**UNIVERSITAS INDONESIA**

# KNOWLEDGE / UNDERSTANDING, PERCEPTION, AND ATTITUDE TOWARDS ATTENTION - DEFICIT/ HYPERACTIVITY DISORDER (ADHD) AMONG PEDIATRICIANS IN INDONESIA

**THESIS**

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**FACULTY OF MEDICINE**
**INTERNATIONAL CLASS PROGRAM**
**JAKARTA**
**AUGUST 2014**

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**THESIS**
**A final research project report submitted to Faculty of Medicine, Universitas Indonesia as one of the prerequisites to obtain Bachelor of Medicine degree**

**AMANDA AYU PUTRI MARDANI**
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**FACULTY OF MEDICINE**
**INTERNATIONAL CLASS PROGRAM**
**JAKARTA**
**AUGUST 2014**

# STATEMENT OF ORIGINALITY

**This project is being done by my own composition. Any information, whether quoted or referered have been stated as such.**

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" Knowledge/Understanding, Perception, and Attitude towards Attention – Deficit/ Hyperactivity Disorder (ADHD) among Pediatricians in Indonesia"

**Has been successfully defended in front of The Board of Examiner and accepted as one of the requirement to achieve the *Sarjana Kedokteran* (Bachelor of Medicine) degree from the Faculty of Medicine, Universitas Indonesia**

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## ACKNOWLEDGEMENT

The author would like to thank Allah SWT for the guidance and blessing to complete this research project. This research was conducted as one of the prerequisites for the Author to achieve the *Sarjana Kedokteran* at Faculty of Medicine Universitas Indonesia. The author realizes that without the support from a lot of people, this research project would not have been completed. Thus, the author would like to wishes sincere gratitude to all of the following people:

1. Dr. dr. Tjhin Wiguna SpKJ (K) as the supervisor of this research project, for his guidance, motivating support, assistance, knowledge and experiences to help the author conducted the research.
2. dr. Isabella Kurnia Liem M.Biomed,PhD. as the head of research module for allowing this research to be conducted.
3. Respondents from pediatricians in Indonesia for their willingness to participate and fill the questionnaires during the data collection.
4. Staffs and members of Pediatrics department RSCM-FKUI for their willingness to help in the process of data collection.
5. Research mates in the same group, Belinda Julivia Murtani, Jason Anthony Wibowo, Cindy Anastasia Liu, Magdalena Rusady Goey, and Kenny Harsono for the encouragement and support during this research project.
6. Author's parents and family who had given their unlimited support and motivation throughout the completion of research project.
7. Author's best friends whom had help in data collection & gave endless encouragement during the conduction of this research.

At the end, the author hopes that this research would able to help in developing the medical knowledge and also be beneficial for many people.

Jakarta, 25 August 2014

Amanda Ayu Putri Mardani

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## ABSTRAK

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Program Studi : Pendidikan Dokter Umum

Judul :Pengetahuan / Pemahaman, Persepsi dan Sikap terhadap Gangguan Pemusatan Perhatian / Hiperaktivitas (GPPH) di antara Dokter Anak di Indonesia

Dokter anak merupakan lini pertama penanganan masalah kesehatan pada anak-anak. Gangguan Pemusatan Perhatian/Hiperaktivitas (GPPH) adalah gangguan perkembangan mental dan perilaku yang sering terjadi pada anak-anak usia sekolah dasar. Penelitian ini bertujuan untuk mengetahui korelasi antara pengalaman praktek dengan tingkat pengetahuan/pemahaman, persepsi, dan sikap terhadap GPPH diantara dokter anak di Indonesia. Rancangan studi potong lintang dan metode uji acak sederhana digunakan dalam pemilihan sampel penelitian ini. Data yang didapat adalah hasil dari kuesioner yang telah diuji validitas dan reliabilitasnya menggunakan formula Pearson Alpha dan Cronbach's Alpha. Hasil dianalisis dengan uji korelasi spearman menggunakan program SPSS versi 20. Dari total 109 responden, penelitian ini mengambil 96 responden melalui randomizer sesuai formula sampel. Hasil dari 96 responden menunjukan bahwa tingkat pengetahuan/pemahaman, persepsi, dan sikap terhadap GPPH berada pada tingkat yang sangat rendah dan rendah (65.6%, 57.3%, dan 76%). Hasil analisis statistik menunjukan bahwa hanya terdapat perbedaan bermakna antara persepsi dengan pengalaman praktek ($p<0.05$), sehingga terdapat korelasi antara pengalaman praktek dengan persepsi terhadap GPPH. Kesimpulannya, tingkat pengetahuan/pemahaman, persepsi, dan sikap terhadap GPPH adalah sangat rendah dan rendah dikalangan dokter anak, sehingga memerlukan edukasi lebih lanjut terhadap ADHD kepada dokter anak tanpa melihat pengalaman praktek yang dimiliki.



Kata kunci : GPPH; pengetahuan; persepsi; sikap; dokter anak

## ABSTRACT

*Name* : *Amanda Ayu Putri Mardani*

*Study Program* : *General Medicine (Pendidikan Dokter Umum)*

*Title* :*Knowledge / Understanding, Perception, and Attitude Towards Attention-Deficit / Hyperactivity Disorder towards ADHD among Pediatricians in Indonesia*

*Pediatricians are the first primary care to seek for children's health problem. Attention – Deficit / Hyperactivity Disorder (ADHD) is a common mental and behavioral developmental disorder in children. In Indonesia, pediatricians usually do not realize ADHD and effect to its inappropriate management thus leads to high prevalence of ADHD. The aim of this research is to identify the correlation between practice experience and level of knowledge / understanding, perception, and attitude towards ADHD among pediatricians in Indonesia. For the sample selections, a cross-sectional study design with simple random sampling method was used in this research. The data that has been acquired from questionnaire is analyzed with spearman correlation test method using SPSS program 20th version. The result from 96 respondents showed the level of knowledge / understanding, perception, and attitude towards ADHD were in very poor and poor levels (65.6%, 57.3%, and 76% respectively). Statistical analysis showed that there were no significant differences in between knowledge / understanding and attitude with practice experience ($p>0.05$) that imply there are no correlation between practice experience and level of knowledge / understanding and attitude towards ADHD. On the other hand, there was a significant difference in between perception with practice experience ($p<0.05$) that implies there is a correlation between practice experience and level of perception towards ADHD. In conclusion, the levels of knowledge / understanding, perception, and attitude towards ADHD were very poor and poor on knowledge / understanding, perception, and attitude among pediatricians in Indonesia, so that a follow-up about ADHD is necessary among pediatricians without considering their practice experience.*



*Keywords: ADHD; knowledge; perception; attitude; pediatricians*

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# CHAPTER I
# INTRODUCTION

## 1.1 Background

Pediatricians usually are the first primary care to seek for any of children's health problem. Particularly, behavioral and developmental problems. Nowadays, one of the most challenging behavioral problems among children worldwide is ADHD. Up to this day, the prevalence of ADHD among Indonesian children is more frequent. It is increasing until 5% per year, which means there is 1 out of 20 children that is diagnosed with ADHD[24]. As neuro-metabolic diseases and especially genetic diseases are inevitably prevalent nowadays, ADHD may appear as a manifestation of these diseases, but as well exhibits a genetic character by itself. Therefore, the combined efforts of experienced child psychiatrists, child neurologists, and pediatricians are necessary in accomplishing the differential diagnosis.

Moreover, there is a study that investigated which group initially considered the diagnosis of ADHD, and it resulted in the teachers, thereafter referring them to child psychiatrists or pediatricians[25]. In a survey for the Child Mind Institute, over 80 percent of parents with worries about a child's mental health talked about it with their pediatrician[26]. Experienced child psychiatrists/pediatricians and pediatric neurologists take active roles in both the education of teachers and particularly on how to differentiate between ADHD and other conditions resembling the clinical picture of ADHD. For the diagnosis and management of ADHD, the American Academy of Pediatrics indicates pediatricians as having an active role in identifying the cases with underlying genetic and metabolic diseases that initially suggest ADHD during regular pediatric examinations[25].

ADHD is a shortage for Attention – Deficit / Hyperactivity Disorder. This is one of the most common psychiatric abnormality among children. Even though it is already common, there are still a lot of people who does not know what is ADHD. They are not fully aware about this abnormality, neither does they care

about this. ADHD is causing someone to not be able to concentrate in their daily activitites therefore affecting their productivity. If it is not treated properly, ADHD will carried out through the rest of the children's life until they are adults. Therefore, this will cause major problem that will causes the person that suffers from this abnormality to experience a lot of problem in being productive. Children that have this abnormality have a cognitive retardation that make their level of intelligence decreases, bad time management, decreasing level of verbal or nonverbal memory, unable to communicate fluently, etc[6,9,10].

ADHD is often mistaken as hyperactivity, thus people neglect the importance of it. Because ADHD can cause many problems in children, hence early detection of ADHD is very important to prevent children to have more severe stage of ADHD. In order to minimize the negative outcomes, it is crucial that they receive proper diagnosis and treatment of their symptoms. ADHD is a disorder that could only be assess subjectively, therefore, prior knowledge about it is essential. Another obstacle is that ADHD has similarity to symptoms of other behavior disorders and has other comorbid factors such as: inattentive subtype, hyperactivity-impulsivity subtype, and combined subtype[2-4].

Different types of professionals often have approach that are vary in order to assess and treat ADHD. However, all of them should acknowledged about the disorder, its symptoms, and appropriate attitude assessment. Because the prevalence of ADHD in Indonesia is gradually increasing, we can conclude that the management of ADHD is still inadequate. According to this matter, it is essential to find the level of knowledge / understanding, perception, and attitude towards ADHD among pediatricians in Indonesia and also evaluate the correlation between their practice experience and level of knowledge / understanding, perception, and attitude towards ADHD.

### 1.2 Research Questions

1. How is the level of knowledge / understanding, perception, and attitude towards ADHD among pediatricians in Indonesia?

2. Is there any correlation between practice experience and knowledge / understanding, perception and attitude towards ADHD among pediatricians in Indonesia?

### 1.3. Hypothesis

There is a correlation between practice experience and knowledge / understanding, perception and attitude towards ADHD among pediatricians in Indonesia.

### 1.4. General Objective(s), Specific Objective (s), and Research Benefit

#### 1.4.1 General Objective

To assess the level of knowledge / understanding, perception and attitude towards ADHD among pediatricians in Indonesia.

#### 1.4.2 Specific Objective

To evaluate the correlation between practice experience and knowledge / understanding, perception and attitude towards ADHD among pediatricians in Indonesia

### 1.5. Benefits from Research

#### 1.5.1 Benefits for Education

1. To act as a supporting data that is useful as a reference for teaching material to educate pediatrician residents
2. To contribute medical literature regarding to ADHD

#### 1.5.2 Benefits for Health Services

1. The data could be use as a reference for developing newly curriculum that focused on ADHD for pediatricians

2. To develop and increase awareness of pediatricians towards ADHD in Indonesia

3. To improve the knowledge / understanding, perception, and attitude of ADHD among pediatricians in Indonesia

### 1.5.3 Benefits for Research

1. The data that has been collected can be use as the reference for further research
2. To provide updated information about the knowledge / understanding, attitude, and perception towards ADHD among pediatricians in Indonesia

# CHAPTER II
# LITERATURE REVIEW

## 2.1 Knowledge / Understanding, Perception, and Attitude

Knowledge is something that people obtained by learning continuously by experience in order understand a subject. The level of knowledge of people may vary due to the difference of each people experience, education, interest, culture, or economical status. Content of knowledge are facts, and information that people acquired from learning that can either be practical or theoretical. Once an individual know about something, they will memorize it. After they can memorize it they will process the information in their brain that can make them be able to describe it[19]. Once a person is acknowledged, later on the person will understand it. Understanding is when people aware if of the meaning of something even deeper. It is the extension of knowledge. People who have the knowledge may not understand. People who are considered as understand of something, they will be able to give example of make a conclusion about their previous knowledge. After they understand they will be able to apply it. Applying means someone is able to give a concrete act based on what they are already know[20]. Furthermore, the general knowledge and understanding will affect how people will think about the subject. It is called perception. It is a process of being able to interpret stimulus that is related to a certain aspect. It can either be from one self, or self-perception, or it can be affected by other people and things, or external perception. There is a process that is occurring inside the receptors of the brain, in order to achieve the matter. It started when stimulus received by the receptors, and it will continue by physiological aspect that is going to differ the perception of that stimulus in the brain. Other factors may also contribute to the difference of perception such as, behaviour, situation, interest, background, and environment. As people already presumed about something, they will think of what action should they do about matter. This is called an attitude. There are three ways of how could an attitude be manifest, which are cognitive, affective, and conative. These classified by things that could differ people's attitude, such as knowledge, emotion, personality, experience, culture, religion, and education[21,22].

## 2.2 ADHD

### 2.2.1 Definition

ADHD, that stands for Attention - Deficit / Hyperactivity Disorder is one of the most common neurobiological disorders in childhood. Children with ADHD will have symptoms that persist throughout their life, even later in adult time. Every stage of groups with ADHD will have different symptoms and thus require different management. Because ADHD is commonly manifest until adulthood, an early identification is needed to prevent the odds. There are several main criteria on how to identified ADHD. We can suspect ADHD in individuals that suffers from difficulty in staying focused and paying attention, difficulty in controlling their behaviour, and individuals with hyperactivity.[1,2]

### 2.2.2 Classification

ADHD has certain symptoms that could help to identify it easily. Basically, the main clinical features of individuals with ADHD are impulsive, inattentive, and hyperactivity. Person who suffers ADHD might have one or more of these criteria. ADHD has been divided into three subtypes based on its main symptoms.

