

## A STUDY ON THE INFLUENCE OF THAI CULTURAL FACTORS ON ATTITUDES AND PERCEPTIONS OF ADHD

Eric K. Mason<sup>1</sup>  
Parvathy Varma<sup>2</sup>

**Received:** 14th July 2020

**Revised:** 6<sup>th</sup> August 2021

**Accepted:** 10<sup>th</sup> September 2021

**Abstract:** The current research examined Thai cultural factors, such as religiosity, stigmatization of mental disorders, holistic thinking, and health locus of control towards attitudes and perceptions of ADHD, moderated by prior exposure to ADHD. The Thai translated scales Multidimensional Health Locus of Control Scales (MHLC), the SBI (Religious Beliefs/Practices), the Community Attitudes towards the Mentally Ill scale, the ADHD Stigma questionnaire (ASQ) (attitudes towards ADHD), Choi's Analysis-Holism Scale, the ADHD Beliefs Scale-revised (perceptions of ADHD) were used for testing the model. The factor structure was examined via confirmatory factor analysis and reliability and validity were established initially before testing the model. Further, SEM was utilized to test the relationships between the aforementioned cultural factors and attitudes and perceptions of ADHD (n = 323). The results indicated significant relationships between cultural factors and negative opinions of ADHD. The current research aimed to contribute to the understanding of unique aspects of ADHD in Thailand. Future research may explore methods to increase knowledge of ADHD and reduce negative attitudes/perceptions of ADHD.

**Keywords:** ADHD; Thailand; Culture; Stigma; Exposure to ADHD; Attention Deficit/Hyperactivity Disorder

**Introduction.** Attention Deficit Hyperactivity Disorder (ADHD) is a complex disorder which presents with both subtle and obvious symptoms. Due to its subtleties, culture may heavily influence both diagnostic rates and treatment rates of ADHD. Research has demonstrated that the prevalence of ADHD varies across cultures. For example, rates of ADHD in France tend to be lower when compared to rates in Germany. Despite proximity and cultural

---

<sup>1</sup> Counseling Psychologist, Light House Human Services and Consulting, Bangkok, Thailand. ericmason2009@gmail.com

<sup>2</sup> PhD Program Director, Graduate Programs in Counseling Psychology, School of Human Sciences, Assumption University, Ramkhamheng soi 24, Hua Mak Bangkok, Thailand, 10240, parvathyvarma@hotmail.com

similarities, ADHD rates remain very different between these two countries. This is not an isolated example. Rates of ADHD are different across practically all countries. This points towards the influence that culture or cultural perception has on rates of ADHD. Furthermore, knowledge and awareness of ADHD also influences perceptions of the disorder. Indeed, there are multiple ways in which cultural factors may influence ADHD rates—possibly leading to both under or over diagnosis of the disorder (Faraone, Sergeant, Gillberg, & Biederman, 2003).

There is limited research on ADHD in Thailand. According to Visanuyothin, et al. (2012), rates of ADHD in Thailand are 8.1%. However, according to Benjasuwantep, et al. (2002) rates were 6.1%. Another study found ADHD rates in Thailand to be much lower, overall, at 2.2% (Sakboonyarat, 2018). ADHD, Inattentive was reported as the higher by one study at 3.8%, while ADHD Hyperactive/Impulsive type were the lowest (Visanuyothin et al, 2013). Rates for ADHD, Hyperactive/Impulsive type being lower would be in line with Barkly's (2001) assertion that the number of reported cases of ADHD in Thailand are lower due to cultural factors which train children to speak quietly in public and encourage obedience to authority figures. As a result, as mentioned above, ADHD may be more likely to present Inattentive type, which was also supported by Visanuyothin, et al. (2013).

Aspects of certain cultures may, in fact, lead to lower rates of ADHD or behaviors associated with ADHD. However, it is more likely that culture has a greater effect on one's perceptions and attitudes towards ADHD. For example, some cultures may find certain behaviors in children to be pathological—leading to a greater likelihood for a diagnosis of ADHD, while other cultures may be more tolerant or find such behaviors age appropriate or normal. Such differences in cultural perceptions of ADHD would certainly lead to differing rates of ADHD between different cultures (Reid et al., 1998).

Indeed, cultural factors play an important role in certain aspects of how the public views ADHD. Cultural factors prevalent in Thailand that may influence perceptions and attitudes towards ADHD have not been well researched in Thailand. The current research explored cultural factors that influence perceptions and attitudes towards ADHD, such as tendency to stigmatize mental disorders, holistic thinking, religiosity, and health locus of control (Sakboonyarat, 2018).

