-10 diagnosis and country. This suggests that the country of the professional may influence their diagnostic opinion. Also, an effect size was calculated using Cramer's V, which was 0.421. This effect size is both significant and relatively strong in magnitude. Across individualistic countries, the most common diagnosis selected were adjustment disorder, major depressive disorder, and schizophrenia. Across collectivistic countries, the most common diagnosis selected were major depressive disorder, schizoid personality disorder, and dysthymia.

To evaluate the professional impression of DSM-IV-TR diagnosis across countries, a Chi-Square Test of Independence was executed. The observed frequencies are presented in Table 2. The frequencies observed in Table 2 did not provide support to hypothesis 1 as personality disorders were only chosen three times in collectivistic countries. The frequencies also did not provide support for hypothesis 2 as most adjustment disorders were observed in individualistic countries.

Country Name		No Diagnosis	Adjustment Disorder	Anxiety Disorder	Autism Spectrum	Bipolar Disorder	Childhood Disorder of Social Functioning	Childhood Emotional Disorder	Conduct Disorder	Dysthymia	Major Depressive Disorder	Oppositional Defiance Disorder
Australia	Count	11	0	1	0	0	0	0	0	0	5	0
	Expected Count	0.9	1.8	0.1	0.3	.1	0.3	0.1	0.5	0.3	2.0	0.2
	% Within Country	57.9%	0.0%	5.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	26.3%	0.0%
Bangladesh	Count	1	0	0	0	0	0	0	3	0	2	1
	Expected Count	4.7	1.0	0.1	0.2	0.1	0.2	0.1	0.3	0.2	1.1	0.1
	% Within Country	10.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	30.0%	0.0%	20.0%	10.0%
Chile	Count	3	0	0	0	0	0	0	0	0	0	0
	Expected Count	2.8	0.6	0.0	0.1	0.0	0.1	0.0	0.2	0.1	0.6	0.1
	% Within Country	50.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
India	Count	3	0	0	0	0	0	0	1	0	1	0
	Expected Count	2.3	0.5	0.0	0.1	0.0	0.1	0.0	0.2	0.1	0.5	0.1
	% Within Country	60.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	20.0%	0.0%	0.0%	0.0%
Iran	Count	4	0	0	0	0	0	0	0	0	1	0
	Expected Count	2.8	0.6	0.0	0.1	0.0	0.1	0.0	0.2	0.1	0.6	0.1
	% Within Country	66.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	16.7%	0.0%
Japan	Count	50	11	0	3	1	3	1	0	0	2	0
	Expected Count	37.9	7.8	0.4	1.3	0.4	1.3	0.4	2.2	1.3	8.6	0.9
	% Within Country	61.7%	13.6%	0.0%	3.7%	1.2%	3.7%	1.2%	0.0%	0.0%	2.5%	0.0%
South Korea	Count	8	3	0	0	0	0	0	1	2	6	1
	Expected Count	15.9	3.3	0.2	0.5	0.2	0.5	0.2	0.9	0.5	3.6	0.4
	% Within Country	23.5%	8.8%	0.0%	0.0%	0.0%	0.0%	0.0%	2.9%	5.9%	17.6%	2.9%
Taiwan	Count	3	2	0	0	0	0	0	0	1	1	0
	Expected Count	5.1	1.1	0.1	0.2	0.1	0.2	0.1	0.3	0.2	1.2	0.1
	% Within Country	27.3%	18.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	9.1%	9.1%	0.0%
Thailand	Count	3	2	0	0	0	0	0	0	0	0	0
	Expected Count	3.7	0.8	0.0	0.1	0.0	0.1	0.1	0.2	0.1	0.9	0.1
	% Within Country	37.5%	25%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
USA	Count	2	0	0	0	0	0	0	0	0	3	0
	Expected Count	3.7	0.8	0.0	0.1	0.0	0.1	0.1	0.2	0.1	0.9	0.1
	% Within Country	25.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	37.5%	0.0%
Total	Count	88	18	1	3	1	3	1	5	3	20	2
	Expected Count	88.0	18.0	1.0	3.0	1.0	3.0	1.0	5.0	3	20.0	2.0
	% Within Country	46.8%	9.6%	0.5%	1.6%	0.5%	1.6%	0.5%	2.7%	1.6%	10.6%	1.1%

Table 2. DSM-IV-TR Diagnostic Impressions Across Countries

Country Name		Other Impulse Disorder	Parent-Child Relational Disorder	Personality Disorder	Schizoid Personality	Schizophrenia	Separation Anxiety Disorder	Social Phobia	Unspecified Mood Disorder	Unspecified Psychosis	Total
Australia	Count	0	0	0	0	0	1	0	0	1	19
	Expected Count	0.8	0.3	0.3	0.9	0.8	0.5	0.2	0.1	0.4	19.0
	% Within Country	0.0%	0.0%	0.0%	0.0%	0.0%	5.3%	0.0%	0.0%	5.3%	100.0%
Bangladesh	Count	0	1	2	0	0	0	0	0	0	10
	Expected Count	.4	0.2	0.2	0.5	0.4	0.3	0.1	0.1	0.2	10.0
	% Within Country	0.0%	10.0%	20.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%
Chile	Count	3	0	0	0	0	0	0	0	0	6
	Expected Count	0.3	0.1	0.1	0.3	0.3	0.2	0.1	0.0	0.1	6.0
	% Within Country	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%
India	Count	0	0	0	1	0	0	0	0	0	5
	Expected Count	0.2	0.1	0.1	0.2	0.2	0.1	0.1	0.0	0.1	5.0
	% Within Country	0.0%	0.0%	0.0%	20.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%
Iran	Count	0	0	0	0	1	0	0	0	0	6
	Expected Count	0.3	0.1	0.1	0.3	0.3	0.2	0.1	0.0	0.1	6.0
	% Within Country	0.0%	0.0%	0.0%	0.0%	16.7%	0.0%	0.0%	0.0%	0.0%	100.0%
Japan	Count	1	2	0	0	5	0	0	1	1	81
	Expected Count	3.4	1.3	1.3	3.9	3.4	2.2	0.9	0.4	1.7	81.0
	% Within Country	1.2%	2.5%	0.0%	0.0%	6.2%	0.0%	0.0%	1.2%	1.2%	100.0%
South Korea	Count	4	0	0	5	0	0	2	0	2	34
	Expected Count	1.4	0.5	0.5	1.6	1.4	0.9	0.4	0.2	0.7	34.0
	% Within Country	11.8%	0.0%	0.0%	14.7%	0.0%	0.0%	5.9%	0.0%	5.9%	100.0%
Taiwan	Count	0	0	1	2	0	1	0	0	0	11
	Expected Count	0.5	0.2	0.2	0.5	0.5	0.3	0.1	0.1	0.2	11.0
	% Within Country	0.0%	0.0%	9.1%	18.2%	0.0%	9.1%	0.0%	0.0%	0.0%	100.0%
Thailand	Count	0	0	0	1	0	2	0	0	0	8
	Expected Count	0.3	0.1	0.1	0.4	0.3	0.2	0.1	0.1	0.2	8.0
	% Within Country	0.0%	0.0%	0.0%	12.5%	0.0%	25.0%	0.0%	0.0%	0.0%	100.0%
USA	Count	0	0	0	0	2	1	0	0	0	8
	Expected Count	0.3	0.1	0.1	0.4	0.3	0.2	0.1	0.0	0.2	8.0
	% Within Country	0.0%	0.0%	0.0%	0.0%	25.0%	12.5%	0.0%	0.0%	0.0%	100.0%
Total	Count	8	3	3	9	8	5	2	1	4	188
	Expected Count	8.0	3.0	3.0	9.0	8.0	5.0	2.0	1.0	4.0	188.0
	% Within Country	4.3%	1.6%	1.6%	4.8%	4.3%	2.7%	1.1%	0.5%	2.1%	100.0%

DSM-IV-TR Diagnostic Impressions Across Countries (Continued)

The analysis yielded a Chi-Square statistic (χ^2) of 267.084 with 171 degrees of freedom. The p-value was less than 0.001, below the alpha level of 0.05, suggesting a statistically significant association between DSM-IV-TR diagnosis and country. This suggests that the country of the professional may influence their diagnostic opinion. Also, the effect size was calculated using Cramer's V, which was 0.397. While this effect size is statistically significant, it is only moderately strong in magnitude. Across individualistic countries, the most common diagnosis selected were major depressive disorder, adjustment disorders, and schizoid personality disorder. Across collectivistic countries, the most selected diagnosis were major depressive disorder, schizoid personality disorder, and adjustment disorder.

A Chi-Square Test of Independence was executed to evaluate the professional impression of a Free Response diagnosis across countries. The observed frequencies are presented in Table 3. The frequencies observed in Table 3 did not provide support to hypothesis 1 as personality disorders were chosen more by participants in a collectivistic country. The frequencies also did not provide support for hypothesis 2 as most adjustment disorders were observed in individualistic countries.

Country Name		Hikikomori	Adjustment Disorder	Adolescent Paranoia	Anxiety Disorder	Asperger's Syndrome	Atypical Depression	Autism Spectrum Disorder	Child Rearing	Dysthymia	Internet Addiction	Loss of Interest	Major Depressive Disorder
Australia	Count	1	0	0	1	1	0	0	0	0	0	0	0
	Expected Count	1.3	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.3	0.3	0.1	0.3
	% Within Country	5.3%	0.0%	0.0%	5.3%	5.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Bangladesh	Count	0	0	0	0	0	0	0	0	1	1	0	0
	Expected Count	0.7	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.2
	% Within Country	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	10.0%	10.0%	0.0%	0.0%
Chile	Count	0	0	0	0	0	0	0	0	0	0	0	1
	Expected Count	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.1
	% Within Country	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	16.7%
India	Count	0	0	0	0	0	0	0	0	0	0	0	0
	Expected Count	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.1
	% Within Country	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Iran	Count	0	0	0	0	0	0	0	0	0	0	0	0
	Expected Count	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.1
	% Within Country	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Japan	Count	7	1	1	0	0	0	1	0	2	0	0	2
	Expected Count	5.6	0.4	0.4	0.4	0.4	0.4	0.4	0.4	1.3	1.3	0.4	1.3
	% Within Country	8.6%	1.2%	1.2%	0.0%	0.0%	0.0%	1.2%	0.0%	2.5%	0.0%	0.0%	2.5%
South Korea	Count	1	0	0	0	0	0	0	0	0	1	1	0
	Expected Count	2.4	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.5	0.5	0.2	0.5
	% Within Country	2.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.9%	2.9%	0.0%
Taiwan	Count	0	0	0	0	0	0	0	0	0	1	0	0
	Expected Count	0.8	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.2
	% Within Country	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	9.1%	0.0%	0.0%
Thailand	Count	2	0	0	0	0	0	0	1	0	0	0	0
	Expected Count	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.1
	% Within Country	25.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	12.5%	0.0%	0.0%	0.0%	0.0%
USA	Count	2	0	0	0	0	1	0	0	0	0	0	0
	Expected Count	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.1
	% Within Country	25.0%	0.0%	0.0%	0.0%	0.0%	12.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Total	Count	13	1	1	1	1	1	1	1	3	3	1	3
	Expected Count	13.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	3.0	3.0	1.0	3.0
	% Within Country	6.9%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	1.6%	1.6%	0.5%	1.6%