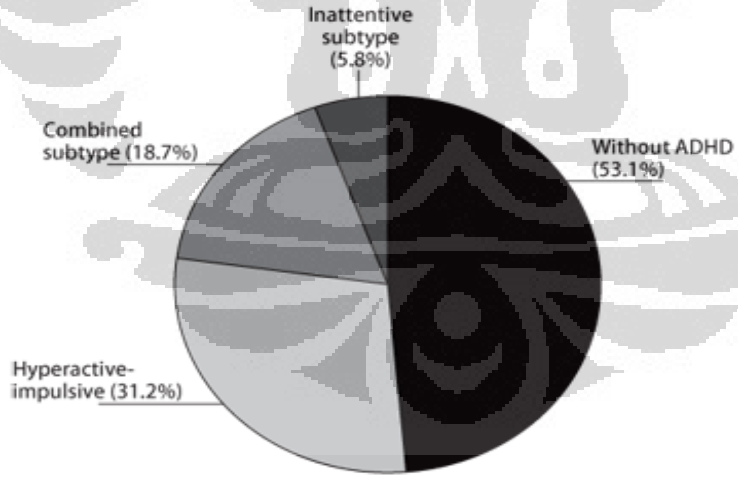



Figure 1: Subtypes of ADHD. Found in: http://www.scielo.br/img/revistas/anp/v68n1/a22fig01.gif

Attention-Deficit/Hyperactivity Disorder, Combined Type.

ADHD will be classified as this subtype if at least six symptoms of inattention and at least six symptoms of hyperactivity-impulsivity exist in the individuals for this

disorder at least 6 months. This is the most common type of ADHD that occur in children and adolescents.

Attention-Deficit/Hyperactivity Disorder, Predominantly Inattentive Type.

ADHD will be classified as this subtype if at least six symptoms of inattention (but fewer than six symptoms of hyperactivity-impulsivity) exist in individuals for this disorder at least 6 months.

Attention-Deficit/Hyperactivity Disorder, Predominantly Hyperactive–Impulsive Type.

ADHD will be classified as this subtype if at least six symptoms of hyperactivity–impulsivity (but fewer than six symptoms of inattention) exist in individuals for this disorder at least 6 months. In many cases, inattention still may be a significant clinical feature[2,3,4].

### 2.2.3. Signs and Symptoms

Inattentiveness

By its definition, it is clear that patient who suffers from ADHD will develop clinical feature like inattentiveness compare to other normal children. The developing of centre of attention are alertness, arousal, selectivity, sustained attention, and attention span. Children who suffer from ADHD will have greatly difficulty in to keep concentrating in completing something. This condition will be seen when the children doing an activity such as having to play with certain thing, they will tend to jump on one toy to another.

Hyperactivity

It is going to be certain that children with ADHD are going to be hyperactive. They tend to be more active than the normal level of their growth, either motorically or vocally. Children with hyperactivity will be anxious, restless, fidgety, and have uncontrolled movement. They tend to not follow the direction and make unnecessary things. Hyperactivity is often associated with impulsivity.

Impulsivity

Generally, children with ADHD cannot control their wants and needs. They tend to unable to differentiate between right and wrong. Not able to control behaviour, cannot postpone responses and wants are can be called as impulsive. Clinical

feature of these children are to quick in giving response, without having to wait for the question. The effects of impulsivity they will have make an unnecessary mistake. Impulsive behaviour is too risky.[2,3,5]

### 2.2.4. Diagnosis

ADHD is considered a mental health disorder, that is why only professionals that can make the diagnosis that a child, teen, or adult has ADHD. These professionals use the Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revised (DSM-IV-TR) as a guide. Lately, awareness about ADHD has led to more children and adults being diagnosed with the disorder. Some people have expressed concern that the condition is being over diagnosed. In order to be diagnosed with ADHD, children must meet the specific diagnostic criteria set in the DSM-IV-TR. These criteria are primarily associated with the main features: inattention, hyperactivity, and impulsivity.[2,5, 17]

### 2.2.5. Epidemiology

Determining the prevalence of ADHD can be quite tricky because it varies by race/ethnicity, sex, age, and socio-economic status. Furthermore, difficulty in diagnosing ADHD adds to the difficulty in developing an adequate case definition for epidemiologic studies. Diagnosis of ADHD only depends on parent and teacher reports, and there is no laboratory test reliable to predict ADHD. Prevalence estimates of ADHD are rapidly changing because there are lots of contributing factors. The diagnosis of ADHD is complicated by the frequent occurrence of comorbid conditions associated. Studies suggest that developing an adequate epidemiologic case definition based on current diagnostic criteria is a prerequisite for further developing the epidemiology of ADHD.

Recent epidemiological studies about ADHD by age groups showed that about 3-8% children and 2-7% adults are affected by ADHD. According to the Badan Pusat Statistik (BPS), ADHD cases in Indonesia are higher, 26,2%. Moreover, International Classification of Diseases (ICD-10) also reported that prevalence of ADHD worldwide is 8-12%. Based on gender studies, it is said that boys are more prone to have ADHD. The ratio estimated 5:1.[2,6,7]

### 2.2.6. Comorbid Factors

Comorbid means a condition where a person has two different conditions occurring at the same time. Those conditions may not interact with each other and any therapy given may not affect the other disease. ADHD is a complex disease with various kinds of contributing factors. That is why any disorder can coexist with ADHD and often the symptoms of ADHD may overlap with other disorders. The overlapping of symptoms among the various disorders makes multiple diagnoses necessary. As the diagnosis of ADHD is considered, the clinician or mental health professional must also determine whether there are any other psychiatric disorders affecting the child that could be responsible for presenting symptoms. By conducting a complete evaluation, a clinician or mental health professional familiar with ADHD and other psychiatric disorders will be able to diagnose both the ADHD and related conditions. Most common disorders to occur with ADHD are: disruptive behavior disorders; mood disorders; anxiety disorders; tics and tourette syndrome; and learning disabilities[16].

**Disruptive Behavior Disorders (Oppositional-Defiant Disorder And Conduct Disorder)**

Patient with ADHD frequently also have oppositional defiant disorder (ODD) Among individuals with ADHD, they also have conduct disorder (CD). They occur in 25 percent of children, 45-50 percent of adolescents and 20-25 percent of adults. ODD symptoms including pattern of arguing with several adults, losing temper, refuse to follow rules, blaming others, and deliberately annoy others, often feeling angry, resentful, spiteful, and vindictive. CD symptoms including efforts to break rules without getting caught, aggressive to people or animals, destroy property, lie or steal things from others, run away, skip school, or break curfews.

**Mood Disorders**

Because of having to experience hyperactivity, impulsivity, and/or inattentive some children, may also seem to always be in a bad mood. They tend to cry suddenly out of nowhere, and they may frequently be irritable with others for no

reason. Chance of both sad, depressive moods and persisting elevated or irritable moods occur with ADHD more.

**Depression**

Some findings suggest that between 10-30 percent of children with ADHD, and 47 percent of adults with ADHD, also have depression. Frequently, ADHD occurs first later they will depress. Both environmental and genetic factors may contribute.

**Bipolar Disorder**

Up to 20 percent of individuals with ADHD also may manifest bipolar disorder. This condition involves periods of abnormally elevated mood followed by episodes of clinical depression.

**Anxiety**

Evidence based shows up to 30 percent of children and 25-40 percent of adults with ADHD will also have an anxiety disorder. Because they will depress, the child's internal feelings may not stand out to parents or teachers. Patients with anxiety disorders often getting restful sleep.

**Tics and Tourette syndrome**

Only about seven percent of those with ADHD have tics or Tourette syndrome, but 60 percent of those with Tourette syndrome have ADHD. Tics (sudden, rapid, recurrent, involuntary movements or vocalizations) can occur with ADHD in two ways. Tourette Syndrome is a much rare, but more severe tic disorder, where patients may make noises (e.g., bark sound) and movements (e.g., repetitive cringing or eye blinking) on an almost daily basis for years. Tourette syndrome often includes ADHD, although patient with ADHD may not have Tourette syndrome.

**Learning Disabilities**

Individuals with ADHD often have difficulty learning in school. Depending on how it is defined, up to 50 percent of children with ADHD have a coexisting learning disorder. Individuals with learning disabilities may have a specific problem reading or calculating, but they are not less intelligent than their peers are. Research indicates that students with both ADHD and dyslexia are no more anxious, hyperactive, or aggressive than student with ADHD only. However, the learning disorder does impact school performance, which may subsequently impact family and social relationships[6,9,10].

### 2.2.7. Etiology

Although the etiology of ADHD yet has to be determined, there is a correlation that the condition involves functional and anatomical dysfunction in the brain's frontal cortex and basal ganglia segments of the cortico-basal ganglia-thalamo-cortical circuitry. These areas support the regulation of attentional resources, the programming of complex motor behaviors, and the learning of responses to reinforcement. Theories involving these areas have been examined in series involving neurobiological studies of healthy humans, humans with ADHD, and animal models. The symptoms of ADHD are multidimensional, suggesting the interaction of neuroanatomical and neurochemical systems. The current evidence for the neurobiological factors suggests that genetics and neurochemistry play key roles.[3,4,5,11]

**1. Biological Factors**

**Genetics**

Genetic factor may also implicate in ADHD, but the mechanism of action is not completely understood. Genetic hypothesis for ADHD is a mixture of dominant and recessive major genes that act with complex polygenic transmission. In boys, excessive Y chromosome (XYY) shows an elevated hyperactivity that includes verbal and low performance. Trouble concentrating and difficulty in learning are also caused by genetic abnormalities. In girls with chromosome 45, XO also shows difficulty in concentrating and difficulty in writing and re-drawing. As for

the genetic family studies, twin, family and adoption studies of ADHD have supported a strong genetic contribution to the disorder, with heritability ranging from 60-90%.

**Neurologic Factor**

ADHD is said to be disrupted system in brain. In individuals with ADHD, there is a deficit activation of brain because of pathology in the prefrontal area and/or sagittal part of the frontal in brain that is predominating in brain cortex. Pathology in brain cortex also causes the symptom in frontal lobe. In people still on fetal or neonate phase, they may have exposed to certain agents that cause hypoxia. Hypoxia can cause the pathology throughout the brain cortex that cause the difficulty to integrate coordination and the cortex cortical later on in life.

**Biochemical Theory**

Certain study believes that certain neurotransmitters are involved in producing the symptoms associated with ADHD, although the mechanism is still unknown. Abnormal levels of these neurotransmitters may be associated with the symptoms of hyperactivity, impulsivity, mood, and aggression often observed in individuals with the disorder.

**Prenatal, Perinatal, and Postnatal Factors**

There has been found the correlation between maternal smoking during pregnancy and hyper-kinetic-impulsive behavior in neonates. Intrauterine exposure to toxic substances, including alcohol, can produce effects on the behavior of the children. Fetal alcohol syndrome includes hyperactivity, impulsivity, and inattention, as well as physical anomalies is going to affect the fetus. Prematurity, fetal distress, low birth weight, precipitated or prolonged labor in perinatal may also be contribute. Other than that, postnatal factors can also contribute to ADHD including cerebral palsy, epilepsy, and other central nervous system abnormalities resulting from trauma, infections, or other neurological disorders.

**2. Environmental Influences**

**Environmental Lead**

Disrupted environmental can contribute on the cognitive and behavioral development in children. Examples of environmental lead are: the toxicity of certain substance, food additives, and allergic reaction. A possible causal link between elevated toxic levels and behavior associated with ADHD is still being investigated.

**Psychosocial Influences**

Disorganized environments or a disruption in family equilibrium may predispose some individuals to ADHD. A high level of psychosocial stress, maternal mental disorder, paternal criminality, low socioeconomic status, and foster care have been implicated. Other psychosocial influences that have been implicated include family history of alcoholism, hysterical and sociopathic behaviors, and parental history of hyperactivity. Developmental learning disorders may also predispose to ADHD.

Up until now, researches still can not identified the main cause of ADHD, but there are lots of factors that contribute in the pathogenesis of this disorder. It is said that biomedical factors is the main factor that contribute, including genetic factor. Genetic factor will greatly affect the pathogenesis of ADHD, starting from molecular aspect until the activation deficit process, inhibition, regulation, or cognitive function of brain. However, psychosocial factor may also contribute in the prognosis of this disorder. Bad influence of environmental cause the bad prognosis of this disorder and cause it to be more severe and get more complex.[3,4,5,11]

**2.2.8 Pathophysiology**

ADHD is a complex disease that has several causes. The definitive cause of ADHD is unknown. Findings across genetic, neuroanatomical, neuroimaging, and neuropsychological factors have been implicated to ADHD. All of them will have a knock-on effect between another that will results in ADHD.

The most common pathophysiological explanation for ADHD involves dopaminergic transmission throughout the frontal-striatal and frontal-parietal pathways by basal ganglia. These dopaminergic neurons located in midbrain. The pathway plays a critical role in regulation of behavioural function of the brain. However, neuroimaging, neuropharmacological, as well as other neurotransmitters are also implicated to ADHD.