### *Religiosity*

Thailand scores very high in religiosity with 94% identifying as Buddhist (Taylor, 2008). Previous research in the United States, reported that those high

in religiosity held negative opinions towards ADHD, although the research participants in this study identified as Christians (Li, 2013). Research has found a strong link between religiosity and perceptions/attitudes towards mental illness. Those who report being more religious often have more negative views towards mental illness. What is more, those who are higher in religiosity tend to be less likely to seek out treatment for mental disorders. Indeed, there is a correlation between religiosity and stigmatization of mental disorders. Therefore, it follows that those high in religiosity may stigmatize ADHD, as well.

### *Stigmatization*

Those with mental disorders are often stigmatized across multiple cultures and societies. People with mental disorders are frequently regarded as dangerous and unpredictable, which creates fear and misunderstanding. Indeed, stigmatization is so pervasive in some cultures, those with mental disorders may even stigmatize themselves (self-stigmatization). Although efforts have been made in Western cultures to reduce stigmatization of mental illness, researchers have found that stigmatization remains higher in developing countries than in developed countries (Lauber & Roessler, 2009). One unique aspect of Thai culture which is related to stigmatization is the cultural phenomena of spirit possession. Being possessed by a malevolent spirit, in turn, leads to those affected (possibly suffering from a mental disorder) to be stigmatized by Thai society (Kaewprom, Curtis, & Deane, 2011). In other words, it is considered to be undesirable, with those being possessed to have been cursed or having brought it on through bad karma (Wong-Anuchit, 2016). Although the researcher is unaware of previous research on stigmatization of ADHD in Thailand, as the literature supports that Thai culture may lead Thais to stigmatize mental disorders, it may be deduced that there would be a link between stigmatization of mental disorders and negative attitudes and perceptions of ADHD.

### *Locus of Control*

The concept of locus of control refers to what extent individuals feel that they are able to influence their environment. Those who believe that they are able to strongly exert influence over their environment are said to have an internal locus of control, while those who feel that they have limited influence over their environment are said to have external locus of control. Those who are from collectivistic cultures, such as Thai culture, tend to have an external locus of control, while those from individualistic cultures usually have an internal locus of control (Cheng & Cheung, 2013). Previous research points out that those with lower internal locus of control may be more likely to have negative views of mental health disorders (Beckman, 1972). ADHD is a mental

disorder leading one to extrapolate that those who hold negative views of mental health disorders, would also hold negative views of ADHD.