Table 3. Free Response Diagnostic Impressions Across Countries

Country Name		No Diagnosis	Oppositional Defiant Disorder	Personality Disorder	Pervasive Developmental Disorder	Prodromal Schizophrenia	Schizophrenia	School Refusal	Social Withdrawal	Unspecified Mood Disorder	Total
Australia	Count	15	0	1	0	0	0	0	0	0	19
	Expected Count	13.0	0.2	0.3	0.1	0.2	0.9	0.5	0.6	0.1	19.0
	% Within Country	78.9%	0.0%	5.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%
Bangladesh	Count	6	0	2	0	0	0	0	0	0	10
	Expected Count	6.9	0.1	0.2	0.1	0.1	0.5	0.3	0.3	0.1	10.0
	% Within Country	60.0%	0.0%	20.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%
Chile	Count	5	0	0	0	0	0	0	0	0	6
	Expected Count	4.1	0.1	0.1	0.0	0.1	0.3	0.2	0.2	0.0	6.0
	% Within Country	83.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%
India	Count	5	0	0	0	0	0	0	0	0	5
	Expected Count	3.4	0.1	0.1	0.0	0.1	0.2	0.1	0.2	0.0	5.0
	% Within Country	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%
Iran	Count	5	0	0	0	0	1	0	0	0	6
	Expected Count	4.1	0.1	0.1	0.0	0.1	0.3	0.2	0.2	0.0	6.0
	% Within Country	83.3%	0.0%	0.0%	0.0%	0.0%	16.7%	0.0%	0.0%	0.0%	100.0%
Japan	Count	49	0	0	1	0	6	5	5	1	81
	Expected Count	55.6	0.9	1.3	0.4	0.9	3.9	2.2	2.6	0.4	81.0
	% Within Country	60.5%	0.0%	0.0%	1.2%	0.0%	7.4%	6.2%	6.2%	1.2%	100.0%
South Korea	Count	27	2	0	0	1	1	0	0	0	34
	Expected Count	23.3	0.4	0.5	0.2	0.4	1.6	0.9	1.1	0.2	34.0
	% Within Country	79.4%	5.9%	0.0%	0.0%	2.9%	2.9%	0.0%	0.0%	0.0%	100.0%
Taiwan	Count	9	0	0	0	1	0	0	0	0	11
	Expected Count	7.5	0.1	0.2	0.1	0.1	0.5	0.3	0.4	0.1	11.0
	% Within Country	81.8%	0.0%	0.0%	0.0%	9.1%	0.0%	0.0%	0.0%	0.0%	100.0%
Thailand	Count	4	0	0	0	0	0	0	1	0	8
	Expected Count	5.5	0.1	0.1	0.0	0.1	0.4	0.2	0.3	0.0	8.0
	% Within Country	50.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	12.5%	0.0%	100.0%
USA	Count	4	0	0	0	0	1	0	0	0	8
	Expected Count	5.5	0.1	0.1	0.0	0.1	0.4	0.2	0.3	0.0	8.0
	% Within Country	50.0%	0.0%	0.0%	0.0%	0.0%	12.5%	0.0%	0.0%	0.0%	100.0%
Total	Count	129	2	3	1	2	9	5	6	1	188
	Expected Count	129.0	2.0	3.0	1.0	2.0	9.0	5.0	6.0	1.0	188.0
	% Within Country	68.6%	1.1%	1.6%	0.5%	1.1%	4.8%	2.7%	3.2%	0.5%	100.0%

Free Response Diagnostic Impressions Across Countries (Continued)

The analysis yielded a Chi-Square statistic (χ^2) of 181.889 with 180 degrees of freedom. The p-value was 0.447, above the alpha level of 0.05, suggesting no statistically significant association between Free Response diagnosis and country. This indicates that there is no relationship between the country of the professional and providing a diagnosis. Also, the effect size was calculated using Cramer's V, which was 0.328. While this effect size is not statistically significant, it is moderately strong in magnitude. While not statistically significant, we did find a difference between cultures and the most common diagnosis chosen. Across individualistic countries, the most common diagnosis selected were hikikomori, schizophrenia, school refusal, and social withdrawal. Across collectivistic countries, the most common diagnosis selected were hikikomori, internet addiction, and personality disorder.

A Chi-Square Test of Independence was executed to evaluate the professional impression of Optimal Intervention across countries. The observed frequencies are presented in Table 4. The frequencies observed in Table 4 provided some support for Hypothesis 3 as individual therapy was selected more by participants in individualistic countries. Psychotherapy was chosen most often as an intervention, but participants did not explain whether this meant individual or group psychotherapy.

Country Name		No Response	Building Relationships	Child Psychiatry	Community Support	Environmental Intervention	Family Intervention	Family Therapy	Individual Therapy	Inpatient Hospitalization	Medical Treatment	Monitor Progress	Outpatient Follow-Up
Australia	Count	15	0	0	0	0	0	3	0	0	0	0	0
	Expected Count	13.2	0.1	0.1	0.5	0.2	0.4	0.4	0.3	0.2	0.1	0.1	0.3
	% Within Country	78.9%	0.0%	0.0%	0.0%	0.0%	0.0%	15.8%	0.0%	0.0%	0.0%	0.0%	0.0%
Bangladesh	Count	10	0	0	0	0	0	0	0	0	0	0	0
	Expected Count	7.0	0.1	0.1	0.3	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.2
	% Within Country	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Chile	Count	6	0	0	0	0	0	0	0	0	0	0	0
	Expected Count	4.2	0.0	0.0	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.1
	% Within Country	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
India	Count	5	0	0	0	0	0	0	0	0	0	0	0
	Expected Count	3.5	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.1
	% Within Country	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Iran	Count	6	0	0	0	0	0	0	0	0	0	0	0
	Expected Count	4.2	0.0	0.0	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.1
	% Within Country	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Japan	Count	45	1	1	5	1	4	1	3	1	1	1	3
	Expected Count	56.4	0.4	0.4	2.2	0.9	1.7	1.7	1.3	0.9	0.4	0.4	1.3
	% Within Country	55.6%	1.2%	1.2%	6.2%	1.2%	4.9%	1.2%	3.7%	1.2%	1.2%	1.2%	3.7%
South Korea	Count	17	0	0	0	1	0	0	0	1	0	0	0
	Expected Count	23.7	0.2	0.2	0.9	0.4	0.7	0.7	0.5	0.4	0.2	0.2	0.5
	% Within Country	50.0%	0.0%	0.0%	0.0%	2.9%	0.0%	0.0%	0.0%	2.9%	0.0%	0.0%	0.0%
Taiwan	Count	11	0	0	0	0	0	0	0	0	0	0	0
	Expected Count	7.7	0.1	0.1	0.3	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.2
	% Within Country	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Thailand	Count	8	0	0	0	0	0	0	0	0	0	0	0
	Expected Count	5.6	0.0	0.0	0.2	0.1	0.2	0.2	0.1	0.1	0.0	0.0	0.1
	% Within Country	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
USA	Count	8	0	0	0	0	0	0	0	0	0	0	0
	Expected Count	5.6	0.0	0.0	0.2	0.1	0.2	0.2	0.1	0.1	0.0	0.0	0.1
	% Within Country	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Total	Count	131	1	1	5	2	4	4	3	2	1	1	3
	Expected Count	131.0	1.0	1.0	5.0	2.0	4.0	4.0	3.0	2.0	1.0	1.0	3.0
	% Within Country	69.7%	0.5%	0.5%	2.7%	1.1%	2.1%	2.1%	1.6%	1.1%	0.5%	0.5%	1.6%

Table 4.Optimal Intervention Impressions Across Countries

Country Name		Pharmacotherapy	Psychoeducation	Psychotherapy	Psychotherapy and Pharmacotherapy	Self-Help Groups	Total
Australia	Count	0	0	1	0	0	19
	Expected Count	1.0	0.3	1.2	0.4	0.1	19.0
	% Within Country	0.0%	0.0%	5.3%	0.0%	0.0%	100.0%
Bangladesh	Count	0	0	0	0	0	10
	Expected Count	0.5	0.2	0.6	0.2	0.1	10.0
	% Within Country	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%
Chile	Count	0	0	0	0	0	6
	Expected Count	0.3	0.1	0.4	0.1	0.0	6.0
	% Within Country	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%
India	Count	0	0	0	0	0	5
	Expected Count	0.3	0.1	0.3	0.1	0.0	5.0
	% Within Country	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%
Iran	Count	0	0	0	0	0	6
	Expected Count	0.3	0.1	0.4	0.1	0.0	6.0
	% Within Country	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%
Japan	Count	0	3	8	2	1	81
	Expected Count	4.3	1.3	5.2	1.7	0.4	81.0
	% Within Country	0.0%	3.7%	9.9%	2.5%	1.2%	100.0%
South Korea	Count	10	0	3	2	0	34
	Expected Count	1.8	0.5	2.2	0.7	0.2	34.0
	% Within Country	29.4%	0.0%	8.8%	5.9%	0.0%	100.0%
Taiwan	Count	0	0	0	0	0	11
	Expected Count	0.6	0.2	0.7	0.2	0.1	11.0
	% Within Country	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%
Thailand	Count	0	0	0	0	0	8
	Expected Count	0.4	0.1	0.5	0.2	0.0	8.0
	% Within Country	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%
USA	Count	0	0	0	0	0	8
	Expected Count	0.4	0.1	0.5	0.2	0.0	8.0
	% Within Country	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%
Total	Count	10	3	12	4	1	188
	Expected Count	10.0	3.0	12.0	4.0	1.0	188.0
	% Within Country	5.3%	1.6%	6.4%	2.1%	0.5%	100.0%

Optimal Intervention Impressions Across Countries (Continued)

The analysis resulted in a Chi-Square statistic (χ^2) of 123.064 with 153 degrees of freedom. The associated p-value was 0.964, above the alpha level of 0.05, suggesting no statistically significant association between Optimal Intervention and country. This suggests that there is no relationship between the country of origin of the participant and the optimal intervention. Also, the effect size was calculated using Cramer's V, which was 0.270. While this effect size is not statistically significant, it is moderately strong in magnitude. The most selected interventions in individualistic countries were psychotherapy, pharmacotherapy, and community support. No interventions were selected across collectivistic countries.