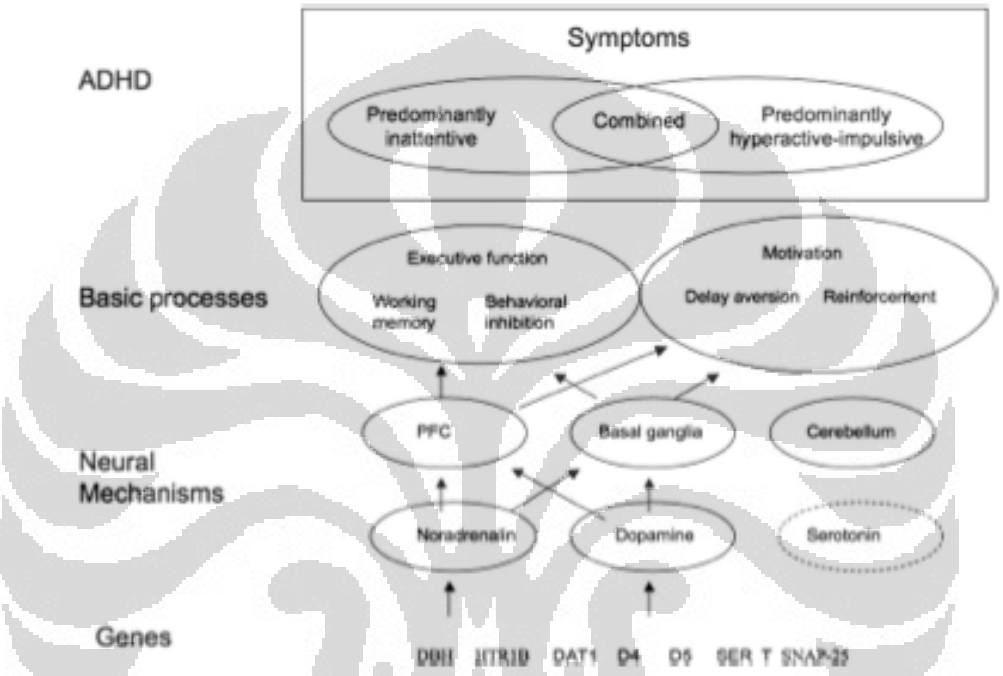


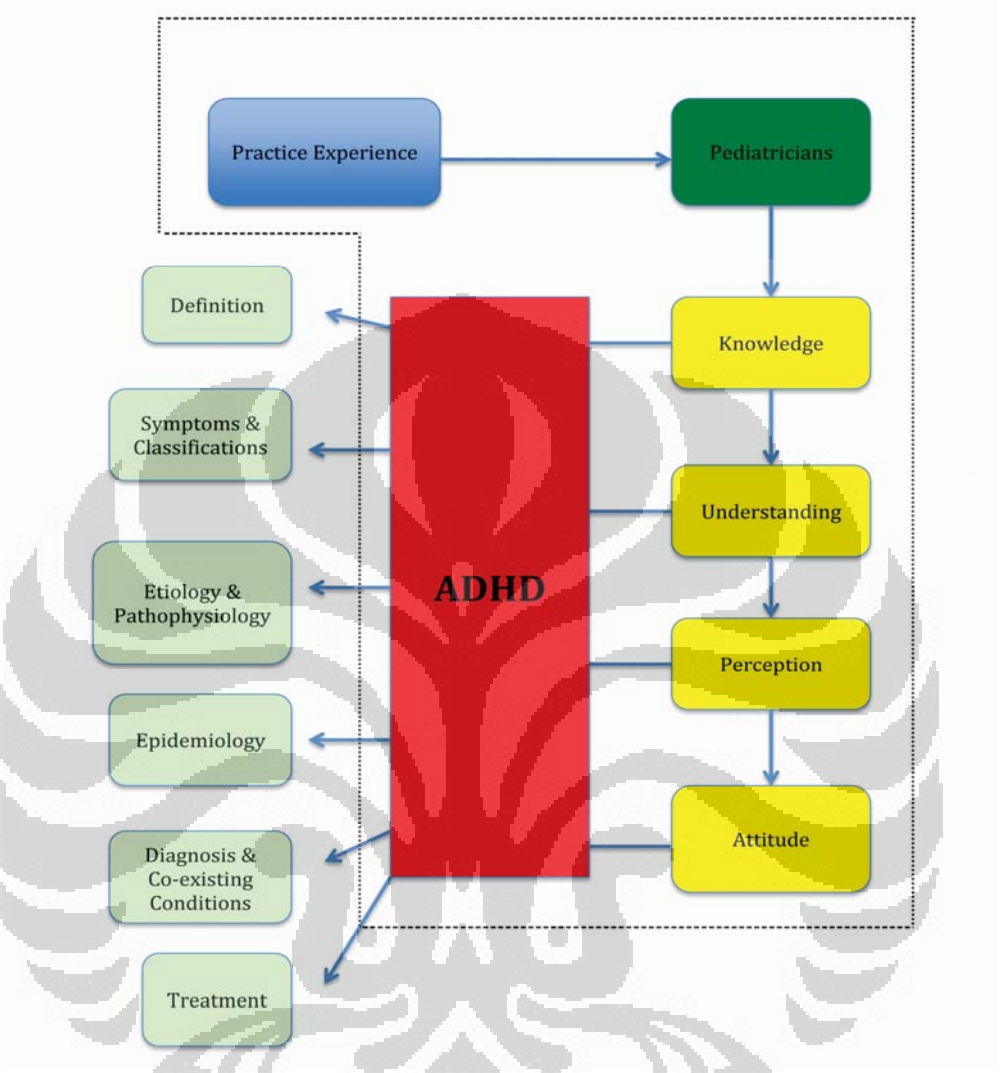

Figure 2: Relation between levels of organization to ADHD. Found in: http://www.peaknt.com/files/%23Neurobiology%20of%20ADHD_Tripp.pdf

### 2.2.9. Neuroimaging Studies

The most affected region of ADHD is frontal lobe. However, some extended until the back of the frontal lobes, leading to insufficient frontal cortical inhibitory control due to fronto–limbic dysfunction. Some neuroscience studies have determined that distributed networks of brain regions underlie attention, cognition, and behavioral self-regulation and that dysfunction in various components of this network can be associated with ADHD. Specifically, researchers have focused on dorsolateral prefrontal cortex and ventrolateral prefrontal cortex, because these regions are thought to support awareness, selective and divided attention, attention shifting, planning, executive control, and

working memory. In addition, ventrolateral prefrontal cortex in particular has been associated with behavioral inhibition, as evidenced by its activation with signal-stopping tasks. Less attention has been paid to orbitofrontal cortex, even though abnormalities of this region are associated with social disinhibition and impulse control. MRI (Magnetic Resonance Imaging) studies of ADHD have detected that patient's overall brain volume, gray matter volume, and cortical thicknesses are reduced.[13,14,18.]

## 2.3 Theoretical and Conceptual Framework




: Scope of the Research

# CHAPTER III
# METHODS

## 3.1 Research Design

This study used a cross sectional study method because it was purposed to assess the level of knowledge / understanding, perception, and attitude towards Attention - Deficit / Hyperactivity Disorder (ADHD) among pediatricians in Indonesia and also their correlation with practice experience.

## 3.2 Time and Location of The Study

This research was conducted in Indonesia from September 2013 to December 2013

## 3.3 Data Sources

The data in this study was obtained by questionnaires, which was a primary data that have been filled by the subjects and it was scored.

## 3.4 Population and Sample

### 3.4.1 Target population

The target population were all pediatricians in Indonesia

### 3.4.2 Accessible population

Accessible population were pediatricians in Indonesia who were filled the questionnaires online and filled the questionnaires that the researcher gave to their hospitals

### 3.4.3 Research subject

The subject of the researcher were pediatricians in Indonesia who was willing to filled the questionnaires and fulfilled the inclusion criteria

## 3.5 Inclusion Criteria

Inclusion criteria was all pediatricians in Indonesia who was willing to participate in this research by signing the informed consent.

### 3.6 Sample Size

The number of the sample used in this study was 96 samples, it was determined by this equation that uses Categorical Descriptive Study formula:

$$n = \frac{Z\alpha^2 pq}{d^2}$$

The definition of each symbols are:

*n* : Sample size

*p* : prevalence of knowledge, understanding, perception, and attitude of pediatricians in Jakarta towards ADHD

*q* : 1-p

$Z\alpha$ : constant (1,96)

*d* : precision (0,1)

Calculation:

**n = $1.96^2$ x 0.1 x 0.1 / $0.01^2$ = 96**

Thus, minimum sample that is required in this study is 96 pediatricians.

### 3.7 Sample Collection

The data was obtained by spreading the questionnaires online (google drive) and distributing them through several hospitals such as: Cipto Mangunkusumo hospital, Pertamina Central hospital, Sahid Sahirman hospital, Setia Mitra hospital, Hermina hospital, etc. Subjects were also originated from author's network such as relation and friends.

The actual data that has been collected were 118, but 9 of them were included in the exclusion criteria. From the 109 data, 96 were selected randomly through "Research Randomizer", a randomizer program in a website: http://www.randomizer.org/form.htm in accordance to sample size calculation.

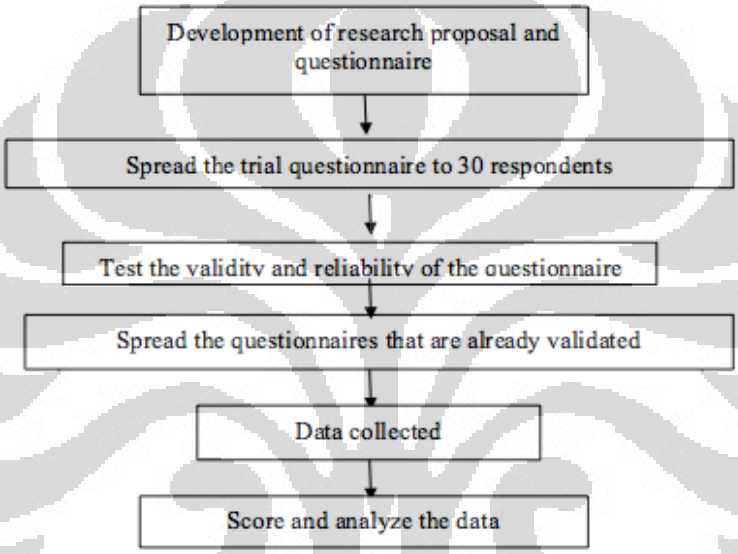
### 3.8 Variable Identification

- Dependent Variables : Level of knowledge / understanding, perception, and attitude towards ADHD
- Independent Variables : Practice experience among pediatricians
- Confounding Variables : Age, gender, family, and environment

### 3.9 Data Collection

The acquired data were collected from the questionnaires that were filled completely by the respondents through online questionnaires or hardcopy. In this study, the subjects must currently work as a pediatrician. Furthermore, to assure that the subjects were willing to participate in this research, an informed consent must have been agreed first by the respondent prior filling the questionnaire.

### 3.10 Flow of the Research




### 3.11 Data Analysis

All of the data that are being collected in this research was analyzed using SPSS software version 20 for Macintosh. To identify the correlation, data was analyzed utilizing spearman correlation method. Lastly, all of the data was presented in tables utilizing SPSS ver.20 and Microsoft Word 2010.

### 3.12 Operational Definition

#### 3.12.1 Demographic Data

| Characteristic | Category | Variable |
|---|---|---|
| Age | Based on respondent's response (in years) | Numeric |
| Gender | Male<br>Female | Nominal |
| Practice Experience | It was defined as the length of the practice of the respondents in years. The division was into four categories based on the percentiles:<br>• < 25% : Very low<br>• 25 – 50% : Low<br>• 51 – 75% : Moderate<br>• > 75% : Good | Ordinal |
| Ethnicity | Based on respondent's response | Nominal |
| Marital status | Unmarried<br>Married<br>Widow/widower | Nominal |
| Income per month | The range of the classification was based on World Bank Income Group 2012:<br>• Low income (< Rp 850.000)<br>• Lower-middle income (Rp 851.000-Rp 3.500.000)<br>• Upper-middle income ( Rp 3.501.000-Rp 10.000.000)<br>• High income (> Rp 10.000.000) | Ordinal |

#### 3.12.2 Knowledge / Understanding

Knowledge is something that people obtained by learning continuously by experience in order to understand a subject. Content of knowledge are facts, and information that people acquired from learning that can either be practical or theoretical. Understanding is when people aware of the meaning of something

even deeper. People who are considered as understand of something, they will be able to give example of make a conclusion about their previous knowledge.

A research questionnaire was used to evaluate the level of knowledge / understanding of the respondents. To assure that the questionnaire are valid and reliable, a Pearson alpha test and Cronbach's alpha test was done. In the questionnaires, Pearson alpha test's result was >0.25 on each variable and the result of Cronbach's alpha test was 0.726; which means the questionnaires are considered as valid and reliable.

In the category of knowledge/understanding, there were 21 questions to assess the respondents level. Respondents' answers then evaluated and scored. Correct answer was given score of 2 points and incorrect answer was given nothing. Meanwhile, score of 1 point was given if the subject did not know the answer. The score of respondents was then summed up to assess the total score. The range of total score was from 0 to 42 points.