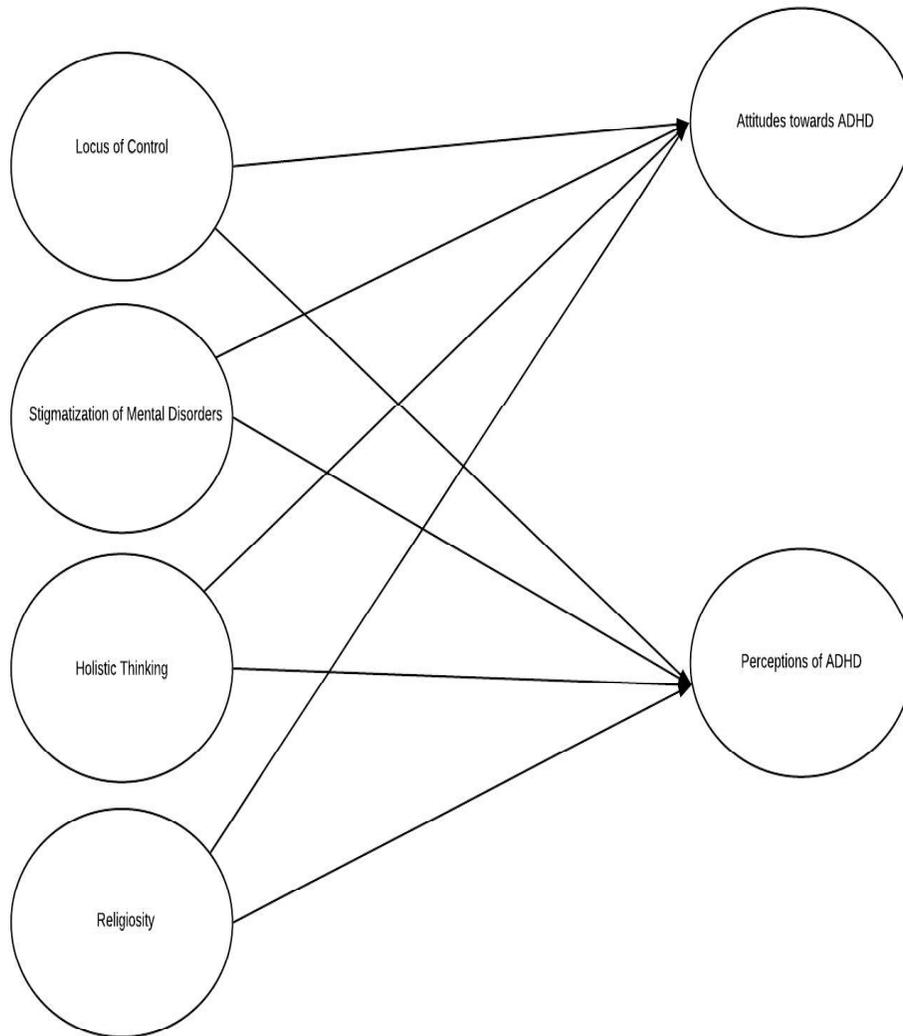
### *Holistic Thinking*

A holistic thinking style could possibly affect perceptions of mental disorders, including ADHD. Research has found that those from collectivistic cultures often have a more holistic thinking style, while those from individualistic cultures tend to have a more analytical style of thinking. In general, it can be said that those from Asian countries are more likely to have a holistic style of thinking, since Asian cultures are more often collectivistic.

People from Asian cultures are more likely to take into account the context of the situation when evaluating causation, while Westerners are more likely to focus on the individual in attributing causation (Nisbett & Miyamoto, 2005). Research in Singapore linked to holistic thinking to collective culpability theory and found that Singaporeans were more likely to attribute blame to perceived wrongdoers due to circumstances, rather than view unassociated events or circumstances as distinctly separate from the perceived wrongdoer (Kwan & Chiu, 2014). Therefore, similarly this link between holistic and tendency to inaccurately associate blame on others may result in negative attitudes and perceptions of ADHD in Thailand.

In order to determine how these cultural factors, influence perceptions and attitudes towards ADHD, it is necessary to establish the psychometric properties of instruments used to measure these cultural factors that have been developed for Western cultures for use in a Thai context. CFA was used on the following scales: System of Belief Inventor (SBI) (used to measure religiosity), the Community Attitudes towards the Mentally Ill Scale (used to measure stigmatization of mental disorders), Choi's Analysis-Holism Scale (used to measure holistic thinking), the Multidimensional Health Locus of Control Scale (used to measure locus of control), the ADHD Stigma Questionnaire (used to measure attitudes towards ADHD), and the ADHD Beliefs Scale-revised (used to measure perceptions of ADHD). After CFA, SEM was applied to determine the relationship between the cultural factors and attitudes and perceptions of ADHD.

## Path Mode tested via SEM



**Figure 1.** *Ovals on the Left Represent the Constructs that may Influence Perceptions and Attitudes Towards ADHD (Represented by the Ovals on the Right)*

**Hypothesis.** This researcher hypothesized that there would be a link between the cultural factors described above and attitudes towards ADHD and perceptions of ADHD. Specifically, this researcher proposed that the relationships between the cultural factors and attitudes towards ADHD and perceptions of ADHD are as follows:

H1 Religiosity has an influence on attitudes towards ADHD. The higher in religiosity Thai people are, the more negative are their attitudes.

H2 Religiosity has an influence on perceptions of ADHD. The higher in religiosity Thai people are, the more negative are their perceptions.

H3 Stigmatization has an influence on attitudes towards ADHD. The higher in stigmatization towards mental illness Thai people are, the more negative are their attitudes towards ADHD.

H4 Stigmatization has an influence on perceptions of ADHD. The higher in stigmatization towards mental illness Thai people are, the more negative are their perceptions of ADHD.

H5 Holistic thinking has an influence on attitudes towards ADHD. The higher in holistic thinking Thai people are, the more negative were their attitudes towards ADHD.

H6 Holistic thinking has an influence on perceptions of ADHD. The higher in holistic thinking Thai people are, the more negative are their perceptions of ADHD.

H7 Health locus of control has an influence on attitudes towards ADHD. The lower in internal locus of control, the more negative are attitudes towards ADHD.

H7 Health locus of control has an influence on perceptions of ADHD. The lower in internal locus of control, the more negative are perceptions of ADHD.

## **Methods**

### *Design*

Step 1: Confirmatory factor Analysis (CFA) was conducted to assess the adequacy of the factor structure identified via EFA. Unlike EFA, CFA allowed the researcher to posit explicitly one or more a priori models. Step 2: The path model was tested via SEM. Step 3: The moderating effect of previous exposure or no exposure to ADHD was investigated.