An average of responses was used to evaluate the professional impression of parents' influence across countries. The observed means and standard deviations are presented in Table 5. These results did not support Hypothesis 4 as most cases saw similar impressions of influence across countries.

Country Name	N	Impression on the Influence of	Mean	Std. Deviation
Australia	18	Mother Father	3.56 4.00	.784 .907
Bangladesh	10	Mother Father	3.30 4.00	1.337 .943
Chile	6	Mother Father	3.67 4.17	.816 .753
India	5	Mother Father	2.60 2.80	1.342 1.304
Iran	6	Mother Father	2.00 2.17	.894 .753
Japan	77 78	Mother Father	3.81 3.87	.974 .873
South Korea	34	Mother Father	3.29 3.29	.906 .938
Taiwan	10	Mother Father	4.00 3.80	1.054 .916
Thailand	8	Mother Father	3.63 3.63	1.188 1.188
USA	8	Mother Father	3.38 3.88	1.061 1.126

Table 5. Average Impression of the Influence of Parents Across Countries

A Chi-Square Test of Independence was executed to evaluate the professional impression of ICD-10 diagnosis across Cultural Types. The observed frequencies are presented in Table 6. The frequencies observed in Table 6 did not provide support to hypothesis 1 as personality disorders were only chosen once in a collectivistic culture. The frequencies also did not provide support for hypothesis 2 as most adjustment disorders were observed in an individualistic culture.

Culture Type		No Diagnosis	Adjustment Disorder	Asperger's Syndrome	Autism Spectrum Disorder	Bipolar Disorder	Childhood Disorder of Social Functioning	Childhood Emotional Disorder	Conduct Disorder	Dysthymia	Major Depressive Disorder	Oppositional Defiance Disorder
Collectivistic	Count	25	2	0	0	0	0	0	2	3	6	1
	Expected Count	28.1	2.7	0.7	0.5	0.2	1.2	0.5	1.5	0.7	3.4	0.2
	% Within Country	54.3%	4.3%	0.0%	0.0%	0.0%	0.0%	0.0%	4.3%	6.5%	13.0%	2.2%
Individualistic	Count	90	9	3	2	1	5	2	4	0	8	0
	Expected Count	86.9	8.3	2.3	1.5	0.8	3.8	1.5	4.5	2.3	10.6	0.8
	% Within Country	63.4%	6.3%	2.1%	1.4%	0.7%	3.5%	1.4%	2.8%	0.0%	5.6%	0.0%
Total	Count	115	11	3	2	1	5	2	6	3	14	1
	Expected Count	115.0	11.0	3.0	2.0	1.0	5.0	2.0	6.0	3.0	14.0	1.0
	% Within Country	61.2%	5.9%	1.6%	1.1%	0.5%	2.7%	1.1%	3.2%	1.6%	7.4%	0.5%

Culture Type		Other Impulse Disorder	Personality Disorder	Prodromal Schizophrenia	Schizoid Personality	Schizophrenia	Separation Anxiety Disorder	Social Phobia	Unspecified Disorder of Psychological Development	Unspecified Mood Disorder	Unspecified Psychosis	Total
Collectivistic	Count	0	1	0	4	1	1	0	0	0	0	46
	Expected Count	0.2	0.2	0.2	1.2	1.5	0.5	0.5	0.5	0.2	1.0	46.0
	% Within Country	0.0%	2.2%	0.0%	8.7%	2.2%	2.2%	0.0%	0.0%	0.0%	0.0%	100.0%
Individualistic	Count	1	0	1	1	5	1	2	2	1	4	142
	Expected Count	0.8	0.8	0.8	3.8	4.5	1.5	1.5	1.5	0.8	3.0	142.0
	% Within Country	0.7%	0.0%	0.7%	0.7%	3.5%	0.7%	1.4%	1.4%	0.7%	2.8%	100.0%
Total	Count	1	1	1	5	6	2	2	2	1	4	188
	Expected Count	1.0	1.0	1.0	5.0	6.0	2.0	2.0	2.0	1.0	4.0	188.0
	% Within Country	0.5%	0.5%	0.5%	2.7%	3.2%	1.1%	1.1%	1.1%	0.5%	2.1%	100.0%

Table 6. ICD-10 Diagnostic Impressions Across Culture Type

The analysis yielded a Chi-Square statistic (χ^2) of 35.971 with 20 degrees of freedom. The associated p-value was 0.016, below the alpha level of 0.05, suggesting a statistically significant association between ICD-10 diagnosis and Cultural Type. This suggests that the culture of the professional may influence their diagnostic opinion. Also, the effect size was calculated using Cramer's V, which was 0.437. This effect size is both significant and relatively strong in magnitude. Across individualistic cultures, the most common diagnosis selected in individualistic cultures were adjustment disorder, major depressive disorder, and schizophrenia. Across collectivistic cultures, the most common diagnosis selected were major depressive disorder, schizoid personality disorder, and dysthymia.

A Chi-Square Test of Independence was executed to evaluate the professional impression of DSM-IV-TR diagnosis across Cultural Types. The observed frequencies are presented in Table 7. The frequencies observed in Table 7 did not provide support to hypothesis 1 as personality disorders were chosen three times in a collectivistic culture compared to none in individualistic cultures. The frequencies also did not provide support for hypothesis 2 as most adjustment disorders were observed in an individualistic culture.

Culture Type		No Diagnosis	Adjustment Disorder	Anxiety Disorder	Autism Spectrum	Bipolar Disorder	Childhood Disorder of Social Functioning	Childhood Emotional Disorder	Conduct Disorder	Dysthymia	Major Depressive Disorder	Oppositional Defiance Disorder
Collectivistic	Count	17	4	0	0	0	0	0	4	1	4	1
	Expected Count	21.5	4.4	0.2	0.7	0.2	0.7	0.2	1.2	0.7	4.9	0.5
	% Within Country	37.0%	8.7%	0.0%	0.0%	0.0%	0.0%	0.0%	8.7%	2.2%	8.7%	2.2%
Individualistic	Count	71	14	1	3	1	3	1	1	2	16	1
	Expected Count	66.5	13.6	0.8	2.3	0.8	2.3	0.8	3.8	2.3	15.1	1.5
	% Within Country	50.0%	9.9%	0.7%	2.1%	0.7%	2.1%	0.7%	0.7%	1.4%	11.3%	0.7%
Total	Count	88	18	1	3	1	3	1	5	3	20	2
	Expected Count	88.0	18.0	1.0	3.0	1.0	3.0	1.0	5.0	3.0	20.0	2.0
	% Within Country	46.8%	9.6%	0.5%	1.6%	0.5%	1.6%	0.5%	2.7%	1.6%	10.6%	1.1%

Culture Type		Other Impulse Disorder	Parent-Child Relational Disorder	Personality Disorder	Schizoid Personality	Schizophrenia	Separation Anxiety Disorder	Social Phobia	Unspecified Mood Disorder	Unspecified Psychosis	Total
Collectivistic	Count	3	1	3	4	1	3	0	0	0	46
	Expected Count	2.0	0.7	0.7	2.2	2.0	1.2	0.5	0.2	1.0	46.0
	% Within Country	6.5%	2.2%	6.5%	8.7%	2.2%	6.5%	0.0%	0.0%	0.0%	100.0%
Individualistic	Count	5	2	0	5	7	2	2	1	4	142
	Expected Count	6.0	2.3	2.3	6.8	6.0	3.8	1.5	0.8	3.0	142.0
	% Within Country	3.5%	1.4%	0.0%	3.5%	4.9%	1.4%	1.4%	0.7%	2.8%	100.0%
Total	Count	8	3	3	9	8	5	2	1	4	188
	Expected Count	8.0	3.0	3.0	9.0	8.0	5.0	2.0	1.0	4.0	188.0
	% Within Country	4.3%	1.6%	1.6%	4.8%	4.3%	2.7%	1.1%	0.5%	2.1%	100.0%

Table 7. DSM-IV-TR Diagnostic Impressions Across Cultural Type

The analysis yielded a Chi-Square statistic (χ^2) of 31.990 with 19 degrees of freedom. The p-value was 0.031, below the alpha level of 0.05, suggesting a statistically significant association between DSM-IV-TR diagnosis and Cultural Type. This suggests that the culture of the professional may influence their diagnostic opinion. Also, the effect size was calculated using Cramer's V, which was 0.413. This effect size is both significant and relatively strong in magnitude. Across individualistic cultures, the most common diagnosis selected were major depressive disorder, adjustment disorders, and schizophrenia. Across collectivistic cultures, the most selected diagnosis were major depressive disorder, schizoid personality disorder, and adjustment disorder. What we observe here is that one cultural type (individualistic) focused on symptoms of a disorder while another (collectivistic) may view it more as a personality aspect.

A Chi-Square Test of Independence was executed to evaluate the professional impression of Free Impression diagnosis across Cultural Types. The observed frequencies are presented in Table 8. The frequencies observed in Table 8 did not provide support to hypothesis 1 as personality disorders were only chosen once in a collectivistic culture. The frequencies also did not provide support for hypothesis 2 as most adjustment disorders and hikikomori were observed in an individualistic culture.