After the total score has been counted, it was then being categorized into four categories based on its percentiles:

- Very poor : if the total score was < 25%
- Poor : if the total score was in range 25%-50%
- Moderate : if the total score was in range 51%-75%
- Good : if the total score was > 75%

**3.12.3 Perception**

Perception is a process of being able to interpret stimulus that is related to a certain aspect. It can either be from self-perception, or external perception. To evaluate the level of perception towards ADHD, questionnaire was used. Moreover, to assure that the questionnaire are valid and reliable, a Pearson alpha test and Cronbach's alpha test was done. The result of Pearson and Cronbach alpha test were alpha coefficient > 0.25 for each variable and alpha coefficient of alpha Cronbach 0.775. This means that the questionnaire was valid and reliable in prior to evaluate the perception level of ADHD of the respondents.

In the category of perception, there were 15 questions in perception variable. According to the answer of respondents, if they answered correctly, they

have given score of 2 points and incorrect answer was given score 0 point. Furthermore, score of 1 point was given if the respondents did not know the answer. The score of the respondents' answer was then summed up to count the total score; the range of total score was from 0 to 30. After the total score of the respondents has been counted, it was then classified based on percentiles into four categories:

- Very poor : if the total score was < 25%
- Poor : if the total score was in range 25%-50%
- Moderate : if the total score was in range 51%-75%
- Good : if the total score was > 75%

**3.12.4 Attitude**

Attitude is an act of acting towards a certain matter. It is affected by the way a person perceived about something. To assess the level of attitude towards ADHD among the respondents, questionnaire was used. To assure that the questionnaire are valid and reliable, a Pearson alpha test and Cronbach's alpha test was done. The questionnaires are already considered as valid and reliable referring to the result of the tests; which are alpha coefficient > 0.25 for each variable and Pearson Alpha coefficient of 0.7.

In the category of attitude variable, there were 6 questions to assess respondents' level of attitude. According to their responses, score 2 points was given for each correct answer, score of 1 point was given if the subject did not know the answer, and score of nothing was given for any false answer. After this, adding up all the scores was done to assess the total score; so that the range of total score was from 0 to 12. After the total score has been counted, it was then categorized into four categories based on the percentiles:

- Very poor : if the total score was < 25%
- Poor : if the total score was in range 25%-50%
- Moderate : if the total score was in range 51%-75%
- Good : if the total score was > 75%

### 3. 13 Research Ethics

All of the respondents of this research have been informed about the purpose of this research before the research conducted. Subjects who agreed to participate have signed the informed consent before hand. They had the rights to refuse to participate in this research. All the collected data in this research are kept confidentially and would not be used for the sake of misused reasons. In addition, The Ethics Committee of The Faculty of Medicine, Universitas Indonesia, had given the ethical approval for this research with no.467/H2.F1/ETIK/2013.

# CHAPTER IV
# RESULTS

## 4.1 Demographic Data

The result is obtain from data collection from 96 respondents who are working as pediatricians in Indonesia

**Table 4.1.1 Characteristics of the Research Subjects (n = 96)**

| Characteristic | | Frequency | Percentage (%) |
|---|---|---|---|
| Age | | | |
| Mean (SD) | 49.2 (6.91) | | |
| Median | 48 | | |
| Mode | 45 | | |
| Range | 28 - 69 | | |
| Gender | | | |
| Male | | 51 | 53.1 |
| Female | | 45 | 46.9 |
| Ethnicity | | | |
| Aceh | | 5 | 4.6 |
| Betawi | | 14 | 12.8 |
| Bugis | | 4 | 3.6 |
| Jawa | | 37 | 34 |
| Minang | | 5 | 4.6 |
| Sunda | | 8 | 7.3 |
| Other / Lain-lain | | 36 | 32.9 |
| Marital status | | | |
| Unmarried | | 4 | 4.2 |
| Widow/widower | | 5 | 5.2 |
| Married | | 87 | 90.6 |
| Monthly income | | | |
| Low income | | 0 | 0 |
| Lower-middle income | | 6 | 6.3 |
| Upper-middle income | | 16 | 16.7 |
| High income | | 59 | 61.5 |

The average age of the pediatricians participated in this research were 49 years old. From 96 respondents, there were more male than female (53.1% and 46.9% respectively). Most of respondents were originated from Javanese ethnic, which is accounted for 37% among all respondents. Moreover, almost all of the

respondents are married (90.6%). Based on their income, most of them (61.5%) are categorized in high-income group (Table 4.1.1)

**Table 4.1.2 Categorization of Practice Experience Based On Percentiles**

| Characteristic | Percentiles | Categories |
|---|---|---|
| Practice Experience | < 25% : ≤ 8 years | Very low |
| | 25 – 50%: 9 - 13 years | Low |
| | 51 – 75%: 14 - 22 years | Moderate |
| | > 75% : > 22 years | Good |

**Table 4.1.3 Distribution of Respondents Based On Practice Experience (n = 96)**

| Characteristic | Frequency | Percentage (%) |
|---|---|---|
| Practice Experience | | |
| Very low | 29 | 30.2 |
| Low | 20 | 20.8 |
| Moderate | 25 | 26.0 |
| Good | 22 | 22.9 |

Practice experience was categorized based on the percentiles of the results of the respondents, which were divided into four different categories that have four different ranges (Table 4.1.2). Majority of the respondents (30.2%) have practice experience below than and/or equal to eight years, which is considered as the very low practice experience (Table 4.1.3)

### 4.2 General Information Data

**Table 4.2.1 Respondents Distribution Based on The Question "Do you know (more or less) any information about Attention – Deficit / Hyperactivity Disorder (ADHD)?"**

| Answer | Frequency | Percentage % |
|---|---|---|
| Yes | 96 | 100 |
| No | 0 | 0 |

**Table 4.2.2 Respondents Distribution Based on Sources of Information About ADHD**

| Sources | Frequency | Percentage % |
|---|---|---|
| Friends, Relatives | 17 | 6 |
| Magazines, Newspapers | 27 | 10 |
| Television, Radio | 9 | 3 |
| Brochure, Books | 73 | 26 |
| General Practitioners | 12 | 4 |
| Pediatricians | 76 | 27 |
| Psychiatrist | 34 | 12 |
| Psychologist | 11 | 4 |
| Teacher | 19 | 7 |
| Medical Student | 3 | 1 |
| Internet | 0 | 0 |

From this study, it can be seen that all of the respondents know about attention – deficit / hyperactivity disorder/ ADHD (Table 4.2.1). Moreover, most respondents know information about ADHD mostly from their colleagues (27%), from brochure and books (26%), and from psychiatrist (12%) (Table 4.2.2).

**Table 4.2.3 Respondents Distribution Based On Question: "Do you know (more or less) any information about hyperactive children or children who are difficult to concentrate?"**

| | N | % |
|---|---|---|
| Yes | 96 | 100 |
| No | 0 | 0 |

**Table 4.2.4 Respondents Distribution Based on Sources of Information About Hyperactive Children**

| | n | % |
|---|---|---|
| Friends, Relatives | 15 | 5 |
| Magazines, Newspapers | 32 | 11 |
| Television, Radio | 9 | 3 |
| Brochure, Books | 71 | 24 |
| General Practitioners | 16 | 5 |
| Pediatricians | 75 | 25 |
| Psychiatrist | 38 | 13 |
| Psychologist | 14 | 5 |
| Teacher | 18 | 6 |
| Medical Student | 4 | 1 |
| Internet | 7 | 2 |

All of respondents in this study knew information about hyperactive children. They acquired it mostly from their colleagues (25%), brochure, books (24%), and psychiatrist (13%) (Table 4.2.3 and 4.2.4).

### 4.3 Knowledge/Understanding About ADHD

**Table 4.3.1 Categorization of Knowledge/Understanding Levels Based On Percentiles**

| | Very Poor < 25% | Poor 25-50% | Moderate 51-75% | Good > 75% |
|---|---|---|---|---|
| Total score | ≤ 24 | 25-30 | 31-32 | ≥ 33 |

The range of score of knowledge / understanding levels from 96 respondents was ranging from 14 to 38 with the mean score was 28.09

### 4.4 Perception About ADHD

**Table 4.4.1 Categorization of Perception Level Based On Percentiles**

| | Very Poor < 25% | Poor 25-50% | Moderate 51-75% | Good > 75% |
|---|---|---|---|---|
| Total score | ≤ 20 | 21-22 | 23 | 24 |

The range of the perception level from 96 respondents was ranging from 16 to 28, and the mean of the score was 22.1

### 4.5 Attitude About ADHD

**Table 4.5.1 Categorization of Attitude Level Based on Percentiles**

| | Very Poor < 25% | Poor 25-50% | Moderate 51-75% | Good > 75% |
|---|---|---|---|---|
| Total score | ≤ 8 | 9-10 | 11 | 12 |

The score of attitude level from 96 respondents was from 4 to 12, and the mean score was 9.19

### 4.6 Correlation Between Practice Experience and Level of Knowledge / Understanding, Perception, and Attitude Towards ADHD

The spearman correlation test indicated that the length of practice experience have a correlation with perception level (0.044), In the other hand, the length of practice experience does not have any correlation with knowledge / understanding level (0.488) and attitude level (0.480) (appendix 4)

# CHAPTER V
# DISCUSSION

In Indonesia, pediatricians are the general practitioners who are taking residency for four years. From 96 pediatricians that participated in this research, majority of them were in the average of age of 49 and have practice experience for less than and/or equal to 8 years. Furthermore, in terms of the gender, there were more male than female respondents (53.1 and 46.9 respectively). In terms of ethnicity, respondents that are coming from Javanese were dominant in this research, but overall the variety of ethnicity that covered in this research made it representative enough to all pediatricians in Indonesia. According to their marital status, most of the respondents were married, and have the income per month within the high-income category.

To assure that the questionnaires are valid and reliable, questionnaires were spread to 30 respondents that were acted as trial. Moreover, tests were used to evaluate the validity and reliability of the questionnaire. There is Pearson Alpha; to test the validity of the questionnaire, and Cronbach's alpha; to test the reliability of the questionnaire. The results of the validity was >0.25 on each dependent variable. The result of the questionnaire of the reliability test was 0.873. These indicate that the questionnaire was valid and reliable (Appendix 3). The content of the questionnaires itself has been confirmed by Dr. dr. Tjhin Wiguna, SpKJ (K), which is a professional in child and adolescent psychiatrist as well as the supervisor of this research.

According to the collection of the data, the author focused on distributing the questionnaires throughout several hospitals such as Pertamina central hospital, Setia Mitra hospital, Sahid Sahirman hospital, Hermina women & children hospital, and also Brawijaya women & children hospital. The author also spread out the questionnaires online, and published them in several social networks in various communities for pediatricians. Moreover, the author also used her network; such as family who works as a pediatrician, and author's friends' parents who are also working as pediatricians.

In addition, the author also helped by her research supervisor, Dr. dr. Tjhin Wiguna, SpKJ (K), to give the questionnaire to the department of children in Faculty of Medicine, Universitas Indonesia - Cipto Mangunkusumo Hospital.

In this study, all of respondents had heard about ADHD (table 4.2.1). This occurs probably because they have studied about ADHD. Moreover, all of them had heard about hyperactive children. The probable caused is because they also have studied about it previously in their studies.

Moreover, in terms of preferences in obtaining knowledge about ADHD and hyperactivity, the respondents mostly gained them from their colleagues.

## 5.1 Knowledge / Understanding towards ADHD

### 5.1.1 Level of Knowledge / Understanding towards ADHD among Pediatricians in Indonesia

In this pediatrician's sample, most subjects had very poor and poor level of knowledge/understanding about ADHD (65.6%). This result of this study is matched with the previous study that is held in Turkey, out of 156 pediatric residents, 127 stated that their knowledge on ADHD was deficient[23]. This matter may happen because the lack of interest of ADHD among pediatricians is leading to their inadequate knowledge about ADHD, therefore they do not search further and dig deeper about ADHD.

### 5.1.2 Correlation Between Practice Experience and Level of Knowledge / Understanding Towards ADHD

Knowledge is not affected by pediatricians' length of practice. Admittedly, person that achieved high level of education will have even deeper knowledge. This matter is caused by their developed mental ability. A person that has already knowledgeable will be able to understand something more easily. However, knowledge can be acquired anywhere. Newly practiced pediatricians maybe more knowledgeable than the older ones, it is according on how determine they are to study about certain things.

Moreover, the result in this research shows that there is no correlation between respondents' practice experience and knowledge towards ADHD (p

> 0.05) (refer to appendix 4). This proved that practice experience is not the only indicator of the level of knowledge / understanding about ADHD.

## 5.2 Perception Towards ADHD

### 5.2.1 Level of Perception towards ADHD among Pediatricians in Indonesia

In this study, most of respondents (57.3%) had very poor and poor level of perception about ADHD. His or her level of knowledge itself may affect someone's level of perception. Since the result of this study is that the levels of knowledge / understanding of the respondents were very poor and poor, this probably affected their level of perception as well. Moreover, because most of respondents had very low practice experience, they are also rarely faced with ADHD cases, so that they do not have enough experience to handle such matter.

### 5.2.2 Correlation between Practice Experience and Level of Perception Towards ADHD

It has been said that prior knowledge affects perception, so that the improvement in perception can be gained if there is an increase in perception. As the pediatricians have experienced their practice, they may have exposed to every kinds of children, thus increasing the level of perception towards children of ADHD. However, the result showed that the level of perception was majority in very poor and poor level. Moreover, the result also showed that there is a correlation between practice experience and perception level (refer to appendix 4). This condition is affected by the majority of the respondents have very low practice experience, therefore it affect the overall level of perception.