### *Participants*

Sample size was 323 Thai adults. 140 (43%) of participants were male and 183 (57%) were female. 149 (46%) of participants were between 18 and 28 years old; 89 (27.6%) were 29 to 39 years old; 49 (15.1%) were 40 to 50 years old; 35 (11%) were 51 to 75 years old. Regarding highest educational levels completed by participants, 146 (45%) completed high school; 126 (39%) completed a bachelor's degree; 45 (14%) completed less than high school; 5 (1.5%) completed a graduate degree (Master's Degree or PhD). Therefore, 277 (86%) of participants had at least a high school education. Participants were recruited primarily in Bangkok, Udon Thani, and Nong Khai. Bangkok is located in central Thailand, while Udon Thani and Nong Khai are in North-

East Thailand. Convenience sampling method was employed for data collection.

Table 1. *Demographics Summary, n = 323*

Demographics	n	Educational Level	n
Female	183	High School	146
Male	140	BA/BS	126
Non-Bangkok	226	Middle School	45
Bangkok	97	Graduate School	5

### Procedure

The data was collected from the participants in the paper form. The instruments were translated to Thai by professional translators and were then back translated to English to ensure there were no discrepancies in translation. The questionnaire comprised of the instruments listed above and consisted of 147 questions. Participants took about 20 minutes on average to complete the questionnaire.

### Data Analysis

Initially Confirmatory factor analysis was done to look at the factor structure of the constructs and convergent and divergent validity were determined. To investigate the influence of religiosity, stigmatization (tendency to stigmatize mental disorders), locus of control, and holistic thinking on attitudes and perceptions of ADHD, the path analysis was employed using SEM. The goodness of fit of posited path model was tested using path analysis.

### Results

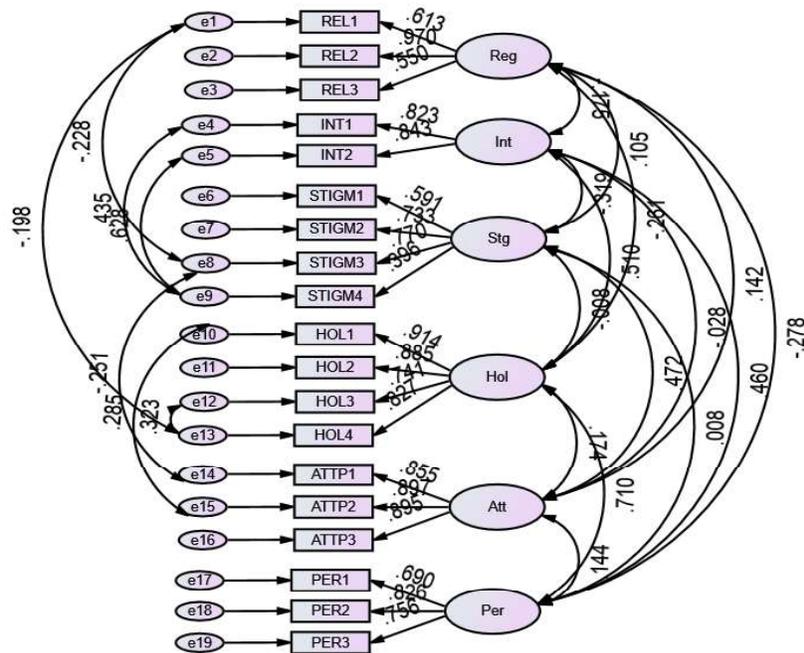
Confirmatory factor analysis (CFA) (n = 323) was carried out to evaluate the identified factor structures of the Thai-translated scales of the Multidimensional Health Locus of Control Scale (locus of control) (internality dimension only), the SBI (religiosity), the Community Attitude Towards the Mentally Ill Scale (stigmatization), Choi's Analysis-Holism Scale (holistic thinking), ADHD Stigma Questionnaire (attitudes towards ADHD), and ADHD Beliefs Scale (perceptions of ADHD). CFA, unlike exploratory factor analysis, allows the researcher to explicitly posit an *a priori* model (e.g., on the basis of the factors identified in the Western-based original scale) and to assess the fit of this model to the observed data. Figure 2 shows the confirmatory factor analysis. The table 2 presents the standardized regression weights