Culture Type		Hikikomori	Adjustment Disorder	Adolescent Paranoia	Anxiety Disorder	Asperger's Syndrome	Atypical Depression	Autism Spectrum Disorder	Child Rearing	Dysthymia	Internet Addiction	Loss of Interest	Major Depressive Disorder
Collectivistic	Count	2	0	0	0	0	0	0	1	1	2	0	1
	Expected Count	3.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.7	0.7	0.2	0.7
	% Within Country	4.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.2%	2.2%	4.3%	0.0%	2.2%
Individualistic	Count	11	1	1	1	1	1	1	0	2	1	1	2
	Expected Count	9.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	2.3	2.3	0.8	2.3
	% Within Country	7.7%	0.7%	0.7%	0.7%	0.7%	0.7%	0.7%	0.0%	1.4%	0.7%	0.7%	1.4%
Total	Count	13	1	1	1	1	1	1	1	3	3	1	3
	Expected Count	13.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	3.0	3.0	1.0	3.0
	% Within Country	6.9%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	1.6%	1.6%	0.5%	1.6%

Culture Type		No Diagnosis	Oppositional Defiant Disorder	Personality Disorder	Pervasive Developmental Disorder	Prodromal Schizophrenia	Schizophrenia	School Refusal	Social Withdrawal	Unspecified Mood Disorder	Total
Collectivistic	Count	34	0	2	0	1	1	0	1	0	46
	Expected Count	31.6	0.5	0.7	0.2	0.5	2.2	1.2	1.5	0.2	46.0
	% Within Country	73.9%	0.0%	4.3%	0.0%	2.2%	2.2%	0.0%	2.2%	0.0%	100.0%
Individualistic	Count	95	2	1	1	1	8	5	5	1	142
	Expected Count	97.4	1.5	2.3	0.8	1.5	6.8	3.8	4.5	0.8	142.0
	% Within Country	66.9%	1.4%	0.7%	0.7%	0.7%	5.6%	3.5%	3.5%	0.7%	100.0%
Total	Count	129	2	3	1	2	9	5	6	1	188
	Expected Count	129.0	2.0	3.0	1.0	2.0	9.0	5.0	6.0	1.0	188.0
	% Within Country	68.6%	1.1%	1.6%	0.5%	1.1%	4.8%	2.7%	3.2%	0.5%	100.0%

Table 8. Free Response Diagnostic Impressions Across Culture Type

The analysis yielded a Chi-Square statistic (χ^2) of 16.908 with 20 degrees of freedom. The p-value was 0.659, above the alpha level of 0.05, suggesting no statistically significant association between Free Impression diagnosis and Cultural Type. This indicates that there is no relationship between the culture of the professional and providing a diagnosis. Also, the effect size was calculated using Cramer's V, which was 0.300. While this effect size is not statistically significant, it is moderately strong in magnitude. While not statistically significant, we did find a difference between cultures and the most common free response diagnosis chosen. Across individualistic countries, the most common diagnosis selected were hikikomori, schizophrenia, school refusal, and social withdrawal. Across collectivistic countries, the most common diagnosis selected were hikikomori, internet addiction, and personality disorder.

A Chi-Square Test of Independence was executed to evaluate the professional impression of Optimal Intervention across Cultural Types. The observed frequencies are presented in Table 9 The frequencies of Table 9 were inconclusive in their support of hypothesis 3 as the observed frequencies indicated that psychotherapy was the most selected treatment in individualistic cultures but did not specify which type. Additionally, while community support was selected as an optimal intervention, it was chosen exclusively by an individualistic country.

Culture Type		No Response	Building Relationships	Child Psychiatry	Community Support	Environmental Intervention	Family Intervention	Family Therapy	Individual Therapy	Inpatient Hospitalization	Medical Treatment	Monitor Progress	Outpatient Follow-Up
Collectivistic	Count	46	0	0	0	0	0	0	0	0	0	0	0
	Expected Count	32.1	0.2	0.2	1.2	0.5	1.0	1.0	0.7	0.5	0.2	0.2	0.7
	% Within Country	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Individualistic	Count	85	1	1	5	2	4	4	3	2	1	1	3
	Expected Count	98.9	0.8	0.8	3.8	1.5	3.0	3.0	2.3	1.5	0.8	0.8	2.3
	% Within Country	59.9%	0.7%	0.7%	3.5%	1.4%	2.8%	2.8%	2.1%	1.4%	0.7%	0.7%	2.1%
Total	Count	131	1	1	5	2	4	4	3	2	1	1	3
	Expected Count	131.0	1.0	1.0	5.0	2.0	4.0	4.0	3.0	2.0	1.0	1.0	3.0
	% Within Country	69.7%	0.5%	0.5%	2.7%	1.1%	2.1%	2.1%	1.6%	1.1%	0.5%	0.5%	1.6%

Country Name		Pharmacotherapy	Psychoeducation	Psychotherapy	Psychotherapy and Pharmacotherapy	Self-Help Groups	Total
Collectivistic	Count	0	0	0	0	0	46
	Expected Count	2.4	0.7	2.9	1.0	0.2	46.0
	% Within Country	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%
Individualistic	Count	10	3	12	4	1	142
	Expected Count	7.6	2.3	9.1	3.0	0.8	142.0
	% Within Country	7.0%	2.1%	8.5%	2.8%	0.7%	100.0%
Total	Count	10	3	12	4	1	188
	Expected Count	10.0	3.0	12.0	4.0	1.0	188.0
	% Within Country	5.3%	1.6%	6.4%	2.1%	0.5%	100.0%

Table 9. Optimal Intervention Impressions Across Culture Type

The analysis yielded a Chi-Square statistic (χ^2) of 26.499 with 17 degrees of freedom. The p-value was 0.066, above the alpha level of 0.05, suggesting no statistically significant association between Optimal Intervention and Cultural Type. This suggests that there is no relationship between the culture of origin of the participant and the optimal intervention. This suggests that there is no relationship between the culture of the participant and the optimal intervention. Also, the effect size was calculated using Cramer's V, which was 0.375. While this effect size is not statistically significant, it is moderately strong in magnitude. The most selected interventions in individualistic cultures were psychotherapy, pharmacotherapy, and community support. No interventions were selected across collectivistic cultures.

An average of responses was used to evaluate the professional impression of parents' influence across countries. The observed means and standard deviations are presented in Table 10. These results did not support Hypothesis 4 as most cases saw similar impressions of influence across cultures.

Culture Type	N	Impression on the Influence of	Mean	Std. Deviation
Collectivistic	45	Mother	3.31	1.258
		Father	3.53	1.140
Individualistic	137	Mother	3.62	.956
	138	Father	3.75	.936

Table 10. Average Impression of the Influence of Parents Across Cultures

Clinical Case B

A Chi-Square Test of Independence was executed to evaluate the professional impressions of ICD-10 diagnosis across countries. The observed frequencies are presented in Table 11. The frequencies observed in Table 11 did provide support to hypothesis 1 as personality disorders were observed primarily in individualistic countries. The frequencies also did not provide support for hypothesis 2 as most adjustment and phobic disorders were observed in an individualistic country.

Country Name		No Diagnosis	Adjustment Disorder	Anxiety Disorder	Asperger's Syndrome	Autism Spectrum Disorder	Dysthymia	Major Depressive Disorder	Personality Disorder	Prodromal Schizophrenia	Schizoid Personality Disorder	Schizophrenia
Australia	Count	12	0	0	0	0	0	2	0	1	0	0
	Expected Count	9.1	0.5	0.1	0.1	0.8	0.3	0.4	1.3	0.1	1.0	1.9
	% Within Country	75.0%	0.0%	0.0%	0.0%	0.0%	0.0%	12.5%	0.0%	6.3%	0.0%	0.0%
Bangladesh	Count	2	0	0	0	0	1	1	1	0	1	2
	Expected Count	4.6	0.2	0.0	0.0	0.4	0.1	0.2	0.7	0.0	0.5	0.9
	% Within Country	25.0%	0.0%	0.0%	0.0%	0.0%	12.5%	12.5%	12.5%	0.0%	12.5%	25.0%
Chile	Count	4	0	0	0	0	0	0	0	0	0	0
	Expected Count	2.3	0.1	0.0	0.0	0.2	0.1	0.1	0.3	0.0	0.3	0.5
	% Within Country	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
India	Count	0	0	0	0	0	0	0	0	0	3	2
	Expected Count	2.9	0.1	0.0	0.0	0.2	0.1	0.1	0.4	0.0	0.3	0.6
	% Within Country	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	60.0%	40.0%
Iran	Count	3	0	0	0	0	0	0	0	0	0	1
	Expected Count	2.3	0.1	0.0	0.0	0.2	0.1	0.1	0.3	0.0	0.3	0.5
	% Within Country	75.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	25.0%
Japan	Count	40	5	1	1	7	0	0	13	0	0	7
	Expected Count	43.9	2.3	0.5	0.5	3.6	1.4	1.8	6.3	0.5	5.0	9.1
	% Within Country	51.9%	6.5%	1.3%	1.3%	9.1%	0.0%	0.0%	16.9%	0.0%	0.0%	9.1%
South Korea	Count	21	0	0	0	0	1	1	0	0	2	4
	Expected Count	16.5	0.9	0.2	0.2	1.4	0.5	0.7	2.4	0.2	1.9	3.4
	% Within Country	72.4%	0.0%	0.0%	0.0%	0.0%	3.4%	3.4%	0.0%	0.0%	6.9%	13.8%
Taiwan	Count	6	0	0	0	0	0	0	0	0	4	3
	Expected Count	7.4	0.4	0.1	0.1	0.6	0.2	0.3	1.1	0.1	0.8	1.5
	% Within Country	46.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	30.8%	23.1%
Thailand	Count	3	0	0	0	1	1	0	0	0	0	1
	Expected Count	3.4	0.2	0.0	0.0	0.3	0.1	0.1	0.5	0.0	0.4	0.7
	% Within Country	50.0%	0.0%	0.0%	0.0%	16.7%	16.7%	0.0%	0.0%	0.0%	0.0%	16.7%
USA	Count	6	0	0	0	0	0	0	0	0	1	0
	Expected Count	4.6	0.2	0.0	0.0	0.4	0.1	0.2	0.7	0.0	0.5	0.9
	% Within Country	75.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	12.5%	0.0%
Total	Count	97	5	1	1	8	3	4	14	1	11	20
	Expected Count	97.0	5.0	1.0	1.0	8.0	3.0	4.0	14.0	1.0	11.0	20.0
	% Within Country	57.1%	2.9%	0.6%	0.6%	4.7%	1.8%	2.4%	8.2%	0.6%	6.5%	11.8%

Table 11. ICD-10 Diagnostic Impressions Across Countries

Country Name		Social Phobia	Unspecified Mood Disorder	Unspecified Psychosis	Total
Australia	Count	1	0	0	16
	Expected Count	0.3	0.1	0.1	16.0
	% Within Country	6.3%	0.0%	0.0%	100.0%
Bangladesh	Count	0	0	0	8
	Expected Count	0.1	0.0	0.0	8.0
	% Within Country	0.0%	0.0%	0.0%	100.0%
Chile	Count	0	0	0	4
	Expected Count	0.1	0.0	0.0	4.0
	% Within Country	0.0%	0.0%	0.0%	100.0%
India	Count	0	0	0	5
	Expected Count	0.1	0.0	0.0	5.0
	% Within Country	0.0%	0.0%	0.0%	100.0%
Iran	Count	0	0	0	4
	Expected Count	0.1	0.0	0.0	4.0
	% Within Country	0.0%	0.0%	0.0%	100.0%
Japan	Count	2	1	0	77
	Expected Count	1.4	0.5	0.5	77.0
	% Within Country	2.6%	1.3%	0.0%	100.0%
South Korea	Count	0	0	0	29
	Expected Count	0.5	0.2	0.2	29.0
	% Within Country	0.0%	0.0%	0.0%	100.0%
Taiwan	Count	0	0	0	13
	Expected Count	0.2	0.1	0.1	13.0
	% Within Country	0.0%	0.0%	0.0%	100.0%
Thailand	Count	0	0	0	6
	Expected Count	0.1	0.0	0.0	6.0
	% Within Country	0.0%	0.0%	0.0%	100.0%
USA	Count	0	0	1	8
	Expected Count	0.1	0.0	0.0	8.0
	% Within Country	0.0%	0.0%	12.5%	100.0%
Total	Count	3	1	1	170
	Expected Count	3.0	1.0	1.0	170.0
	% Within Country	1.8%	0.6%	0.6%	100.0%

ICD-10 Diagnostic Impressions Across Countries (Continued)

The analysis yielded a Chi-Square statistic *(χ^2)* of 156.591, with 117 degrees of freedom. The associated p-value was 0.009, below the alpha level of 0.05, suggesting a statistically significant association between ICD-10 diagnosis and country. This suggests that the country of the professional may influence their diagnostic opinion. Also, an effect size was calculated using Cramer's V, which was 0.320. While this effect size is statistically significant, it is only moderately strong in magnitude. Across individualistic cultures, the most selected diagnosis were schizophrenia, personality disorder, and schizoid personality disorder. Across collectivistic cultures, the most selected diagnosis were schizophrenia, schizoid personality disorder, and dysthymia.