## 5.3 Attitude Towards ADHD

### 5.3.1 Level of Attitude towards ADHD among Pediatricians in Indonesia

In this study, it has revealed that the respondents had very poor level and poor level of attitude towards ADHD (76%). This may occur due to the lack of interest of ADHD in respondents. Handling ADHD can be quite

tricky, that is why the very poor and poor level of knowledge towards ADHD in respondents resulted in the poor attitude towards ADHD as well.

### 5.3.2 Correlation between Practice Experience and Level of Attitude Towards ADHD

Higher practice experience in pediatricians is not related with improved level of attitude towards ADHD. This probably because even though pediatricians have prior knowledge about ADHD, they are still do not have the idea on how to act around ADHD children.

In this study, the result revealed that there is no correlation between practice experience of pediatricians and level of attitude towards ADHD (refer to appendix 4). Thus conclude the previous theory that has been mentioned before.

## 5.4 Strength and Limitation of Study

Although the conduction of this research has been successful, there are certain limitations to this study. This research used some online questionnaires, the respondent biases would probably occur. To overcome this bias probability, the validity and reliability have been guaranteed by the author through confirmation from the expert. In addition, this study only assesses the correlation between practice experience and the level of knowledge / understanding, perception, and attitude towards ADHD without considering other confounding variables, such as: beliefs and personality.

However, despite all of the limitations, this research is the first research to be conducted in Indonesia that evaluates the correlation between the practice experience and the level of knowledge / understanding, perception, and attitude among pediatricians in Indonesia.

# CHAPTER VI
# CONCLUSION AND RECOMMENDATION

## 6.1 Conclusion

1. The level of knowledge / understanding, perception, and attitude about ADHD of pediatricians in Indonesia were very poor and poor.
2. There was not any correlation between the practice experience and knowledge / understanding, and attitude towards ADHD among pediatricians in Indonesia; however, there was a correlation between the practice experience and perception towards ADHD among pediatricians in Indonesia.

## 6.2 Recommendation

1. Education through seminars or workshops should be done for pediatricians and inform them more thoroughly about ADHD to update their knowledge about ADHD in order to help children with ADHD.
2. An evaluation towards the level of knowledge / understanding, perception, and attitude towards ADHD among pediatricians should be done.
3. Pediatric resident education programs must focus more on the topics of behavioral and developmental neurology as well as common neuropsychiatric disorders, or in child psychiatry and child neurology rotations, within current rotation systems in pediatric residency training, should be extended.

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# APPENDIX

**Appendix 1. Informed Consent**

***Surat Persetujuan (Informed Consent)***

Yth. Saudara/i responden
di tempat

Dengan hormat,

Saya, Amanda Ayu Putri, mahasiswa tingkat 3 Fakultas Kedokteran Universitas Indonesia (FKUI), saat ini sedang menjalankan survei mengenai "Pengetahuan, Pemahaman, Persepsi dan Sikap Terhadap GPPH (Gangguan Pemusatan Perhatian Hiperaktivitas) di Antara Dokter Anak Indonesia". Kami akan menggunakan data survei ini sebagai bahan pembahasan dalam topik skripsi saya

Untuk itu, saya mengharapkan agar Saudara/i bersedia mengisi setiap pertanyaan dalam kuesioner ini. Segala data yang berkaitan dengan survei akan disimpan sebagai arsip peneliti dan dijamin kerahasiaannya. Saudara/i berhak untuk menolak atau mengundurkan diri dari survei ini. Bila Saudara/i bersedia untuk ikut dalam survei ini, mohon mengisi dan menandatangani surat persetujuan ini. Apabila ada hal-hal yang kurang dapat dipahami, maka dapat ditanyakan lebih lanjut kepada kami. Atas perhatian Saudara/i, kami mengucapkan terima kasih.

---

Saya yang bertandatangan di bawah ini secara sadar dan tanpa paksaan bersedia berpartisipasi sebagai subjek penelitian ini. Saya menjamin bahwa semua data dan keterangan yang diberikan dalam penelitian ini adalah jujur dan benar adanya.

Nama Lengkap :
Jenis kelamin : laki-laki / perempuan
Usia :

Jakarta,.....2013

( )

**Appendix 2. Research Questionnaire**

## Data Demografis Responden

Jenis kelamin :

Usia :

Alamat : Jakarta Pusat / Jakarta Utara / Jakarta Barat /
Jakarta Timur / Jakarta Selatan / Luar Jakarta

Pendidikan terakhir : S1 / S2 / S3

Lama Praktek : Tahun

Pendapatan/ bulan : < Rp 850.000,- / Rp 851.000 – Rp 3.500.000,- /
Rp 3.501.000 – Rp 10.000.000,- / Rp >10.000.000,-

Status perkawinan : belum kawin / kawin / duda - janda

Jumlah anak :

Suku : Aceh / Ambon / Asmat / Arab / Bali / Batak / Banjar / Betawi / Bugis / Dayak / Flores / India / Jawa / Manado / Melayu / Minang / Sunda / Tionghoa / Toraja / *Lainnya*

*Apabila pada suku memilih lainnya, mohon menuliskan pada kotak di bawah ini:*

**** Lingkari jawaban yang sesuai**

Jakarta,.....2013

# Kuesioner

***Pertanyaan berikut terkait dengan pengetahuan dan pemahaman Anda mengenai GPPH atau ADHD***

1. Apakah anda mengetahui (baik sedikit atau banyak) informasi mengenai ganguan pemusatan perhatian/hiperaktivtas (GPPH) atau ADHD?
    a. Ya
    b. Tidak

2. Jika no. 1 dijawab 'Ya', dari mana anda mendengar istilah tersebut? (Jawaban boleh lebih dari satu)
    a. Teman, kenalan
    b. Majalah, koran
    c. Televisi, radio
    d. Selebaran, buku-buku
    e. Dokter umum
    f. Dokter anak
    g. Psikiater
    h. Psikolog
    i. Guru
    j. Mahasiswa kedokteran

3. Apakah anda mengetahui (baik sedikit atau banyak) informasi tentang anak hiperaktif atau anak sulit berkonsentrasi ?
    a. Ya
    b. Tidak

4. Jika no. 3 dijawab 'Ya', dari mana anda mengetahui informasi tersebut? (Jawaban boleh lebih dari satu)
    a. Teman, kenalan
    b. Majalah, koran
    c. Televisi, radio
    d. Selebaran, buku-buku
    e. Dokter umum
    f. Dokter anak
    g. Psikiater
    h. Psikolog
    i. Guru
    j. Mahasiswa kedokteran

5. Apakah GPPH atau ADHD merupakah masalah kesehatan anak?
    a. Ya
    b. Tidak

6. Menurut Anda, GPPH atau ADHD merupakan: (jawaban boleh lebih dari satu)

| No. | Gangguan | Ya | Tidak |
|---|---|---|---|
| 6.1 | Gangguan jiwa dan mental | | |
| 6.2 | Gangguan saraf atau otak | | |
| 6.3 | Gangguan perilaku dan perkembangan | | |

7. Menurut Anda apa yang menjadi tanda atau ciri-ciri anak GPPH atau ADHD : (jawaban boleh lebih dari satu)

| No. | Tanda / Ciri-ciri | Ya | Tidak |
|---|---|---|---|
| 7.1 | Tidak kenal lelah, atau aktivitas yang berlebihan | | |
| 7.2 | Mudah menjadi gembira, impulsif | | |
| 7.3 | Mengganggu anak-anak lain | | |
| 7.4 | Gagal menyelesaikan kegiatan yang telah dimulai, selang waktu perhatiannya pendek | | |
| 7.5 | Menggerak-gerakan anggota badan atau kepala secara terus menerus | | |
| 7.6 | Perhatian kurang, mudah teralihkan | | |
| 7.7 | Permintaan harus segera dipenuhi, mudah menjadi frustrasi | | |
| 7.8 | Sering dan mudah menangis | | |
| 7.9 | Suasana hatinya berubah dengan cepat dan drastis | | |
| 7.10 | Ledakan kekesalan, tingkah laku eksplosif dan tak terduga | | |

8. Menurut Anda apa yang menjadi faktor risiko terjadinya GPPH atau ADHD : (jawaban boleh lebih dari satu)

| No. | Penyebab | Ya | Tidak |
|---|---|---|---|
| 8.1 | Keturunan | | |
| 8.2 | Zat penyedap rasa | | |
| 8.3 | Masalah dalam kehamilan | | |
| 8.4 | Pola asuh yang tidak tepat | | |

9. Menururt Anda, penanganan anak GPPH atau ADHD lebih baik dengan?
   a. obat saja
   b. obat + terapi perilaku
   c. terapi perilaku saja
   d. tidak memerlukan penanganan

   Jika memilih obat, obatnya adalah……

10. *Metilfenidat* sebagai obat stimulan dapat digunakan untuk pengobatan terhadap anak GPPH atau ADHD
    a. Ya
    b. Tidak
    c. Tidak tahu

11. Obat non-stimulan seperti *atomoxetine* dapat digunakan sebagai penngobatan terhadap anak GPPH atau ADHD apabila terdapat kontraindikasi pada obat stimulan
    a. Ya
    b. Tidak
    c. Tidak tahu

***Pertanyaan berikut terkait dengan persepsi Anda terhadap GPPH atau ADHD***

12. Apakah perilaku anak GPPH atau ADHD yang sulit berkonsentrasi (tidak dapat mempertahankan konsentrasi ketika mengerjakan satu pekerjaan atau tugas sekolah, mudah bosan dan teralihkan perhatiannya ketika mengerjakan satu pekerjaan atau tugas sekolah) mengganggu orang sekitarnya?
    a. Ya
    b. Tidak
    c. Tidak tahu

13. Apakah perilaku anak GPPH atau ADHD yang sulit berkonsentrasi mengganggu fungsi anak tersebut sehari-hari (bermain, belajar, berinteraksi dengan orang lain) ?
    a. Ya
    b. Tidak
    c. Tidak tahu

14. Apakah perilaku anak GPPH atau ADHD yang hiperaktif (tidak dapat duduk diam, selalu mau bergerak dan cenderung banyak bermain) dapat mengganggu orang sekitarnya?
    a. Ya
    b. Tidak
    c. Tidak tahu

15. Apakah perilaku anak GPPH atau ADHD yang hiperaktif dapat mengganggu fungsi anak tersebut sehari-hari (bermain, belajar, berinteraksi dengan orang lain) ?
    a. Ya
    b. Tidak
    c. Tidak tahu

16. Apakah perilaku anak GPPH atau ADHD yang impulsif (bertindak sebelum dipikirkan terlebih dahulu, seperti melakukan berbagai tindakan yang membahayakan diri sendiri, tidak sabaran, dan cenderung tergesa-gesa) dapat mengganggu orang sekitarnya?
    a. Ya
    b. Tidak
    c. Tidak tahu

17. Apakah perilaku anak GPPH atau ADHD yang impulsif mengganggu fungsi anak tersebut sehari-hari (bermain, belajar, berinteraksi dengan orang lain) ?
    a. Ya
    b. Tidak
    c. Tidak tahu

18. Menurut Anda, Apakah anak GPPH atau ADHD boleh bermain dengan anak-anak normal disekitarnya?
    a. Ya
    b. Tidak
    c. Tidak tahu

19. Apakah anak dengan GPPH atau ADHD perlu mendapatkan penanganan?
    a. Ya , alasan: ……..
    b. Tidak , alasan: …….
    c. Tidak tahu

20. Menurut Anda, bentuk penanganan terhadap GPPH atau ADHD yang tepat dapat dilakukan melalui? (Jawaban boleh lebih dari satu)

| No. | Bentuk penanganan | Ya | Tidak |
|---|---|---|---|
| 20.1 | Sendiri | | |
| 20.2 | Guru | | |
| 20.3 | Medis | | |

21. Menurut Anda, apakah anak GPPH atau ADHD memerlukan pendisiplinan yang berbeda jika dibandingkan dengan anak-anak pada umumnya ?
    a. Ya
    b. Tidak
    c. Tidak tahu

22. Menurut Anda, apakah anak GPPH atau ADHD memerlukan makanan khusus ?
    a. Ya
    b. Tidak
    c. Tidak tahu

23. Menurut Anda, apakah anak GPPH atau ADHD memerlukan pelajaran tambahan di luar sekolah ?
    a. Ya
    b. Tidak
    c. Tidak tahu

***Pertanyaan berikut terkait dengan sikap Anda terhadap GPPH atau ADHD***

24. Apakah Anda akan bersikap acuh tak acuh ketika bertemu dengan anak yang menderita GPPH atau ADHD ?
    a. Ya
    b. Tidak
    c. Tidak tahu

25. Apakah Anda akan meminta pertolongan ketika bertemu dengan anak yang menderita GPPH atau ADHD ?
    a. Ya
    b. Tidak
    c. Tidak tahu

26. Apakah Anda akan menjauh ketika bertemu dengan anak yang menderita GPPH atau ADHD ?
    a. Ya
    b. Tidak
    c. Tidak tahu