Table 2. CFA: Standardized Regress Weights, *p* value, and critical ratio

	Parameters	Standard Regress. Weights	<i>p</i>	Critical Ratio
REL1	← Religiosity (REL)	0.613		
REL1	← Religiosity (REL)	0.970	***	8.749
REL1	← Religiosity (REL)	0.550	***	8.839
INT1	← Internal Locus (INT)	0.823		
INT2	← Internal Locus (INT)	0.843	***	11.132
HOL1	← Holistic (HOL)	0.914		
HOL2	← Holistic (HOL)	0.855	***	23.349
HOL3	← Holistic (HOL)	0.741	***	16.570
HOL4	← Holistic (HOL)	0.827	***	20.526
STIGM1	← Stigmatization (STG)	0.591		
STIGM2	← Stigmatization (STG)	0.733	***	9.214
STIGM3	← Stigmatization (STG)	0.770	***	9.358
STIGM4	← Stigmatization (STG)	0.396	***	5.864
ATTP1	← Attitude ADHD (ATT)	0.855		
ATTP2	← Attitude ADHD (ATT)	0.897	***	21.041
ATTP3	← Attitude ADHD (ATT)	0.895	***	20.853
PER1	← Perception ADHD (PER)	0.690		
PER2	← Perception ADHD (PER)	0.826	***	12.072
PER3	← Perception ADHD (PER)	0.756	***	11.489

As indicated by table 2 and figure 2, each of the latent constructs had highly significant relationships ( $p < .001$ ) with each of their respective parcels—indicating that each instrument measures what it proposes to measure (high convergent validity). The standardized regression coefficients (factor loadings) ranged from .591 to .970. The percentage of unexplained variance ranged for the 19 indicator variables ranged from 22% (78% explained) (attitudes towards ADHD) to 59% (41% explained) (stigmatization).

## Confirmatory Factor Analysis



**Figure 2. Six-Factor Measurement Model Representing the Latent Constructs of Religiosity, Internality, Stigmatization, Holistic Thinking, Attitude Towards ADHD and Perception of ADHD.**

Convergent validity of each of the instruments can be determined by the CFA model by examining if each indicator variable's standardized loading/coefficient with its underlying latent construct is significant (greater than twice its standard error) (Anderson & Gerbing, 1988). A standardized coefficient is significant if its associated critical ratio is  $\geq + 1.96$ . The critical ratio test revealed that the standardized loadings for all 19 indicator variables are statistically significant, which indicates convergent validity for all the instruments.

Discriminant validity was assessed by how strongly each factor correlated with itself as compared to how well each factor correlated with other factors. This indicates that each instrument is able to distinguish the latent construct it measures from the other latent constructs. Table 3 shows that when correlation coefficients for a factor are ranked from highest to lowest it results the highest correlations coefficients lining up on the diagonal, which is representative of discriminate validity across all factors.

Table 3. *Discriminant Validity*

	REL	INT	HOL	STG	ATT	PER
REL	<b>0.540</b>	0.031	0.068	0.011	0.020	0.077
INT		<b>0.694</b>	0.260	0.102	0.001	0.212
HOL			<b>0.713</b>	0.000	0.030	0.504
STG				<b>0.409</b>	0.223	0.000
ATT					<b>0.779</b>	0.021
PER						<b>0.577</b>

### **Path analysis to investigate the relationship of religiosity, locus of control, stigmatization, and holistic thinking on perceptions and attitudes towards ADHD**

The hypothesized model was tested to see how well it explained the relationships of religiosity, locus of control, stigmatization, and holistic thinking on participants' perceptions and attitudes towards ADHD.

### **Base Model: Structural model between the four independent variables of religiosity, locus of control, stigmatization, holistic thinking and the two dependent variables of attitudes towards ADHD and perceptions of ADHD**

SEM was used to test the path model ( $n = 323$ ). According to the direct model, the four independent variables directly have an association with the two dependent variables. The cultural constructs denoted by the independent variables represent Thai cultural concepts that differ from Western culture. The fit of the path model posited to represent the structural relationships between the independent variables and the dependent variables was evaluated via SEM. This method analyzed the covariance matrix missed generated from the model's measurement variables.

The overall chi-square goodness-of-fit value was significant,  $\chi^2(df = 2) = 259.917$ ,  $p < .001$ , and the incremental fit indices (IFI, TLI, CFI) are above .90. This indicates that model is a good fit when compared to a null or independence model in that the posited model represented over a 90% improvement in fit over the null or independence model; therefore, supporting the structure of the posited direct path model. The RMSEA value of 0.057 is also with the acceptable range; thus, indicating that the model fits the population covariance matrix well. In addition, the PNFI value was 0.690 which is used for comparing the goodness-of-fit for competing values. **Structural Model (Base Model): Standardized Regression Coefficients.**

As can be seen in table 4 religiosity, stigmatization, holistic thinking, and internal locus of control were significantly directly associated with the criterion variables of attitudes towards ADHD and perceptions of ADHD.