To evaluate the professional impression of DSM-IV-TR diagnosis across countries, a Chi-Square Test of Independence was executed. The observed frequencies are presented in Table 12. The frequencies observed in Table 12 provided support for hypothesis 1 as personality disorders were mostly observed in individualistic countries. The frequencies also did not provide support for hypothesis 2 as most adjustment disorders were observed in individualistic countries.

Country Name		No Diagnosis	Adjustment Disorder	Agoraphobia	Anxiety Disorder	Asperger's Syndrome	Autism Spectrum Disorder	Dysthymia	Major Depressive Disorder	Personality Disorder	Schizoid Personality Disorder	Schizophrenia
Australia	Count	9	0	1	0	0	0	0	2	2	1	0
	Expected Count	6.7	0.7	0.1	0.1	0.1	0.6	0.4	0.5	1.8	3.1	1.1
	% Within Country	56.3%	0.0%	6.3%	0.0%	0.0%	0.0%	0.0%	12.5%	12.5%	6.3%	0.0%
Bangladesh	Count	2	0	0	0	0	0	1	2	1	1	1
	Expected Count	3.3	0.3	0.0	0.0	0.0	0.3	0.2	0.2	0.9	1.6	0.6
	% Within Country	25.0%	0.0%	0.0%	0.0%	0.0%	0.0%	12.5%	25.0%	12.5%	12.5%	12.5%
Chile	Count	1	0	0	0	0	0	0	0	2	1	0
	Expected Count	1.7	0.2	0.0	0.0	0.0	0.1	0.1	0.1	0.4	0.8	0.3
	% Within Country	25.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	50.0%	25.0%	0.0%
India	Count	2	0	0	0	0	0	0	0	0	1	2
	Expected Count	2.1	0.2	0.0	0.0	0.0	0.2	0.1	0.1	0.6	1.0	0.4
	% Within Country	40.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	20.0%	40.0%
Iran	Count	2	0	0	0	0	0	0	0	0	0	2
	Expected Count	1.7	0.2	0.0	0.0	0.0	0.1	0.1	0.1	0.4	0.8	0.3
	% Within Country	50.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	50.0%
Japan	Count	43	7	0	1	1	5	0	0	13	3	3
	Expected Count	32.2	3.2	0.5	0.5	0.5	2.7	1.8	2.3	8.6	14.9	5.4
	% Within Country	55.8%	9.1%	0.0%	1.3%	1.3%	6.5%	0.0%	0.0%	16.9%	3.9%	3.9%
South Korea	Count	6	0	0	0	0	0	2	1	0	16	0
	Expected Count	12.1	1.2	0.2	0.2	0.2	1.0	0.7	0.9	3.2	5.6	2.0
	% Within Country	20.7%	0.0%	0.0%	0.0%	0.0%	0.0%	6.9%	3.4%	0.0%	55.2%	0.0%
Taiwan	Count	1	0	0	0	0	0	0	0	1	8	3
	Expected Count	5.4	0.5	0.1	0.1	0.1	0.5	0.3	0.4	1.5	2.5	0.9
	% Within Country	7.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	7.7%	61.5%	23.1%
Thailand	Count	3	0	0	0	0	1	1	0	0	0	0
	Expected Count	2.5	0.2	0.0	0.0	0.0	0.2	0.1	0.2	0.7	1.2	0.4
	% Within Country	50.0%	0.0%	0.0%	0.0%	0.0%	16.7%	16.7%	0.0%	0.0%	0.0%	0.0%
USA	Count	2	0	0	0	0	0	0	0	0	2	1
	Expected Count	3.3	0.3	0.0	0.0	0.0	0.3	0.2	0.2	0.9	1.6	0.6
	% Within Country	25.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	25.0%	12.5%
Total	Count	71	7	1	1	1	6	4	5	19	33	12
	Expected Count	71.0	7.0	1.0	1.0	1.0	6.0	4.0	5.0	19.0	33.0	12.0
	% Within Country	41.8%	4.1%	0.6%	0.6%	0.6%	3.5%	2.4%	2.9%	11.2%	19.4%	7.1%

Table 12. DSM-IV-TR Diagnostic Impressions Across Countries

Country Name		Prodromal Schizophrenia	Unspecified Mood Disorder	Unspecified Psychosis	Total
Australia	Count	1	0	0	16
	Expected Count	0.1	0.2	0.7	16.0
	% Within Country	6.3%	0.0%	0.0%	100.0%
Bangladesh	Count	0	0	0	8
	Expected Count	0.0	0.1	0.3	8.0
	% Within Country	0.0%	0.0%	0.0%	100.0%
Chile	Count	0	0	0	4
	Expected Count	0.0	0.0	0.2	4.0
	% Within Country	0.0%	0.0%	0.0%	100.0%
India	Count	0	0	0	5
	Expected Count	0.0	0.1	0.2	5.0
	% Within Country	0.0%	0.0%	0.0%	100.0%
Iran	Count	0	0	0	4
	Expected Count	0.0	0.0	0.2	4.0
	% Within Country	0.0%	0.0%	0.0%	100.0%
Japan	Count	0	0	1	77
	Expected Count	0.5	0.9	3.2	77.0
	% Within Country	0.0%	0.0%	1.3%	100.0%
South Korea	Count	0	0	4	29
	Expected Count	0.2	0.3	1.2	29.0
	% Within Country	0.0%	0.0%	13.8%	100.0%
Taiwan	Count	0	0	0	13
	Expected Count	0.1	0.2	0.5	13.0
	% Within Country	0.0%	0.0%	0.0%	100.0%
Thailand	Count	0	0	1	6
	Expected Count	0.0	0.1	0.2	6.0
	% Within Country	0.0%	0.0%	16.7%	100.0%
USA	Count	0	2	1	8
	Expected Count	0.0	0.1	0.3	8.0
	% Within Country	0.0%	25.0%	12.5%	100.0%
Total	Count	1	2	7	170
	Expected Count	1.0	2.0	7.0	170.0
	% Within Country	0.6%	1.2%	4.1%	100.0%

DSM-IV-TR Diagnostic Impressions Across Countries (Continued)

The analysis yielded a Chi-Square statistic *(χ^2)* of 227.370 with 117 degrees of freedom. The p-value was less than 0.001, below the alpha level of 0.05, suggesting a statistically significant association between DSM-IV-TR diagnosis and country. This suggests that the country of the professional may influence their diagnostic opinion. Also, the effect size was calculated using Cramer's V, which was 0.385. While this effect size is statistically significant, it is only moderately strong in magnitude. Most selected diagnosis across individualistic countries were personality disorder, adjustment disorder, and schizoid personality disorder. The most selected diagnosis across collectivistic countries were schizoid personality disorder, schizophrenia, and unspecified psychosis.

A Chi-Square Test of Independence was executed to evaluate the professional impression of a Free Response diagnosis across countries. The observed frequencies are presented in Table 13. The frequencies observed in Table 13 provided support for hypothesis 1 as personality disorders were exclusively seen in individualistic countries. The frequencies also did not provide support for hypothesis 2 as most adjustment and phobic disorders were observed in individualistic countries while hikikomori was evenly split between both country types.

Country Name		No Diagnosis	Hikikomori	Adjustment Disorder	Asperger's Syndrome	Autism Spectrum Disorder	Avoidant Depression	Avoidant Personality Disorder	Developmental Disorder	Dysthymia	Internet Addiction	Major Depressive Disorder	Personality Disorder
Australia	Count	10	1	0	0	0	0	0	0	2	0	0	1
	Expected Count	10.4	0.8	0.2	0.1	0.1	0.1	0.3	0.2	0.3	0.3	0.3	0.1
	% Within Country	62.5%	6.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	12.5%	0.0%	0.0%	6.3%
Bangladesh	Count	6	0	0	0	0	0	0	0	1	0	0	0
	Expected Count	5.2	0.4	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0
	% Within Country	75.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	12.5%	0.0%	0.0%	0.0%
Chile	Count	4	0	0	0	0	0	0	0	0	0	0	0
	Expected Count	2.6	0.2	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.1	0.1	0.0
	% Within Country	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
India	Count	5	0	0	0	0	0	0	0	0	0	0	0
	Expected Count	3.3	0.2	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0
	% Within Country	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Iran	Count	3	0	0	0	0	0	0	0	0	0	1	0
	Expected Count	2.6	0.2	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.1	0.1	0.0
	% Within Country	75.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	25.0%	0.0%
Japan	Count	47	3	2	1	1	1	3	2	0	0	1	0
	Expected Count	50.3	3.6	0.9	0.5	0.5	0.5	1.4	0.9	1.4	1.4	1.4	0.5
	% Within Country	61.0%	3.9%	2.6%	1.3%	1.3%	1.3%	3.9%	2.6%	0.0%	0.0%	1.3%	0.0%
South Korea	Count	20	2	0	0	0	0	0	0	0	2	0	0
	Expected Count	18.9	1.4	0.3	0.2	0.2	0.2	0.5	0.3	0.5	0.5	0.5	0.2
	% Within Country	69.0%	6.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	6.9%	0.0%	0.0%
Taiwan	Count	10	0	0	0	0	0	0	0	0	0	0	0
	Expected Count	8.5	0.6	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.1
	% Within Country	76.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Thailand	Count	2	2	0	0	0	0	0	0	0	0	0	0
	Expected Count	3.9	0.3	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0
	% Within Country	33.3%	33.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
USA	Count	4	0	0	0	0	0	0	0	0	1	1	0
	Expected Count	5.2	0.4	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0
	% Within Country	50.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	12.5%	12.5%	0.0%
Total	Count	111	8	2	1	1	1	3	2	3	3	3	1
	Expected Count	111.0	8.0	2.0	1.0	1.0	1.0	3.0	2.0	3.0	3.0	3.0	1.0
	% Within Country	65.3%	4.7%	1.2%	0.6%	0.6%	0.6%	1.8%	1.2%	1.8%	1.8%	1.8%	0.6%