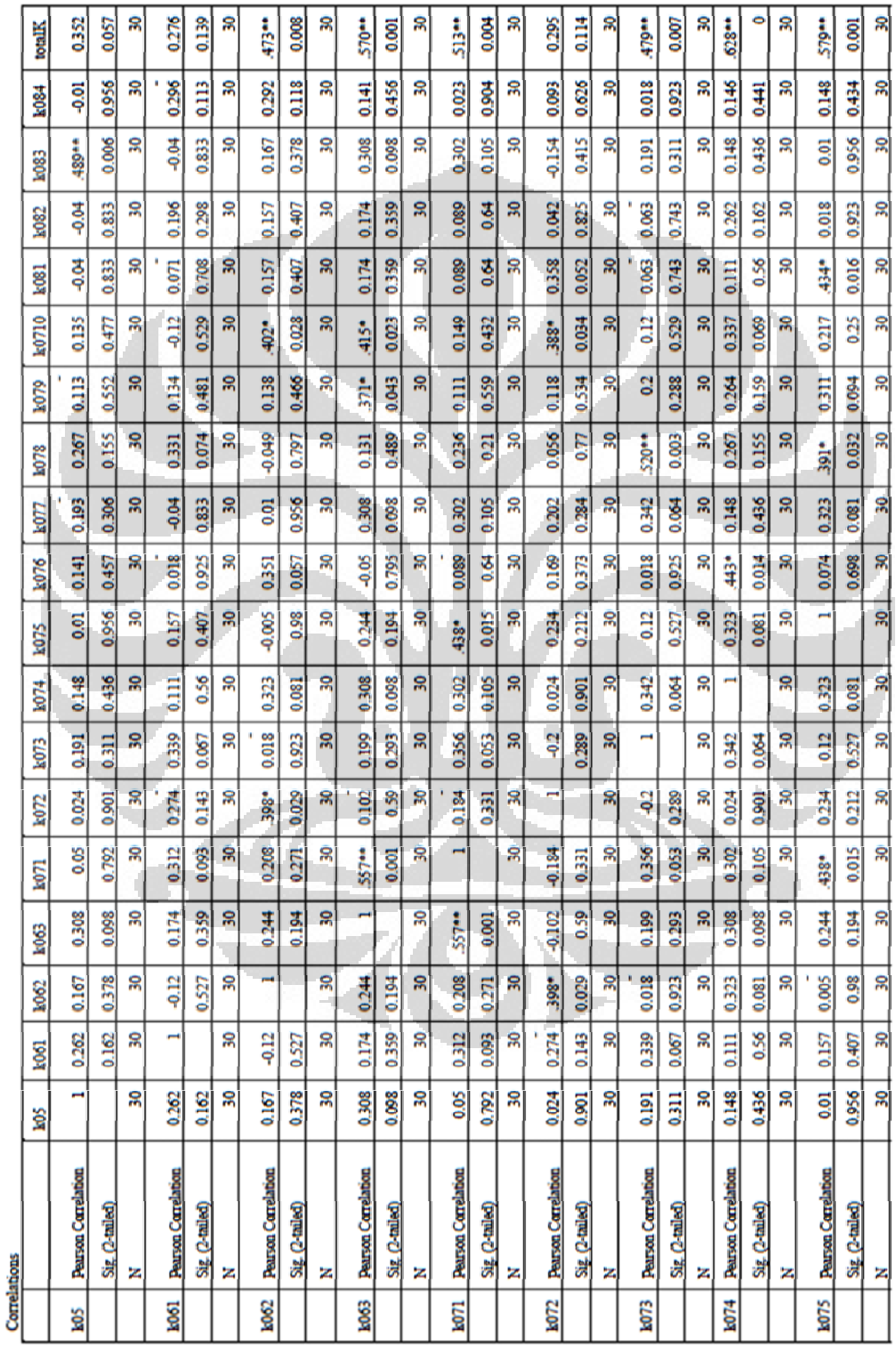
27. Apakah Anda akan memberi pendisiplinan ketika bertemu dengan anak yang menderita GPPH atau ADHD ?
    a. Ya
    b. Tidak
    c. Tidak tahu

28. Apakah Anda akan mencari informasi ketika bertemu dengan anak yang menderita GPPH atau ADHD ?
    a. Ya
    b. Tidak
    c. Tidak tahu

29. Apakah anda mau membicarakan pada orang lain apabila anak atau kerabat dekat Anda menderita GPPH atau ADHD?
    a. Ya
    b. Tidak
    c. Tidak tahu

**Appendix 3. Validity and Reliability Tests of The Questionnaire**

## Validity Test: Knowledge/Understanding

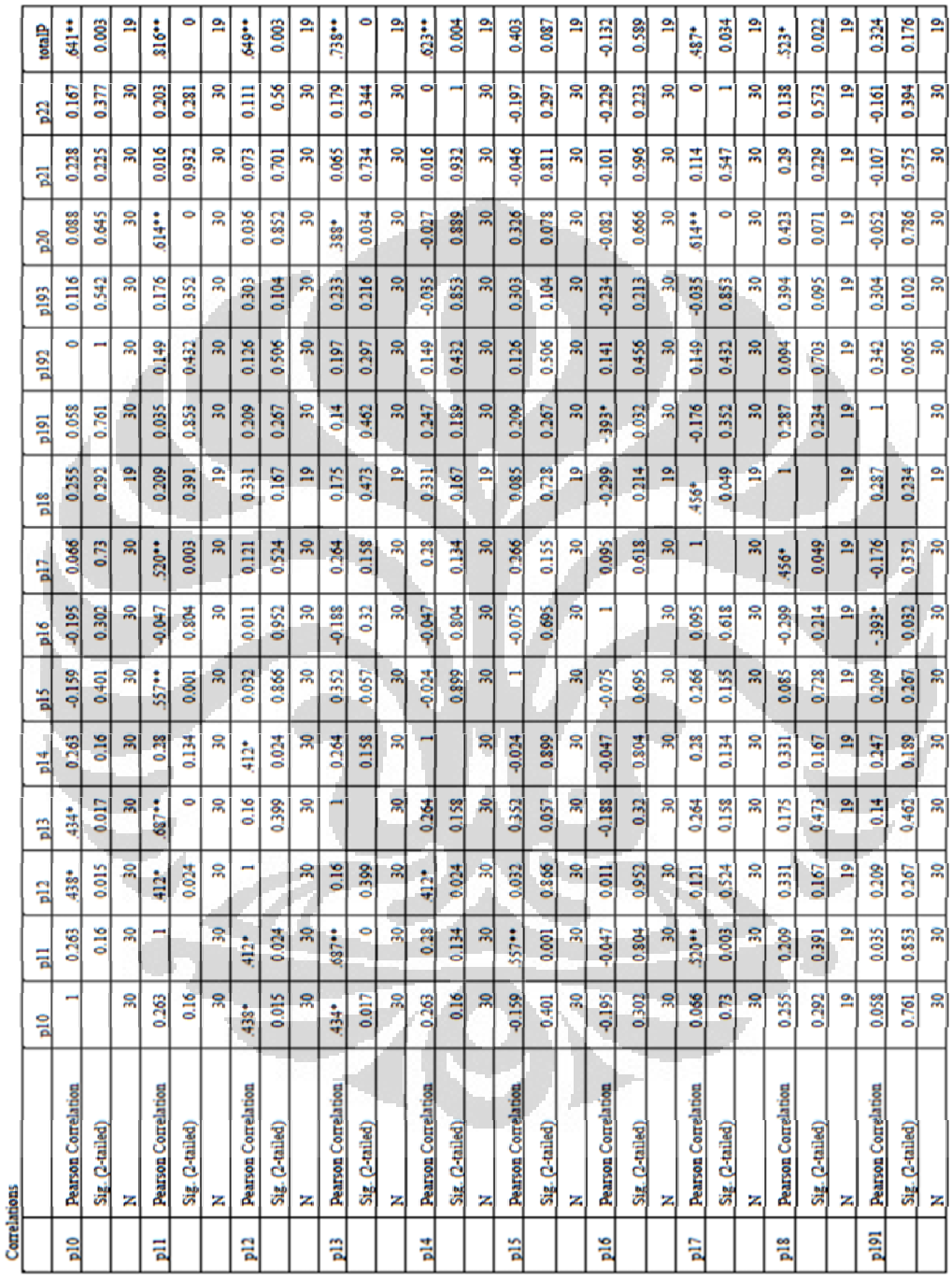


Correlations

| | | k05 | k061 | k062 | k063 | k071 | k072 | k073 | k074 | k075 | k076 | k077 | k078 | k079 | k0710 | k081 | k082 | k083 | k084 | totalK |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| k05 | Pearson Correlation | 1 | 0.262 | 0.167 | 0.308 | 0.05 | 0.024 | 0.191 | 0.148 | 0.01 | 0.141 | -0.193 | 0.267 | -0.113 | 0.135 | -0.04 | -0.04 | .489** | -0.01 | 0.352 |
| | Sig. (2-tailed) | | 0.162 | 0.378 | 0.098 | 0.792 | 0.901 | 0.311 | 0.436 | 0.956 | 0.457 | 0.306 | 0.155 | 0.552 | 0.477 | 0.833 | 0.833 | 0.006 | 0.956 | 0.057 |
| | N | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 |
| k061 | Pearson Correlation | 0.262 | 1 | -0.12 | 0.174 | 0.312 | 0.274 | 0.339 | 0.111 | 0.157 | 0.018 | -0.04 | 0.331 | 0.134 | -0.12 | 0.071 | 0.196 | -0.04 | 0.296 | 0.276 |
| | Sig. (2-tailed) | 0.162 | | 0.527 | 0.359 | 0.093 | 0.143 | 0.067 | 0.56 | 0.407 | 0.925 | 0.833 | 0.074 | 0.481 | 0.529 | 0.708 | 0.298 | 0.833 | 0.113 | 0.139 |
| | N | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 |
| k062 | Pearson Correlation | 0.167 | -0.12 | 1 | 0.244 | 0.208 | .398* | 0.018 | 0.323 | -0.005 | 0.351 | 0.01 | -0.049 | 0.138 | .402* | 0.157 | 0.157 | 0.167 | 0.292 | .473** |
| | Sig. (2-tailed) | 0.378 | 0.527 | | 0.194 | 0.271 | 0.029 | 0.923 | 0.081 | 0.98 | 0.057 | 0.956 | 0.797 | 0.466 | 0.028 | 0.407 | 0.407 | 0.378 | 0.118 | 0.008 |
| | N | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 |
| k063 | Pearson Correlation | 0.308 | 0.174 | 0.244 | 1 | .557** | 0.102 | 0.199 | 0.308 | 0.244 | -0.05 | 0.308 | 0.131 | .371* | .415* | 0.174 | 0.174 | 0.308 | 0.141 | .570** |
| | Sig. (2-tailed) | 0.098 | 0.359 | 0.194 | | 0.001 | 0.59 | 0.293 | 0.098 | 0.194 | 0.795 | 0.098 | 0.489 | 0.043 | 0.023 | 0.359 | 0.359 | 0.098 | 0.456 | 0.001 |
| | N | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 |
| k071 | Pearson Correlation | 0.05 | 0.312 | 0.208 | .557** | 1 | 0.184 | 0.356 | 0.302 | .438* | 0.089 | 0.302 | 0.236 | 0.111 | 0.149 | 0.089 | 0.089 | 0.302 | 0.023 | .513** |
| | Sig. (2-tailed) | 0.792 | 0.093 | 0.271 | 0.001 | | 0.331 | 0.053 | 0.105 | 0.015 | 0.64 | 0.105 | 0.21 | 0.559 | 0.432 | 0.64 | 0.64 | 0.105 | 0.904 | 0.004 |
| | N | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 |
| k072 | Pearson Correlation | 0.024 | .398* | -0.102 | -0.102 | -0.184 | 1 | -0.2 | 0.024 | 0.234 | 0.169 | 0.202 | 0.056 | 0.118 | .388* | 0.358 | 0.042 | -0.154 | 0.093 | 0.295 |
| | Sig. (2-tailed) | 0.901 | 0.029 | 0.59 | 0.59 | 0.331 | | 0.289 | 0.901 | 0.212 | 0.373 | 0.284 | 0.77 | 0.534 | 0.034 | 0.052 | 0.825 | 0.415 | 0.626 | 0.114 |
| | N | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 |
| k073 | Pearson Correlation | 0.191 | 0.339 | 0.018 | 0.199 | 0.356 | -0.2 | 1 | 0.342 | -0.12 | 0.018 | 0.342 | .520** | 0.2 | 0.12 | 0.063 | 0.063 | 0.191 | 0.018 | .479** |
| | Sig. (2-tailed) | 0.311 | 0.067 | 0.923 | 0.293 | 0.053 | 0.289 | | 0.064 | 0.527 | 0.925 | 0.064 | 0.003 | 0.288 | 0.529 | 0.743 | 0.743 | 0.311 | 0.923 | 0.007 |
| | N | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 |
| k074 | Pearson Correlation | 0.148 | 0.111 | 0.323 | 0.308 | 0.302 | 0.024 | 0.342 | 1 | 0.323 | .443* | 0.148 | 0.267 | 0.264 | 0.337 | 0.111 | 0.262 | 0.148 | 0.146 | .628** |
| | Sig. (2-tailed) | 0.436 | 0.56 | 0.081 | 0.098 | 0.105 | 0.901 | 0.064 | | 0.081 | 0.014 | 0.436 | 0.155 | 0.159 | 0.069 | 0.56 | 0.162 | 0.436 | 0.441 | 0 |
| | N | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 |
| k075 | Pearson Correlation | 0.01 | 0.157 | 0.005 | 0.244 | .438* | 0.234 | 0.12 | 0.323 | 1 | 0.074 | 0.323 | .391* | 0.311 | 0.217 | .434* | 0.018 | 0.01 | 0.148 | .579** |
| | Sig. (2-tailed) | 0.956 | 0.407 | 0.98 | 0.194 | 0.015 | 0.212 | 0.527 | 0.081 | | 0.698 | 0.081 | 0.032 | 0.094 | 0.25 | 0.016 | 0.923 | 0.956 | 0.434 | 0.001 |
| | N | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 |