Table 4. *Standardized regression weights, p value, and critical ratio of the structural model*

Parameters	Standard Regress. Weights	<i>p</i>	Critical Ratio
Attitude ADHD ← Religiosity	0.148	0.009	2.616
Attitude ADHD ← Internal Locus	0.048	0.522	0.640
Attitude ADHD ← Stigmatization	0.467	***	5.823
Attitude ADHD ← Holistic	0.197	0.006	2.769
Perception ADHD ← Internal Locus	0.170	0.014	2.470
Perception ADHD ← Stigmatization	0.094	0.127	1.527
Perception ADHD ← Holistic	0.599	***	8.162
Perception ADHD ← Religiosity	-0.103	0.044	-2.016

Table 5. *Factor Covariances for the Structural Model*

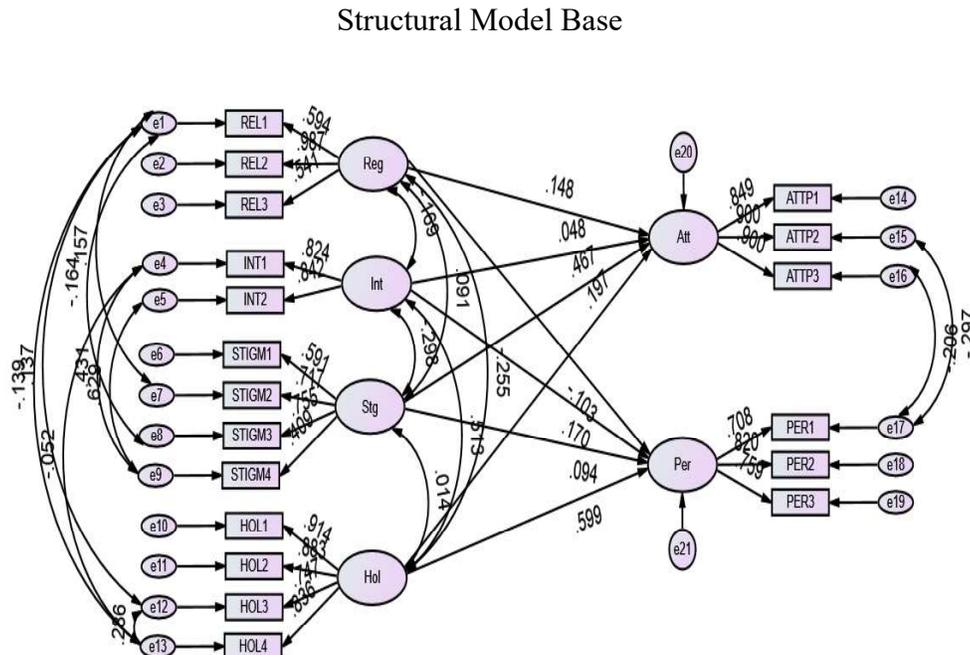
Parameters	Standard Regress. Weights	<i>p</i>	Critical Ratio
Religiosity ↔ Stigmatization	0.091	0.173	1.364
Religiosity ↔ Internal Locus	-0.169	0.008	-2.641
Internal Locus ↔ Holistic	0.513	***	6.988
Stigmatization ↔ Holistic	0.014	0.835	0.208
Internal Locus ↔ Stigmatization	-0.298	***	-3.792
Religiosity ↔ Holistic	-0.255	***	-3.770

*Attitudes towards ADHD:* The higher the religiosity (Beta = 0.148), stigmatization (Beta = 0.467), and holistic thinking (Beta = 0.197), the more negative the attitudes towards ADHD. Internal locus of control was not significantly associated with attitudes towards ADHD. *Perceptions of ADHD:* While high religiosity was associated with more accurate/favorable perceptions of ADHD (Beta = -0.103), internal locus of control (Beta = 0.170), and holistic thinking (Beta = 0.599) were associated with more inaccurate/unfavorable perceptions of ADHD. Stigmatization was not significantly associated with perceptions of ADHD.

Unlike the other cultural factors in which higher scores resulted in more negative perceptions towards ADHD, the inverse was true for religiosity. The researcher hypothesized that higher religiosity would result in more

inaccurate/unfavorable perceptions towards ADHD. However, in this instance those higher in religiosity had more favorable perceptions towards ADHD. Nevertheless, higher religiosity was associated with negative attitudes towards ADHD, which was in line with what the researcher hypothesized.