Table 13. Free Response Diagnostic Impressions Across Countries

Country Name		Pervasive Developmental Disorder	Psychotic Disorder	Schizoid Personality Disorder	Schizophrenia	Social Phobia	Social Withdrawal	Social Withdrawal, Internet Addiction	Total
Australia	Count	0	0	0	0	1	1	0	16
	Expected Count	0.1	0.4	0.4	1.0	0.2	0.8	0.1	16.0
	% Within Country	0.0%	0.0%	0.0%	0.0%	6.3%	6.3%	0.0%	100.0%
Bangladesh	Count	0	1	0	0	0	0	0	8
	Expected Count	0.0	0.2	0.2	0.5	0.1	0.4	0.0	8.0
	% Within Country	0.0%	12.5%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%
Chile	Count	0	0	0	0	0	0	0	4
	Expected Count	0.0	0.1	0.1	0.3	0.0	0.2	0.0	4.0
	% Within Country	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%
India	Count	0	0	0	0	0	0	0	5
	Expected Count	0.0	0.1	0.1	0.3	0.1	0.2	0.0	5.0
	% Within Country	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%
Iran	Count	0	0	0	0	0	0	0	4
	Expected Count	0.0	0.1	0.1	0.3	0.0	0.2	0.0	4.0
	% Within Country	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%
Japan	Count	1	0	1	6	1	6	1	77
	Expected Count	0.5	1.8	1.8	5.0	0.9	3.6	0.5	77.0
	% Within Country	1.3%	0.0%	1.3%	7.8%	1.3%	7.8%	1.3%	100.0%
South Korea	Count	0	2	1	1	0	1	0	29
	Expected Count	0.2	0.7	0.7	1.9	0.3	1.4	0.2	29.0
	% Within Country	0.0%	6.9%	3.4%	3.4%	0.0%	3.4%	0.0%	100.0%
Taiwan	Count	0	0	1	2	0	0	0	13
	Expected Count	0.1	0.3	0.3	0.8	0.2	0.6	0.1	13.0
	% Within Country	0.0%	0.0%	7.7%	15.4%	0.0%	0.0%	0.0%	100.0%
Thailand	Count	0	1	1	0	0	0	0	6
	Expected Count	0.0	0.1	0.1	0.4	0.1	0.3	0.0	6.0
	% Within Country	0.0%	16.7%	16.7%	0.0%	0.0%	0.0%	0.0%	100.0%
USA	Count	0	0	0	2	0	0	0	8
	Expected Count	0.0	0.2	0.2	0.5	0.1	0.4	0.0	8.0
	% Within Country	0.0%	0.0%	0.0%	25.0%	0.0%	0.0%	0.0%	100.0%
Total	Count	1	4	4	11	2	8	1	170
	Expected Count	1.0	4.0	4.0	11.0	2.0	8.0	1.0	170.0
	% Within Country	0.6%	2.4%	2.4%	6.5%	1.2%	4.7%	0.6%	100.0%

Free Response Diagnostic Impressions Across Countries (Continued)

The analysis resulted in a Chi-Square statistic *(χ^2)* of 130.065 with 162 degrees of freedom. The associated p-value was 0.969, above the alpha level of 0.05, suggesting no statistically significant association between Free Response diagnosis and country. This indicates that there is no relationship between the country of the professional and providing a diagnosis. Also, the effect size was calculated using Cramer's V, which was 0.292. While this effect size is not statistically significant, it is moderately strong in magnitude. While not statistically significant, we did find a difference between countries and the most common free response diagnosis chosen. The most selected diagnosis in individualistic countries were schizophrenia, social withdrawal, and hikikomori. The most selected diagnosis in collectivistic countries were psychotic disorders, hikikomori, schizoid personality disorder, and schizophrenia.

A Chi-Square Test of Independence was executed to evaluate the professional impression of Optimal Intervention across countries. The observed frequencies are presented in Table 14. The frequencies observed in Table 14 are inconclusive in their support of Hypothesis 3. Psychotherapy was chosen most often as an intervention, but participants did not explain whether this meant individual or group psychotherapy. Under the assumption that there was no association between Optimal Intervention and country, the expected frequencies would be the same as those calculated and presented in Table 14.

Country Name		No Response	Community Support	Environmental intervention	Family Intervention	Family Therapy	Group Psychotherapy	Inpatient Hospitalization	Outpatient Follow-Up	Pharmacotherapy
Australia	Count	11	0	1	1	1	0	0	0	0
	Expected Count	10.9	0.6	0.1	0.2	0.3	0.1	0.3	0.5	1.1
	% Within Country	68.8%	0.0%	6.3%	6.3%	6.3%	0.0%	0.0%	0.0%	0.0%
Bangladesh	Count	8	0	0	0	0	0	0	0	0
	Expected Count	5.5	0.3	0.0	0.1	0.1	0.0	0.1	0.2	0.6
	% Within Country	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Chile	Count	4	0	0	0	0	0	0	0	0
	Expected Count	2.7	0.1	0.0	0.0	0.1	0.0	0.1	0.1	0.3
	% Within Country	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
India	Count	5	0	0	0	0	0	0	0	0
	Expected Count	3.4	0.2	0.0	0.1	0.1	0.0	0.1	0.1	0.4
	% Within Country	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Iran	Count	4	0	0	0	0	0	0	0	0
	Expected Count	2.7	0.1	0.0	0.0	0.1	0.0	0.1	0.1	0.3
	% Within Country	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Japan	Count	45	6	0	1	2	1	2	5	0
	Expected Count	52.5	2.7	0.5	0.9	1.4	0.5	1.4	2.3	5.4
	% Within Country	58.4%	7.8%	0.0%	1.3%	2.6%	1.3%	2.6%	6.5%	0.0%
South Korea	Count	12	0	0	0	0	0	1	0	12
	Expected Count	19.8	1.0	0.2	0.3	0.5	0.2	0.5	0.9	2.0
	% Within Country	41.4%	0.0%	0.0%	0.0%	0.0%	0.0%	3.4%	0.0%	41.4%
Taiwan	Count	13	0	0	0	0	0	0	0	0
	Expected Count	8.9	0.5	0.1	0.2	0.2	0.1	0.2	0.4	0.9
	% Within Country	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Thailand	Count	6	0	0	0	0	0	0	0	0
	Expected Count	4.1	0.2	0.0	0.1	0.1	0.0	0.1	0.2	0.4
	% Within Country	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
USA	Count	8	0	0	0	0	0	0	0	0
	Expected Count	5.5	0.3	0.0	0.1	0.1	0.0	0.1	0.2	0.6
	% Within Country	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Total	Count	116	6	1	2	3	1	3	5	12
	Expected Count	116.0	6.0	1.0	2.0	3.0	1.0	3.0	5.0	12.0
	% Within Country	68.2%	3.5%	0.6%	1.2%	1.8%	0.6%	1.8%	2.9%	7.1%

Table 14. Optimal Intervention Impressions Across Countries

Country Name		Psychoeducation	Psychotherapy	Psychotherapy and Pharmacotherapy	Total
Australia	Count	0	2	0	16
	Expected Count	0.1	1.3	0.6	16.0
	% Within Country	0.0%	12.5%	0.0%	100.0%
Bangladesh	Count	0	0	0	8
	Expected Count	0.0	0.7	0.3	8.0
	% Within Country	0.0%	0.0%	0.0%	100.0%
Chile	Count	0	0	0	4
	Expected Count	0.0	0.3	0.1	4.0
	% Within Country	0.0%	0.0%	0.0%	100.0%
India	Count	0	0	0	5
	Expected Count	0.0	0.4	0.2	5.0
	% Within Country	0.0%	0.0%	0.0%	100.0%
Iran	Count	0	0	0	4
	Expected Count	0.0	0.3	0.1	4.0
	% Within Country	0.0%	0.0%	0.0%	100.0%
Japan	Count	1	10	4	77
	Expected Count	0.5	6.3	2.7	77.0
	% Within Country	1.3%	13.0%	5.2%	100.0%
South Korea	Count	0	2	2	29
	Expected Count	0.2	2.4	1.0	29.0
	% Within Country	0.0%	6.9%	6.9%	100.0%
Taiwan	Count	0	0	0	13
	Expected Count	0.1	1.1	0.5	13.0
	% Within Country	0.0%	0.0%	0.0%	100.0%
Thailand	Count	0	0	0	6
	Expected Count	0.0	0.5	0.2	6.0
	% Within Country	0.0%	0.0%	0.0%	100.0%
USA	Count	0	0	0	8
	Expected Count	0.0	0.7	0.3	8.0
	% Within Country	0.0%	0.0%	0.0%	100.0%
Total	Count	1	14	6	170
	Expected Count	1.0	14.0	6.0	170.0
	% Within Country	0.6%	8.2%	3.5%	100.0%

Optimal Intervention Impressions Across Countries (Continued)

The analysis yielded a Chi-Square statistic *(χ^2)* of 114.993 with 99 degrees of freedom. The associated p-value was 0.130, above the alpha level of 0.05, suggesting no statistically significant association between the Optimal Intervention and the country. This suggests that there is no relationship between the country of origin of the participant and the optimal intervention. Also, the effect size was calculated using Cramer's V, which was 0.274. While this effect size is not statistically significant, it is moderately strong in magnitude. While not statistically significant, we did find a difference between countries and the most common optimal intervention chosen. The most selected interventions for individualistic countries were psychotherapy, community support, and outpatient follow-up. The most selected interventions for collectivistic countries were pharmacotherapy, psychotherapy, and psychotherapy in conjunction with pharmacotherapy.

An average of responses was used to evaluate the professional impression of parents' influence across countries. The observed means and standard deviations are presented in Table 15. These results did not support Hypothesis 4 as most cases saw similar impressions of influence across countries.

Country Name	N	Impression on the Influence of	Mean	Std. Deviation
Australia	16	Mother Father	3.44 3.31	.892 .793
Bangladesh	8	Mother Father	2.00 2.55	.926 .707
Chile	4	Mother Father	3.75 3.25	1.258 .957
India	4	Mother Father	2.00 2.20	1.414 1.643
Iran	4	Mother Father	1.75 1.75	.957 .957
Japan	75	Mother Father	3.32 3.12	1.029 .986
South Korea	29	Mother Father	2.83 2.86	.848 .833
Taiwan	13	Mother Father	3.15 3.15	.987 .987
Thailand	6	Mother Father	3.00 3.00	1.265 1.265
USA	8	Mother Father	3.00 3.00	.926 .926

Table 15. Average Impression of the Influence of Parents Across Countries

A Chi-Square Test of Independence was executed to evaluate the professional impression of ICD-10 diagnosis across Cultural Types. The observed frequencies are presented in Table 16. The frequencies observed in Table 16 did provide support to hypothesis 1 as personality disorders were observed primarily in individualistic cultures. The frequencies also did not provide support for hypothesis 2 as most adjustment and phobic disorders were observed in an individualistic culture.