| | | k05 | k061 | k062 | k063 | k071 | k072 | k073 | k074 | k075 | k076 | k077 | k078 | k079 | k0710 | k081 | k082 | k083 | k084 | totalK |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| k076 | Pearson Correlation | 0.141 | -0.018 | 0.351 | -0.05 | -0.089 | 0.169 | 0.018 | .443* | 0.074 | 1 | -0.161 | 0.189 | -0.134 | 0.239 | -0.018 | -0.018 | 0.141 | 0.203 | 0.289 |
| | Sig. (2-tailed) | 0.457 | 0.925 | 0.057 | 0.795 | 0.64 | 0.373 | 0.925 | 0.014 | 0.698 | | 0.395 | 0.317 | 0.481 | 0.203 | 0.925 | 0.925 | 0.457 | 0.281 | 0.122 |
| | N | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 |
| k077 | Pearson Correlation | -0.193 | -0.04 | 0.01 | 0.308 | 0.302 | 0.202 | 0.342 | 0.148 | 0.333 | -0.161 | 1 | .426* | .641** | 0.337 | 0.262 | 0.111 | -0.193 | -0.01 | .490** |
| | Sig. (2-tailed) | 0.306 | 0.833 | 0.956 | 0.098 | 0.105 | 0.284 | 0.064 | 0.436 | 0.081 | 0.395 | | 0.019 | 0 | 0.069 | 0.162 | 0.56 | 0.306 | 0.956 | 0.006 |
| | N | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 |
| k078 | Pearson Correlation | 0.267 | 0.331 | -0.049 | 0.131 | 0.336 | 0.056 | .520** | 0.267 | .391* | 0.189 | .426* | 1 | 0.354 | 0.316 | 0.047 | 0.047 | -0.053 | -0.098 | .576** |
| | Sig. (2-tailed) | 0.155 | 0.074 | 0.797 | 0.489 | 0.21 | 0.77 | 0.003 | 0.155 | 0.032 | 0.317 | 0.019 | | 0.055 | 0.089 | 0.804 | 0.804 | 0.78 | 0.607 | 0.001 |
| | N | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 |
| k079 | Pearson Correlation | -0.113 | 0.134 | 0.138 | .371* | 0.111 | 0.118 | 0.2 | 0.264 | 0.311 | -0.134 | .641** | 0.354 | 1 | 0.224 | .468** | 0.134 | -0.113 | 0.208 | .566** |
| | Sig. (2-tailed) | 0.552 | 0.481 | 0.466 | 0.043 | 0.559 | 0.534 | 0.288 | 0.159 | 0.094 | 0.481 | 0 | 0.055 | | 0.235 | 0.009 | 0.481 | 0.552 | 0.271 | 0.001 |
| | N | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 |
| k0710 | Pearson Correlation | 0.135 | -0.12 | .402* | .415* | 0.149 | .388* | 0.12 | 0.337 | 0.217 | 0.239 | 0.337 | 0.316 | 0.224 | 1 | 0.06 | 0.239 | -0.067 | 0.155 | .551** |
| | Sig. (2-tailed) | 0.477 | 0.529 | 0.028 | 0.023 | 0.432 | 0.034 | 0.529 | 0.069 | 0.25 | 0.203 | 0.069 | 0.089 | 0.235 | | 0.754 | 0.203 | 0.723 | 0.414 | 0.002 |
| | N | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 |
| k081 | Pearson Correlation | -0.04 | -0.071 | 0.157 | 0.174 | 0.089 | 0.358 | -0.063 | 0.111 | .434* | -0.018 | 0.262 | 0.047 | .468** | 0.06 | 1 | -0.205 | 0.111 | .397* | .440* |
| | Sig. (2-tailed) | 0.833 | 0.708 | 0.407 | 0.359 | 0.64 | 0.062 | 0.743 | 0.56 | 0.016 | 0.925 | 0.162 | 0.804 | 0.009 | 0.754 | | 0.276 | 0.56 | 0.03 | 0.015 |
| | N | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 |
| k082 | Pearson Correlation | -0.04 | 0.196 | 0.157 | 0.174 | 0.089 | 0.042 | -0.063 | 0.262 | 0.018 | -0.018 | 0.111 | 0.047 | 0.134 | 0.239 | -0.205 | 1 | -0.342 | -0.296 | 0.195 |
| | Sig. (2-tailed) | 0.833 | 0.298 | 0.407 | 0.359 | 0.64 | 0.825 | 0.743 | 0.162 | 0.923 | 0.925 | 0.56 | 0.804 | 0.481 | 0.203 | 0.276 | | 0.064 | 0.113 | 0.302 |
| | N | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 |
| k083 | Pearson Correlation | .489** | -0.04 | 0.167 | 0.308 | 0.302 | -0.154 | 0.191 | 0.148 | 0.01 | 0.141 | -0.193 | -0.053 | -0.113 | -0.067 | 0.111 | -0.342 | 1 | 0.302 | 0.26 |
| | Sig. (2-tailed) | 0.006 | 0.833 | 0.378 | 0.098 | 0.105 | 0.415 | 0.311 | 0.436 | 0.956 | 0.457 | 0.306 | 0.78 | 0.552 | 0.723 | 0.56 | 0.064 | | 0.104 | 0.166 |
| | N | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 |
| k084 | Pearson Correlation | -0.01 | -0.296 | 0.292 | 0.141 | 0.023 | 0.093 | 0.018 | 0.146 | 0.148 | 0.203 | -0.01 | -0.068 | 0.208 | 0.155 | .397* | -0.296 | 0.302 | 1 | 0.309 |
| | Sig. (2-tailed) | 0.956 | 0.113 | 0.118 | 0.456 | 0.904 | 0.626 | 0.923 | 0.441 | 0.434 | 0.281 | 0.956 | 0.607 | 0.271 | 0.414 | 0.03 | 0.113 | 0.104 | | 0.096 |
| | N | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 |
| totalK | Pearson Correlation | 0.352 | 0.276 | 0.473** | 0.570** | 0.513** | 0.295 | 0.479** | 0.628** | 0.579** | 0.289 | .490** | .576** | .566** | .551** | .440* | 0.295 | 0.26 | 0.309 | 1 |
| | Sig. (2-tailed) | 0.057 | 0.139 | 0.008 | 0.001 | 0.004 | 0.114 | 0.007 | 0 | 0.001 | 0.122 | 0.006 | 0.001 | 0.001 | 0.002 | 0.015 | 0.302 | 0.166 | 0.096 | |
| | N | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 |

**Validity Test: Perception**

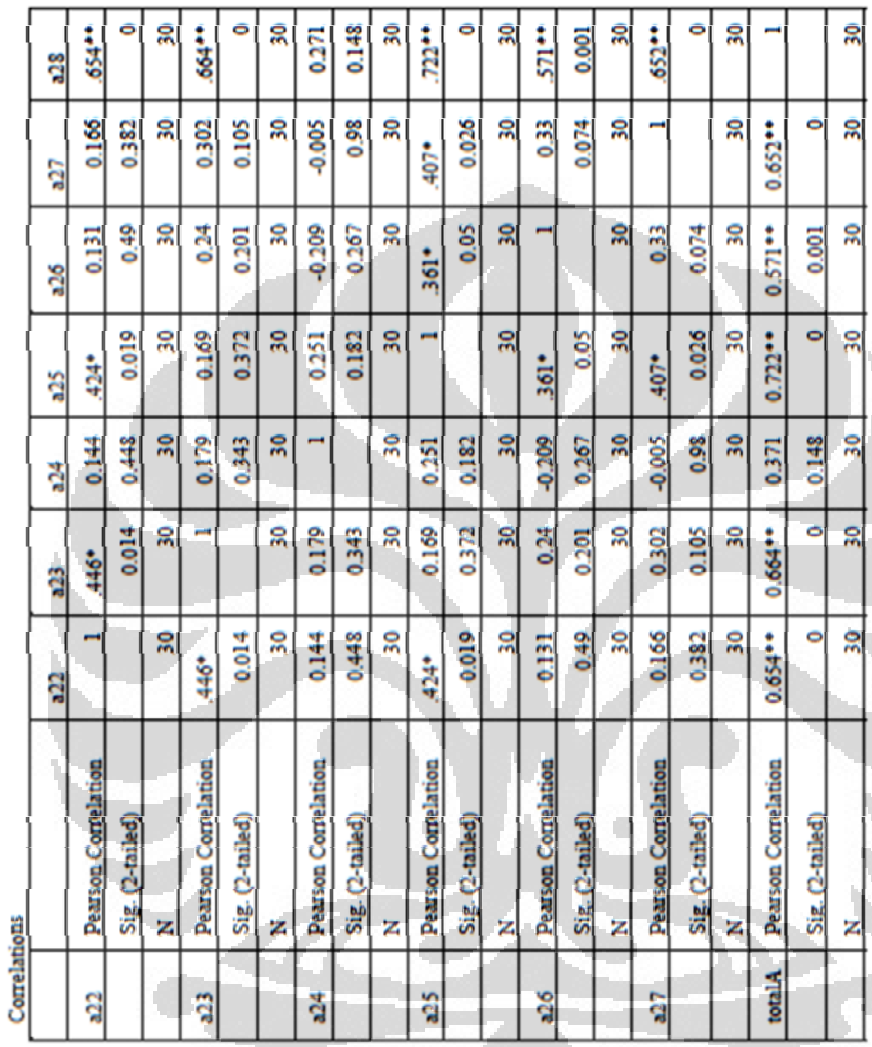


Correlations

| | | p10 | p11 | p12 | p13 | p14 | p15 | p16 | p17 | p18 | p191 | p192 | p193 | p20 | p21 | p22 | totalP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| p10 | Pearson Correlation | 1 | 0.263 | .438* | .434* | 0.263 | -0.159 | -0.195 | 0.066 | 0.255 | 0.058 | 0 | 0.116 | 0.088 | 0.228 | 0.167 | .641** |
| | Sig. (2-tailed) | | 0.16 | 0.015 | 0.017 | 0.16 | 0.401 | 0.302 | 0.73 | 0.292 | 0.761 | 1 | 0.542 | 0.645 | 0.225 | 0.377 | 0.003 |
| | N | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 19 | 30 | 30 | 30 | 30 | 30 | 30 | 19 |
| p11 | Pearson Correlation | 0.263 | 1 | .412* | .687** | 0.28 | .557** | -0.047 | .520** | 0.209 | 0.035 | 0.149 | 0.176 | .614** | 0.016 | 0.203 | .816** |
| | Sig. (2-tailed) | 0.16 | | 0.024 | 0 | 0.134 | 0.001 | 0.804 | 0.003 | 0.391 | 0.853 | 0.432 | 0.352 | 0 | 0.932 | 0.281 | 0 |
| | N | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 19 | 30 | 30 | 30 | 30 | 30 | 30 | 19 |
| p12 | Pearson Correlation | .438* | .412* | 1 | 0.16 | .412* | 0.032 | 0.011 | 0.121 | 0.331 | 0.209 | 0.126 | 0.303 | 0.036 | 0.073 | 0.111 | .649** |
| | Sig. (2-tailed) | 0.015 | 0.024 | | 0.399 | 0.024 | 0.866 | 0.952 | 0.524 | 0.167 | 0.267 | 0.506 | 0.104 | 0.852 | 0.701 | 0.56 | 0.003 |
| | N | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 19 | 30 | 30 | 30 | 30 | 30 | 30 | 19 |
| p13 | Pearson Correlation | .434* | .687** | 0.16 | 1 | 0.264 | 0.352 | -0.188 | 0.264 | 0.175 | 0.14 | 0.197 | 0.233 | .388* | 0.065 | 0.179 | .738** |
| | Sig. (2-tailed) | 0.017 | 0 | 0.399 | | 0.158 | 0.057 | 0.32 | 0.158 | 0.473 | 0.462 | 0.297 | 0.216 | 0.034 | 0.734 | 0.344 | 0 |
| | N | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 19 | 30 | 30 | 30 | 30 | 30 | 30 | 19 |
| p14 | Pearson Correlation | 0.263 | 0.28 | .412* | 0.264 | 1 | -0.024 | -0.047 | 0.28 | 0.331 | 0.247 | 0.149 | -0.095 | -0.027 | 0.016 | 0 | .623** |
| | Sig. (2-tailed) | 0.16 | 0.134 | 0.024 | 0.158 | | 0.899 | 0.804 | 0.134 | 0.167 | 0.189 | 0.432 | 0.853 | 0.889 | 0.932 | 1 | 0.004 |
| | N | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 19 | 30 | 30 | 30 | 30 | 30 | 30 | 19 |
| p15 | Pearson Correlation | -0.159 | .557** | 0.032 | 0.352 | -0.024 | 1 | -0.075 | 0.366 | 0.085 | 0.209 | 0.126 | 0.303 | 0.326 | -0.046 | -0.197 | 0.403 |
| | Sig. (2-tailed) | 0.401 | 0.001 | 0.866 | 0.057 | 0.899 | | 0.695 | 0.155 | 0.728 | 0.267 | 0.506 | 0.104 | 0.078 | 0.811 | 0.297 | 0.087 |
| | N | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 19 | 30 | 30 | 30 | 30 | 30 | 30 | 19 |
| p16 | Pearson Correlation | -0.195 | -0.047 | 0.011 | -0.188 | -0.047 | -0.075 | 1 | 0.095 | -0.299 | -.393* | 0.141 | -0.234 | -0.082 | -0.101 | -0.229 | -0.132 |
| | Sig. (2-tailed) | 0.302 | 0.804 | 0.952 | 0.32 | 0.804 | 0.695 | | 0.618 | 0.214 | 0.032 | 0.456 | 0.213 | 0.666 | 0.596 | 0.223 | 0.589 |
| | N | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 19 | 30 | 30 | 30 | 30 | 30 | 30 | 19 |
| p17 | Pearson Correlation | 0.066 | .520** | 0.121 | 0.264 | 0.28 | 0.266 | 0.095 | 1 | .456* | -0.176 | 0.149 | -0.035 | .614** | 0.114 | 0 | .487* |
| | Sig. (2-tailed) | 0.73 | 0.003 | 0.524 | 0.158 | 0.134 | 0.155 | 0.618 | | 0.049 | 0.352 | 0.432 | 0.853 | 0 | 0.547 | 1 | 0.034 |
| | N | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 19 | 30 | 30 | 30 | 30 | 30 | 30 | 19 |
| p18 | Pearson Correlation | 0.255 | 0.209 | 0.331 | 0.175 | 0.331 | 0.085 | -0.299 | .456* | 1 | 0.287 | 0.094 | 0.394 | 0.423 | 0.29 | 0.138 | .523* |
| | Sig. (2-tailed) | 0.292 | 0.391 | 0.167 | 0.473 | 0.167 | 0.728 | 0.214 | 0.049 | | 0.234 | 0.703 | 0.095 | 0.071 | 0.229 | 0.573 | 0.022 |
| | N | 19 | 19 | 19 | 19 | 19 | 19 | 19 | 19 | 19 | 19 | 19 | 19 | 19 | 19 | 19 | 19 |
| p191 | Pearson Correlation | 0.058 | 0.035 | 0.209 | 0.14 | 0.247 | 0.209 | -.393* | -0.176 | 0.287 | 1 | 0.342 | 0.304 | -0.052 | -0.107 | -0.161 | 0.324 |
| | Sig. (2-tailed) | 0.761 | 0.853 | 0.267 | 0.462 | 0.189 | 0.267 | 0.032 | 0.352 | 0.234 | | 0.065 | 0.102 | 0.786 | 0.575 | 0.394 | 0.176 |
| | N | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 19 | 30 | 30 | 30 | 30 | 30 | 30 | 19 |