The researcher believed that high religiosity would be associated with both negative perceptions and negative attitudes towards ADHD; however, the results were mixed. Perhaps, these results indicate that those high in religiosity may perceive ADHD accurately, while still having the tendency to stigmatize ADHD. Based on the operationalized definition of perceptions of ADHD and attitudes towards ADHD for the purposes of this study, it may be possible to have both accurate/favorable perceptions of ADHD, while still having negative attitudes towards the ADHD.



**Figure 3. Six-factor Structural Model Representing the Latent Constructs**

**Discussion.** Previous research has indicated a potential link to these cultural factors and negative opinions of ADHD and/or mental health disorders. For example, Li (2008) found a link between religiosity and negative opinions of ADHD, Wong-Anuchit, et al. (2016) reported on Thai cultural tendencies to stigmatize mental disorders, Kwan and Chiu (2014) found a connection between holistic thinking and the potential tendency to inaccurately attribute

blame, and Beckman (1972) proposed that those with low internal locus of control may be more likely to stigmatize mental disorders. In order to investigate the relationship between these cultural factors and perceptions/attitudes towards ADHD, path models were examined.

The current research found a link between cultural factors prominent in Thailand and negative perceptions/attitudes towards ADHD. Religiosity, stigmatization, and holistic thinking were associated with negative attitudes towards ADHD, while internal locus of control and holistic thinking were associated with negative perceptions of ADHD. Religiosity was associated with favorable/accurate perceptions of ADHD.

Religiosity appeared to be the most inconsistent cultural factor. It was associated with negative attitudes towards ADHD, but favorable/accurate perceptions of ADHD. Since high religiosity was associated with negative attitudes towards ADHD, it would be expected that it would also be associated with unfavorable/inaccurate perceptions; however, the inverse resulted with high religiosity being associated with favorable perceptions of ADHD. Those high in religiosity may tend to stigmatize ADHD, while also having favorable/accurate perceptions of the disorder.

Only holistic thinking resulted in both negative attitudes towards ADHD and unfavorable/inaccurate perceptions of ADHD. Perhaps the tendency to inaccurately attribute blame which results from holistic thinking leads to more negative attitudes and perceptions towards ADHD (Kwan and Chiu 2014).

Table 6. *Cultural factors significantly associated with negative attitudes and perceptions towards ADHD.*

Negative Attitudes	Unfavorable/Inaccurate Perceptions
Stigmatization	Holistic Thinking
Religiosity Holistic Thinking	Internal Locus of Control

Overall, all cultural factors investigated in the current study were associated with negative attitudes towards ADHD or inaccurate/unfavorable perceptions of ADHD in at least one instance. This is significant, as research indicates that these cultural factors are more prevalent in Thai culture than in Western culture, which may contribute to less favorable opinions on ADHD.

High scores on holistic thinking were associated with both negative attitudes and unfavorable/inaccurate perceptions of ADHD, while the other cultural factors were only associated either negative attitudes or negative perceptions (not both). This suggests that this cultural factor may be result in more overall

negative opinions of ADHD. However, on the other hand, high religiosity was also associated with favorable/accurate perceptions of ADHD and negative attitudes towards ADHD. Perhaps aspects of religiosity in Thailand serves to increase negative attitudes towards ADHD, while at the same time resulting in favorable and or accurate perceptions of the disorder. This could be investigated further in future research.

### **Limitations of the Study**

The study should be interpreted cautiously before generalizing the results. Firstly, all the questionnaires were translated from their original language (English) to Thai. Although it was determined that the translation was accurate, it is always possible that some subtleties of language are lost in translation.

The results of the study only represent relationships between variables. Therefore, regarding the results, causality cannot be attributed between independent and dependent variables. The observed significant path coefficients only signify these relationships.

### **Implications of the Findings**

The current study revealed that cultural factors prominent in Thailand were associated with negative attitudes and unfavorable/inaccurate perceptions of ADHD. Particularly, stigmatization of mental illness and holistic thinking were consistently associated with negative opinions towards ADHD, while health locus of control and religiosity were somewhat less consistently associated with negative opinions towards ADHD.

Furthermore, previous exposure to ADHD (knowing someone with ADHD) lessened the association between these cultural factors and negative opinions towards ADHD, which shows that familiarity with the disorder reduces negative opinions towards ADHD. This further highlights the importance of educating Thais about ADHD, since building familiarity with ADHD may even override cultural influences—serving to mitigate negative opinions towards ADHD.