Culture Type		No Diagnosis	Adjustment Disorder	Anxiety Disorder	Asperger's Syndrome	Autism Spectrum Disorder	Dysthymia	Major Depressive Disorder	Personality Disorder	Prodromal Schizophrenia	Schizoid Personality Disorder	Schizophrenia
Collectivistic	Count	39	0	0	0	1	3	2	1	0	10	13
	Expected Count	39.4	2.0	0.4	0.4	3.2	1.2	1.6	5.7	0.4	4.5	8.1
	% Within Country	56.5%	0.0%	0.0%	0.0%	1.4%	4.3%	2.9%	1.4%	0.0%	14.5%	18.8%
Individualistic	Count	58	5	1	1	7	0	2	13	1	1	7
	Expected Count	57.6	3.0	0.6	0.6	4.8	1.8	2.4	8.3	0.6	6.5	11.9
	% Within Country	57.4%	5.0%	1.0%	1.0%	6.9%	0.0%	2.0%	12.9%	1.0%	1.0%	6.9%
Total	Count	97	5	1	1	8	3	4	14	1	11	20
	Expected Count	97.0	5.0	1.0	1.0	8.0	3.0	4.0	14.0	1.0	11.0	20.0
	% Within Country	57.1%	2.9%	0.6%	0.6%	4.7%	1.8%	2.4%	8.2%	0.6%	6.5%	11.8%

Culture Type		Social Phobia	Unspecified Mood Disorder	Unspecified Psychosis	Total
Collectivistic	Count	0	0	0	69
	Expected Count	1.2	0.4	0.4	69.0
	% Within Country	0.0%	0.0%	0.0%	100.0%
Individualistic	Count	3	1	1	101
	Expected Count	1.8	0.6	0.6	101.0
	% Within Country	3.0%	1.0%	1.0%	100.0%
Total	Count	3	1	1	170
	Expected Count	3.0	1.0	1.0	170.0
	% Within Country	1.8%	0.6%	0.6%	100.0%

Table 16. ICD-10 Diagnostic Impressions Across Culture Type

The analysis yielded a Chi-Square statistic (χ^2) of 39.030 with 13 degrees of freedom. The p-value was less than 0.001, below the alpha level of 0.05, suggesting a statistically significant association between ICD-10 diagnosis and Cultural Type. This suggests that the culture of the professional may influence their diagnostic opinion. Also, the effect size was calculated using Cramer's V, which was 0.479. This effect size is both significant and relatively strong in magnitude. Across individualistic cultures, the most selected diagnosis were schizophrenia, personality disorder, and schizoid personality disorder. Across collectivistic cultures, the most selected diagnosis were schizophrenia, schizoid personality disorder, and dysthymia.

A Chi-Square Test of Independence was executed to evaluate the professional impression of DSM-IV-TR diagnosis across Cultural Types. The observed frequencies are presented in Table 17. The frequencies observed in Table 17 did provide support to hypothesis 1 as personality disorders were observed primarily in individualistic cultures. The frequencies also did not provide support for hypothesis 2 as most adjustment and phobic disorders were observed in individualistic cultures.

Culture Type		No Diagnosis	Adjustment Disorder	Agoraphobia	Anxiety Disorder	Asperger's Syndrome	Autism Spectrum Disorder	Dysthymia	Major Depressive Disorder	Personality Disorder	Schizoid Personality Disorder	Schizophrenia
Collectivistic	Count	17	0	0	0	0	1	4	3	4	27	8
	Expected Count	28.8	2.8	0.4	0.4	0.4	2.4	1.6	2.0	7.7	13.4	4.9
	% Within Country	24.6%	0.0%	0.0%	0.0%	0.0%	1.4%	5.8%	4.3%	5.8%	39.1%	11.6%
Individualistic	Count	54	7	1	1	1	5	0	2	15	6	4
	Expected Count	42.2	4.2	0.6	0.6	0.6	3.6	2.4	3.0	11.3	19.6	7.1
	% Within Country	53.5%	6.9%	1.0%	1.0%	1.0%	5.0%	0.0%	2.0%	14.9%	5.9%	4.0%
Total	Count	71	7	1	1	1	6	4	5	19	33	12
	Expected Count	71.0	7.0	1.0	1.0	1.0	6.0	4.0	5.0	19.0	33.0	12.0
	% Within Country	41.8%	4.1%	0.6%	0.6%	0.6%	3.5%	2.4%	2.9%	11.2%	19.4%	7.1%

Culture Type		Prodromal Schizophrenia	Unspecified Mood Disorder	Unspecified Psychosis	Total
Collectivistic	Count	0	0	5	69
	Expected Count	0.4	0.8	2.8	69.0
	% Within Country	0.0%	0.0%	7.2%	100.0%
Individualistic	Count	1	2	2	101
	Expected Count	0.6	1.2	4.2	101.0
	% Within Country	1.0%	2.0%	2.0%	100.0%
Total	Count	1	2	7	170
	Expected Count	1.0	2.0	7.0	170.0
	% Within Country	0.6%	1.2%	4.1%	100.0%

Table 17. DSM-IV-TR Diagnostic Impressions Across Cultural Type

The analysis yielded a Chi-Square statistic (χ^2) of 57.514 with 13 degrees of freedom. The p-value was less than 0.001, below the alpha level of 0.05, suggesting a statistically significant association between DSM-IV-TR diagnosis and Cultural Type. This suggests that the culture of the professional may influence their diagnostic opinion. Also, the effect size was calculated using Cramer's V, which was 0.582. This effect size is both significant and strong in magnitude. Most selected diagnosis across individualistic cultures were personality disorder, adjustment disorder, and schizoid personality disorder. The most selected diagnosis across collectivistic cultures were schizoid personality disorder, schizophrenia, and unspecified psychosis.

A Chi-Square Test of Independence was executed to evaluate the professional impression of Free Impression diagnosis across Cultural Types. The observed frequencies are presented in Table 18. The frequencies observed in Table 18 provided support for hypothesis 1 as personality disorders were exclusively seen in individualistic cultures. The frequencies also did not provide support for hypothesis 2 as most adjustment and phobic disorders were observed in individualistic cultures while hikikomori was evenly split between both culture types.

Culture Type		No Diagnosis	Hikikomori	Adjustment Disorder	Asperger's Syndrome	Autism Spectrum Disorder	Avoidant Depression	Avoidant Personality Disorder	Developmental Disorder	Dysthymia	Internet Addiction	Major Depressive Disorder	Personality Disorder
Collectivistic	Count	50	4	0	0	0	0	0	0	1	2	1	0
	Expected Count	45.1	3.2	0.8	0.4	0.4	0.4	1.2	0.8	1.2	1.2	1.2	0.4
	% Within Country	72.5%	5.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.4%	2.9%	1.4%	0.0%
Individualistic	Count	61	4	2	1	1	1	3	2	2	1	2	1
	Expected Count	65.9	4.8	1.2	0.6	0.6	0.6	1.8	1.2	1.8	1.8	1.8	0.6
	% Within Country	60.4%	4.0%	2.0%	1.0%	1.0%	1.0%	3.0%	2.0%	2.0%	1.0%	2.0%	1.0%
Total	Count	111	8	2	1	1	1	3	2	3	3	3	1
	Expected Count	111.0	8.0	2.0	1.0	1.0	1.0	3.0	2.0	3.0	3.0	3.0	1.0
	% Within Country	65.3%	4.7%	1.2%	0.6%	0.6%	0.6%	1.8%	1.2%	1.8%	1.8%	1.8%	0.6%

Culture Type		Pervasive Developmental Disorder	Psychotic Disorder	Schizoid Personality Disorder	Schizophrenia	Social Phobia	Social Withdrawal	Social Withdrawal, Internet Addiction	Total
Collectivistic	Count	0	4	3	3	0	1	0	69
	Expected Count	0.4	1.6	1.6	4.5	0.8	3.2	0.4	69.0
	% Within Country	0.0%	5.8%	4.3%	4.3%	0.0%	1.4%	0.0%	100.0%
Individualistic	Count	1	0	1	8	2	7	1	101
	Expected Count	0.6	2.4	2.4	6.5	1.2	4.8	0.6	101.0
	% Within Country	1.0%	0.0%	1.0%	7.9%	2.0%	6.9%	1.0%	100.0%
Total	Count	1	4	4	11	2	8	1	170
	Expected Count	1.0	4.0	4.0	11.0	2.0	8.0	1.0	170.0
	% Within Country	0.6%	2.4%	2.4%	6.5%	1.2%	4.7%	0.6%	100.0%

Table 18.Free Response Diagnostic Impressions Across Culture Type

The analysis yielded a Chi-Square statistic (χ^2) of 23.678 with 18 degrees of freedom. The p-value was 0.166, above the alpha level of 0.05, suggesting no statistically significant association between Free Impression diagnosis and Cultural Type. This indicates that there is no relationship between the country of the professional and providing a diagnosis. Also, the effect size was calculated using Cramer's V, which was 0.373. While this effect size is not statistically significant, it is moderately strong in magnitude. While not statistically significant, we did find a difference between cultures and the most common free response diagnosis chosen. The most selected diagnosis in individualistic cultures were schizophrenia, social withdrawal, and hikikomori. The most selected diagnosis in collectivistic cultures were psychotic disorders, hikikomori, schizoid personality disorder, and schizophrenia.

A Chi-Square Test of Independence was executed to evaluate the professional impression of Optimal Intervention across Cultural Types. The observed frequencies are presented in Table 19. The frequencies observed in Table 19 are inconclusive in their support of Hypothesis 3. Psychotherapy was chosen most often as an intervention, but participants did not explain whether this meant individual or group psychotherapy. Assuming there was no association between Optimal Intervention and Cultural Type, the expected frequencies would be the same as those calculated and presented in Table 19.