| | | p10 | p11 | p12 | p13 | p14 | p15 | p16 | p17 | p18 | p191 | p192 | p193 | p20 | p21 | p22 | totalP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| p192 | Pearson Correlation | 0 | 0.149 | 0.126 | 0.197 | 0.149 | 0.126 | 0.141 | 0.149 | 0.094 | 0.342 | 1 | 0.184 | -0.06 | -0.012 | -0.152 | 0.387 |
| | Sig. (2-tailed) | 1 | 0.431 | 0.506 | 0.297 | 0.432 | 0.506 | 0.456 | 0.432 | 0.703 | 0.065 | | 0.331 | 0.754 | 0.949 | 0.424 | 0.101 |
| | N | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 19 | 30 | 30 | 30 | 30 | 30 | 30 | 19 |
| p193 | Pearson Correlation | 0.116 | 0.176 | 0.303 | 0.233 | -0.035 | 0.303 | -0.234 | -0.035 | 0.394 | 0.304 | 0.184 | 1 | 0.052 | 0.02 | 0.161 | .506* |
| | Sig. (2-tailed) | 0.542 | 0.352 | 0.104 | 0.216 | 0.853 | 0.104 | 0.213 | 0.853 | 0.095 | 0.102 | 0.331 | | 0.786 | 0.916 | 0.394 | 0.027 |
| | N | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 19 | 30 | 30 | 30 | 30 | 30 | 30 | 19 |
| p20 | Pearson Correlation | 0.088 | .614** | 0.036 | .388* | -0.027 | 0.326 | -0.082 | .614** | 0.423 | -0.052 | -0.06 | 0.052 | 1 | 0.081 | 0.122 | .492* |
| | Sig. (2-tailed) | 0.645 | 0 | 0.852 | 0.034 | 0.889 | 0.078 | 0.666 | 0 | 0.071 | 0.786 | 0.754 | 0.786 | | 0.672 | 0.52 | 0.033 |
| | N | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 19 | 30 | 30 | 30 | 30 | 30 | 30 | 19 |
| p21 | Pearson Correlation | 0.228 | 0.016 | 0.073 | 0.065 | 0.016 | -0.046 | -0.101 | 0.114 | 0.29 | -0.107 | -0.012 | 0.02 | 0.081 | 1 | 0.316 | 0.389 |
| | Sig. (2-tailed) | 0.225 | 0.932 | 0.701 | 0.734 | 0.932 | 0.811 | 0.596 | 0.547 | 0.229 | 0.575 | 0.949 | 0.916 | 0.672 | | 0.089 | 0.1 |
| | N | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 19 | 30 | 30 | 30 | 30 | 30 | 30 | 19 |
| p22 | Pearson Correlation | 0.167 | 0.203 | 0.111 | 0.179 | 0 | -0.197 | -0.229 | 0 | 0.138 | 0.161 | 0.152 | 0.161 | 0.122 | 0.316 | 1 | .487* |
| | Sig. (2-tailed) | 0.377 | 0.281 | 0.56 | 0.344 | 1 | 0.297 | 0.223 | 1 | 0.573 | 0.394 | 0.424 | 0.394 | 0.52 | 0.089 | | 0.034 |
| | N | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 19 | 30 | 30 | 30 | 30 | 30 | 30 | 19 |
| totalP | Pearson Correlation | 0.641** | 0.816** | 0.649** | 0.738** | 0.633** | 0.403 | 0.332 | 0.487* | 0.523* | 0.324 | 0.387 | 0.506* | 0.492* | 0.389 | 0.487* | 1 |
| | Sig. (2-tailed) | 0.003 | 0 | 0.003 | 0 | 0.004 | 0.087 | 0.589 | 0.034 | 0.022 | 0.176 | 0.101 | 0.027 | 0.033 | 0.1 | 0.034 | |
| | N | 19 | 19 | 19 | 19 | 19 | 19 | 19 | 19 | 19 | 19 | 19 | 19 | 19 | 19 | 19 | 19 |

**Validity Test: Attitude**



Correlations

| | | a22 | a23 | a24 | a25 | a26 | a27 | a28 |
|---|---|---|---|---|---|---|---|---|
| a22 | Pearson Correlation | 1 | .446* | 0.144 | .424* | 0.131 | 0.166 | .654** |
| | Sig. (2-tailed) | | 0.014 | 0.448 | 0.019 | 0.49 | 0.382 | 0 |
| | N | 30 | 30 | 30 | 30 | 30 | 30 | 30 |
| a23 | Pearson Correlation | .446* | 1 | 0.179 | 0.169 | 0.24 | 0.302 | .664** |
| | Sig. (2-tailed) | 0.014 | | 0.343 | 0.372 | 0.201 | 0.105 | 0 |
| | N | 30 | 30 | 30 | 30 | 30 | 30 | 30 |
| a24 | Pearson Correlation | 0.144 | 0.179 | 1 | 0.251 | -0.209 | -0.005 | 0.271 |
| | Sig. (2-tailed) | 0.448 | 0.343 | | 0.182 | 0.267 | 0.98 | 0.148 |
| | N | 30 | 30 | 30 | 30 | 30 | 30 | 30 |
| a25 | Pearson Correlation | .424* | 0.169 | 0.251 | 1 | .361* | .407* | .722** |
| | Sig. (2-tailed) | 0.019 | 0.372 | 0.182 | | 0.05 | 0.026 | 0 |
| | N | 30 | 30 | 30 | 30 | 30 | 30 | 30 |
| a26 | Pearson Correlation | 0.131 | 0.24 | -0.209 | .361* | 1 | 0.33 | .571** |
| | Sig. (2-tailed) | 0.49 | 0.201 | 0.267 | 0.05 | | 0.074 | 0.001 |
| | N | 30 | 30 | 30 | 30 | 30 | 30 | 30 |
| a27 | Pearson Correlation | 0.166 | 0.302 | -0.005 | .407* | 0.33 | 1 | .652** |
| | Sig. (2-tailed) | 0.382 | 0.105 | 0.98 | 0.026 | 0.074 | | 0 |
| | N | 30 | 30 | 30 | 30 | 30 | 30 | 30 |
| totalA | Pearson Correlation | 0.654** | 0.664** | 0.371 | 0.722** | 0.571** | 0.652** | 1 |
| | Sig. (2-tailed) | 0 | 0 | 0.148 | 0 | 0.001 | 0 | |
| | N | 30 | 30 | 30 | 30 | 30 | 30 | 30 |

## Reliability Test

### Knowledge/Understanding

Case Processing Summary

| | | N | % |
|---|---|---|---|
| Cases | Valid | 30 | 100 |
| | Excluded | 0 | 0 |
| | Total | 34 | 100 |

Reliability Statistics

| Cronbach's Alpha | N of Items |
|---|---|
| 0.726 | 18 |

### Perception

Case Processing Summary

| | | N | % |
|---|---|---|---|
| Cases | Valid | 30 | 100 |
| | Excluded | 0 | 0 |
| | Total | 30 | 100 |

Reliability Statistics

| Cronbach's Alpha | N of Items |
|---|---|
| 0.775 | 15 |

### Attitude

Case Processing Summary

| | | N | % |
|---|---|---|---|
| Cases | Valid | 30 | 30 |
| | Excludeda | 0 | 0 |
| | Total | 30 | 0 |

Reliability Statistics

| Cronbach's Alpha | N of Items |
|---|---|
| 0.65 | 6 |

### Knowledge/Understanding, Perception, and Attitude

Case Processing Summary

| | | N | % |
|---|---|---|---|
| Cases | Valid | 30 | 0 |
| | Excluded | 0 | 0 |
| | Total | 30 | 0 |

Reliability Statistics

| Cronbach's Alpha | N of Items |
|---|---|
| 0.873 | 39 |

**Appendix 4. Correlation Testing**

**Correlations**

| | | | Lamapraktekmenjadidokteranak | TotalKnowledge | TotalPerception | TotalAttitude |
|---|---|---|---|---|---|---|
| Spearman's rho | Lamapraktekmenjadidokteranak | Correlation Coefficient | 1.000 | .072 | .206* | -.073 |
| | | Sig. (2-tailed) | . | .488 | .044 | .480 |
| | | N | 96 | 96 | 96 | 96 |
| | TotalKnowledge | Correlation Coefficient | .072 | 1.000 | -.036 | .304** |
| | | Sig. (2-tailed) | .488 | . | .728 | .003 |
| | | N | 96 | 96 | 96 | 96 |
| | TotalPerception | Correlation Coefficient | .206* | -.036 | 1.000 | -.026 |
| | | Sig. (2-tailed) | .044 | .728 | . | .800 |
| | | N | 96 | 96 | 96 | 96 |
| | TotalAttitude | Correlation Coefficient | -.073 | .304** | -.026 | 1.000 |
| | | Sig. (2-tailed) | .480 | .003 | .800 | . |
| | | N | 96 | 96 | 96 | 96 |

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

**Appendix 5. Ethical Approval**

**Komite Etik Penelitian Kesehatan**
**Fakultas Kedokteran Universitas Indonesia**
**Rumah Sakit Cipto Mangunkusumo**

*Health Research Ethics Committee*
*Faculty of Medicine Universitas Indonesia*
*Cipto Mangunkusumo Hospital*

Jalan Salemba Raya No. 6, Jakarta Pusat 10430. Telp. 021-3157008. E-mail: ec_fkui@yahoo.com

Nomor : 467 /H2.F1/ETIK/2013

## KETERANGAN LOLOS KAJI ETIK

## ETHICAL APPROVAL

Komite Etik Penelitian Kesehatan Fakultas Kedokteran Universitas Indonesia dalam upaya melindungi hak asasi dan kesejahteraan subyek penelitian kedokteran, telah mengkaji dengan teliti protokol berjudul:

*The Ethics Committee of the Faculty of Medicine, University of Indonesia, with regards of* the Protection of human rights and welfare in medical research, has carefully reviewed the *research protocol entitled:*

**"Pengetahuan, Pemahaman, Persepsi, dan Sikap Terhadap Gangguan Pemusatan Perhatian/Hiperaktivitas (GPPH) di Indonesia".**

**Peneliti Utama** : **Dr. dr. Tjhin Wiguna, SpKJ(K)**
*Principal Investigators*

**Nama Institusi** : **Psikiatri FKUI/RSCM**
*Name of the Institution*

dan telah menyetujui protokol tersebut di atas.
*and approved the above-mentioned protocol.*

Jakarta, 22 JUL 2013
Ketua
Chairman

**Prof. Dr. dr. Rianto Setiabudy, SpFK**

******Ethical approval* **berlaku satu tahun dari tanggal persetujuan**
****Peneliti berkewajiban**

1. Menjaga kerahasiaan identitas subyek penelitian
2. Memberitahukan status penelitian apabila
   a. Setelah masa berlakunya keterangan lolos kaji etik, penelitian masih belum selesai, dalam hal ini *ethical clearance* harus diperpanjang
   b. Penelitian berhenti di tengah jalan
3. Melaporkan kejadian serius yang tidak diinginkan (*serious adverse events)*
4. Peneliti tidak boleh melakukan tindakan apapun pada subyek sebelum penelitian lolos kaji etik dan *informed consent*