### **Avenues for Future Research**

(1) Teaching tools/methods should be researched and developed to reduce stigmatization of ADHD and other mental health disorders. Such educational tools/methods could be implemented in schools with students and teachers, as well as with parents to reduce the stigma and shame associated with mental health disorders. This would decrease resistance towards an ADHD diagnosis and increase treatment-seeking behaviors. (2) Future research could

investigate in more detail the results of this study that linked religiosity with both positive perceptions of ADHD and negative attitudes towards ADHD, simultaneously.

### **Conclusion**

The present study investigated the relationship between cultural factors and attitudes/perceptions of ADHD in Thailand. This research contribute to understanding the relationship between these cultural factors and ADHD. Therefore, the present study contributed to expanding the knowledge of ADHD in Thailand. The current research found that there was support for the hypotheses that this researcher proposed, although further research on this topic is needed. For example, the current research suggested that there was a relationship between Thai cultural factors and negative opinions towards ADHD.

In addition, the current research found that cultural factors prevalent in Thailand were associated with negative attitudes and perceptions of ADHD. Future research should focus on improving awareness and knowledge of ADHD in Thailand and reducing stigma towards the disorder. In so doing, the current research along with future research broadens the base of knowledge of ADHD in Thailand in hopes of improving access for treatment of ADHD; thus, improving the lives of children, teens, and adults with ADHD.

### **REFERENCES**

- Anderson, J. C., & Gerbing, D. W. (1988). Structural equation modeling in practice: A review and recommended two-step approach. *Psychological Bulletin*, 103(3), 411–423.
- Barkley, R. (2001). The inattentive type of adhd as a distinct disorder: What remains to be done. *Clinical Psychology: Science and Practice*, 8, 489 - 493. doi:10.1093/clipsy.8.4.489
- Beckman, L. (1972). Locus of control and attitudes toward mental illness among mental health volunteers. *Journal of Consulting and Clinical Psychology*, 38(1), 84-8.
- Benjasuwantep, B., Ruangdaraganon, N., & Visudhiphan, P. (2002). Prevalence and clinical characteristics of attention deficit hyperactivity disorder among primary school students in bangkok. *Journal of the Medical Association of Thailand*, 85(4), 1232-40.
- Cheng, C., & Cheung, S. F. (2013). Cultural meaning of perceived control: A meta-analysis of locus of control and psychological symptoms across 18 cultural regions. *Psychological Bulletin*, 139(1), 152-188.

- Faraone, S., Sergeant, J., Gillberg, C., & Biederman, B. (2003). The worldwide prevalence of adhd: Is it an american condition? *World Psychiatry, 2*, 2.
- Fuermaier, A.B., et al. (2014). Stigmatization in teachers towards adults with attention deficit hyperactivity disorder. *SpringerPlus (3)*, 26.
- Kaewprom C., Curtis J., & Deane, F.P. (2011). Factors involved in recovery from schizophrenia: A qualitative study of Thai mental health nurses. *Nurs Health Sci, 13*(3), 323-327.
- Kwan, L., & Chiu, C. (2014). Holistic versus analytic thinking explains collective culpability attribution. *Basic and Applied Social Psychology, 36*, 38.
- Lauber, C., & Rössler, W. (2007). *Stigma towards people with mental illness in developing countries in Asia*. Taylor & Francis.
- Li, K. (2013). Religion and medicalization: The case of adhd. *Journal for the Scientific Study of Religion, 52*(2), 309–327
- Nisbett, R. E., & Miyamoto, Y. (2005). The influence of culture: Holistic versus analytic perception. *Trends in Cognitive Sciences, 9*(10), 467-473.
- Taylor, J. (2008). *Buddhism and Postmodern Imaginings in Thailand*. London: Routledge.
- Wong-Anuchit, C., Mills A., Schneider J., Rujkorakarn, D., Kerdpong bunchote, C., & Panyayong, B. (2016). Internalized stigma of mental illness scale - thai version: Translation and assessment of psychometric properties among psychiatric outpatients in central thailand. *Archives of Psychiatric Nursing, 30*, 450–456
- Reid, R., DuPaul, G., Anastopoulos, A., & Riccio, C. (1998). Assessing culturally different students for attention deficit hyperactivity disorder using behavior rating scales. *Journal of Child Psychology, 26*, 187-198.
- Sakboonyarat, B., et al. (2018). Prevalence and associated factors of attention deficit hyperactivity disorder (adhd) in a rural community, central thailand: A mixed methods study. *Canadian Center of Science and Education, 10*, 60-69.
- Visanuyothin, T., et al. (2013). The prevalence of attention deficit/hyperactivity disorder in Thailand. *Journal of Mental Health of Thailand, 21*(2), 394-356.