Culture Type		No Response	Community Support	Environmental intervention	Family Intervention	Family Therapy	Group Psychotherapy	Inpatient Hospitalization	Outpatient Follow-Up	Pharmacotherapy	Psychoeducation	Psychotherapy
Collectivistic	Count	52	0	0	0	0	0	1	0	12	0	2
	Expected Count	47.1	2.4	0.4	0.8	1.2	0.4	1.2	2.0	4.9	0.4	5.7
	% Within Country	75.4%	0.0%	0.0%	0.0%	0.0%	0.0%	1.4%	0.0%	17.4%	0.0%	2.9%
Individualistic	Count	64	6	1	2	3	1	2	5	0	1	12
	Expected Count	68.9	3.6	0.6	1.2	1.8	0.6	1.8	3.0	7.1	0.6	8.3
	% Within Country	63.4%	5.9%	1.0%	2.0%	3.0%	1.0%	2.0%	5.0%	0.0%	1.0%	11.9%
Total	Count	116	6	1	2	3	1	3	5	12	1	14
	Expected Count	116.0	6.0	1.0	2.0	3.0	1.0	3.0	5.0	12.0	1.0	14.0
	% Within Country	68.2%	3.5%	0.6%	1.2%	1.8%	0.6%	1.8%	2.9%	7.1%	0.6%	8.2%

Country Name		Psychotherapy and Pharmacotherapy	Total
Collectivistic	Count	2	69
	Expected Count	2.4	69.0
	% Within Country	2.9%	100.0%
Individualistic	Count	4	101
	Expected Count	3.6	101.0
	% Within Country	4.0%	100.0%
Total	Count	6	170
	Expected Count	6.0	170.0
	% Within Country	3.5%	100.0%

Table 19. Optimal Intervention Impressions Across Culture Types

The analysis yielded a Chi-Square statistic (χ^2) of 35.623 with 11 degrees of freedom. The p-value was less than 0.001, above the alpha level of 0.05, suggesting no statistically significant association between Optimal Intervention and Cultural Type. This suggests that there is no relationship between the country of origin of the participant and the optimal intervention. Also, the effect size was calculated using Cramer's V, which was 0.458. At the same time, this effect size is statistically significant but relatively strong in magnitude. While not statistically significant, we did find a difference between cultures and the most common optimal intervention chosen. The most selected interventions for individualistic cultures were psychotherapy, community support, and outpatient follow-up. The most selected interventions for collectivistic cultures were pharmacotherapy, psychotherapy, and psychotherapy in conjunction with pharmacotherapy.

An average of responses was executed to evaluate professional impressions of the influence of parents across countries. The observed means and standard deviations are presented in Table 20. These results did support Hypothesis 4 as most cases expressed a stronger impression on the influence of parents on hikikomori.

Culture Type	N	Impression on the Influence of	Mean	Std. Deviation
Collectivistic	69	Mother	2.74	1.080
		Father	2.77	1.017
Individualistic	99	Mother	3.31	.996
		Father	3.14	.948

Table 20. Average Impression of the Influence of Parents Across Cultures

CHAPTER IV DISCUSSION

Based on the works of Kato and Teo, this study aimed to examine whether the cultural disorder of hikikomori could be diagnosed in countries outside of Japan and whether cultural factors would influence this diagnosis. To do so, common trends of professional impressions were evaluated across nine countries and two cultural types to determine whether there existed common trends in diagnosing and/or treating hikikomori. The results of this study indicated that there was a significant association between ICD-10/DSM-IV-TR diagnosis and the country/culture of the professional. The results add support to the theory proposed by Kato et al. (2012) that varying interpretations of the hikikomori vignettes exist across countries. Furthermore, the results show that these differences are likely due to the cultural norms and experiences of the professional which in turn may result in a misdiagnosis or under diagnosis of hikikomori.

Of note was that the results did not extend to the free responses or optimal interventions; no statistically significant association between a free response and optimal intervention was found across either the country or the culture of the professional. One possibility is that the standardized nature of the ICD-10 and the DSM-IV-TR allows similar diagnostic impressions to be noted based on symptoms. When allowed to opine without the restrictions of these systems, a more diverse variety of diagnoses could be observed. It is at this point that another observation of the results should be noted. Most respondents chose to make no diagnosis, through leaving the response blank, noting that they could not make a diagnosis, or indicating that they were unable to, based on lack of familiarity with the system of diagnostic code. This large amount of no responses may have led to the results that were provided in the ICD-10 and DSM-IV-TR analysis having

greater weight in deciding the trends. Another possibility is that due to the large number of no responses to the free response prompt, not enough data was collected to be able to decide. Similar possibilities exist with the comparison between optimal intervention and the country/culture of the professional.

Another aspect observed is that when these coding systems were abandoned and the respondent was allowed to make a diagnosis freely, hikikomori was provided as a frequent diagnosis. This may explain the number of no responses observed as respondents may have opted to not diagnose due to being restricted to the diagnosis available in the coding systems. This may explain why Kato et al. (2012) found it difficult to conclude that same type of hikikomori (or reason for social withdrawal) was found in Japan as in other countries.

Additionally, these results build upon Kato et al. (2012)'s theory by providing insight into the common diagnosis made by professionals of different cultural backgrounds and types. In Case A, individualistic cultures had fewer responses to personality disorders than collectivistic cultures. In the case of ICD-10 diagnosis, adjustment disorders were found to be more likely in individualistic cultures as opposed to collectivistic cultures. When observing DSM-IV-TR diagnosis, it is more likely for adjustment disorder to be observed in collectivistic cultures instead, as assumed in the hypothesis. In Case B, observations were more in line with the hypothesis that individualistic cultures would have more personality disorders suggested across both ICD-10 and DSM-IV-TR diagnoses. Despite this, the responses observed did not support the hypothesis that collectivistic cultures would have more phobic, adjustment-related, or traumatic diagnoses. Instead, schizophrenia and depression related diagnoses were

observed with greater frequency. One possibility for this difference across cases is that personality disorders may be more challenging to diagnose in children and adolescents. The observed rate of responses in the study may reflect the lower number of respondents in the collectivistic culture condition compared to the individualistic culture condition. It is interesting to note that a more significant number of schizophrenia responses were observed in both conditions. This may be due to respondents finding a way to account for the behavioral disturbance in both vignettes. Also of note is the responses in the free response category. When allowed to freely response, hikikomori was able to be observed, as well as internet addiction and social withdrawal. As stated earlier, this may be because they no longer need to restrict themselves to the diagnostic systems and allow themselves to suggest other phenomena or specific symptoms.

When reviewing the results of optimal interventions across cultural types, it was observed in both cases that psychotherapy was preferred in individualistic cultures. This aligns with the hypothesis that individualistic cultures focus on the individual instead of groups or the community as a form of treatment. In Case B, community support was viewed as the second most common response in preferred treatment but was still secondary to psychotherapy. One possibility for this observation may be due to the number of evidence-based treatments that provide a greater confidence that psychotherapy may be able to address some of the problems. Another possibility is that respondents may be more prone to select psychotherapy due to their historical diagnoses and treatment experiences.

In case B, the most frequently chosen optimal intervention for collectivistic cultures was pharmacotherapy, followed by a combination of psychotherapy and

pharmacotherapy. Not observed were community-related interventions. Due to a lack of responses, collectivist cultural responses for optimal interventions in Case A could not be observed. This may result from the lower number of respondents to this question. The selection of pharmacotherapy over psychotherapy in Case B may reflect a provider's belief that the individual's disorder development may be outside their control and require some assistance. However, this is difficult to determine without specific reasoning regarding the respondent's response.

Finally, both cases provided evidence to support the works of Borovoy (2008), Yamamoto (2005), and Yajima and Nemoto (2002) by showing that respondents did find parents had an influence on the development of hikikomori. Additionally, it provided some insight into which parents held greater influence across cultures. The results for Case A showed minimal difference in the impression of the influence of parents across cultures. This may be due to the case focusing on an adolescent and the belief that parents are more responsible for the development of their children. Case B shows a more significant difference in the impression of the influence of parents across both cultural types. It was observed that individualistic cultures had a more significant impression that parents influenced the development of the disorder in the case compared to collectivistic cultures. This may reflect the community playing a more vital role in an individual's life in a collectivistic culture, resulting in influence being dispersed across a more significant number of people than only parents.

Limitations and Future Directions

Several vital limitations may have affected this study. The first is the distribution of respondents across countries and cultures. This study had a far more significant number of individuals from individualistic cultures, specifically from Japan , than collectivistic cultures. This discrepancy across cultures and countries makes it difficult to determine whether observed results are due to trends across the dimensions or the power of the analysis being weaker due to fewer responses. Additionally, having one country more heavily represented in the study weighs that country's responses and sways the overall grouping towards any trend occurring in one country instead of all the countries included. In some ways, this is understandable, given that the study originated in Japan and focused on a Japanese culture-bound syndrome. In the future, greater emphasis should be placed on gathering an equal number of responses across countries and cultures to provide a more accurate view of trends across countries and cultures without one country tipping the scales.

Another limitation is the age of the data set. The initial study and data were gathered in 2011 and only reflect trends from then. Since then, trends in countries and cultures may have changed, and these results may only reflect a snapshot of what was occurring then. To provide more accurate data, a more recent study should capture current trends and compare whether professional impressions have changed over time; additionally, given the age of the data set, it focused on DSM-IV-TR diagnosis. Since the study, the DSM-V and DSM-V-TR have been published with changes to various diagnostic groups. Future studies should reflect this by focusing on the DSM-V-TR as it

is the current DSM system of diagnosis, and new diagnoses may have been added while older ones may have been dropped.

Thirdly, the study lacks information about the respondents, such as experience, years of practicing, whether they were raised in the culture they worked in, and the theoretical background they practice from. Such information may provide greater context into their decisions and help them understand trends in their country and cultural type. For example, understanding whether they were raised in the country/culture they work in may provide more significant information about that specific country or culture or whether they represent an outlier in that specific set. Another possibility is reviewing whether different theoretical backgrounds influence a country or culture's overall diagnostic and therapeutic approach. This may provide insight into why specific diagnosis or treatment approaches were chosen.

A final limitation observed was the number of "no response" responses in the study. This limited the analysis's power by having less data to analyze. Additionally, several responses expressed having never used the ICD-10 when giving no response. Future studies should focus on the most common diagnostic system across countries to gather a greater number of responses and provide greater standardization. Alternatively, greater emphasis could be placed on the free response option. As seen in the data, the diagnostic systems used did not include the hikikomori phenomenon and, as a result, saw no responses for hikikomori. When allowed to respond freely, more responses identified the hikikomori phenomenon and found it among the most common diagnoses in the set. This could be used to observe and support how common hikikomori truly is across cultures.

Conclusion

This study provided insight into the relationship between country/cultural type and diagnostic impressions of a specific culture-bound syndrome, its treatment, and the influence of external factors. While some parts of the initial hypotheses were supported, others were not. The clinical significance of these results is not fully known without comparing them to more recent data to compare the development of trends. If a comparison can eventually be made, a greater understanding of common factors of the development of this culture-bound syndrome may be observed. Additionally, comparing different impressions of an optimal intervention may provide a greater pool of interventions for professionals to pull from. If so, it is hoped that this would provide better clinical outcomes for treating this syndrome.

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