

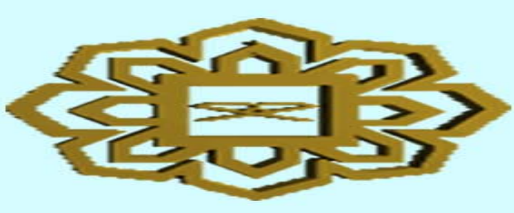
بِسْمِ اللّٰهِ الرَّحْمٰنِ الرَّحِیْمِ

"ونفس وما سواها . فأنهها فجورها و تقواها .  
قد أفلح من زكاهها . وقد خاب من دساها ."

سورة الشمس آية ٧-١٠

By the soul, and the proportion and order given to it.  
And its inspiration as to its wrong and its right.  
Truly he succeeds that purifies it.  
And he fails that corrupts it.

91: 7-10



A PRELIMINARY STUDY OF  
THE STANDARDIZATION OF THE SIXTEEN  
PERSONALITY FACTOR QUESTIONNAIRE (16PF)  
USING A MALAYSIAN SAMPLE

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A THESIS SUBMITTED IN PARTIAL  
FULFILLMENT OF THE REQUIREMENTS  
FOR THE DEGREE OF MASTER OF HUMAN  
SCIENCES IN PSYCHOLOGY

KULLIYAH OF ISLAMIC REVEALED  
KNOWLEDGE AND HUMAN SCIENCES  
INTERNATIONAL ISLAMIC UNIVERSITY  
MALAYSIA

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## ABSTRACT

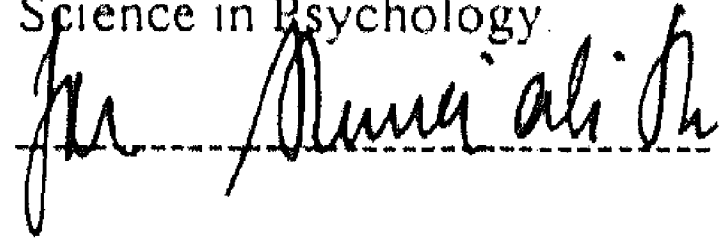
The purpose of this study is to evaluate, validate, and develop adjusted norms for the 16 Personality Factor Questionnaire (16PF) Fifth Edition in the Malaysian context. A sample of 306 Muslim students was randomly selected from International Islamic University Malaysia; 140 of the participants are males and 166 are females. The ages of participants range from 18 and 31. The 16PF Fifth Edition and a personal bank questionnaire were administered to the participants. When alpha Cronbach was tested the internal consistency shows a range of reliability from .40 for Factor L (Vigilance) as the lowest to .76 for Factor H (social Boldness) as the highest. Comparing these results to the original study there are .16 points as a mean difference. The results indicate significant gender differences on Factor I (Sensitivity), O (Apprehension), and Q3 (Perfectionism). As a result, different norm groups are established for Factor I, O, and Q3. These findings support the American findings in Factor I but differ from them on Factors O and Q3. The sten ranks also show significant differences. The American norms have few extreme left while Malaysian sample norms have few extreme right scores. When age groups were tested the results show that there is no significant difference in any factor except on Factor O, therefore, age variable does not show any impact on the 16PF fifth Edition in the Malaysian context.

## ملخص البحث

يهدف هذا البحث إلى تقويم وثبيت وبناء معايير جديدة لمقياس الشخصية الإنسانية المسمى ب(16PF) الطبعة الخامسة في المجتمع الماليزي. قد تم اختيار عينة عشوائية مكونة من 306 مشاركا من طلاب مسلمين بالجامعة الإسلامية العالمية بماليزيا . فقد احتوت العينة على 140 فردا من الذكور و166 من الإناث وكانت أعمارهم تتراوح ما بين 18 إلى 31 عاما. وقد طلب من المشاركين في البحث إجابة الاستبيان (16PF) و استبيان المعلومات الشخصية . وقد أظهرت النتائج أن درجة "الثبات الداخلي" لمقياس (16PF) يتراوح ما بين معدل 40. لعامل "L" (اليقظة) كأدنى معدل ومعدل 76. لعامل "H" (الاجتماعي) كأعلى معدل. وعندما قورنت هذه النتائج بالدراسة الأصلية تبين أن هناك 16. نقطة كمعدل اختلاف في درجة الثبات الداخلي. و ظهرت أيضا أن هناك دلالات إحصائية ملحوظة بين الذكور والإناث في ثلاثة عوامل: العامل "I" (الحساسية) والعامل "O" (الإدراك) والعامل "Q3" (الكمالية). بناء على هذه الدلالات الإحصائية الملحوظة بين الذكور والإناث تم بناء معايير جديدة للذكور والإناث. وهذه النتيجة تتفق مع النتائج للدراسات التي أجريت في أمريكا في العامل "I" (الحساسية) وتختلف معها في العاملين: "O" (الإدراك) و "Q3" (الكمالية). أما نتائج العشاري المعياري (Sten ranks) فقد أظهرت دلالات إحصائية ملحوظة بين المعايير في البلدين. فالمعايير الأمريكية قد أظهرت تطرفا نحو اليمين بينما النتائج الماليزية قد أظهرت تطرفا نحو اليسار. أما متغير العمر فلم تظهر فيه أية دلالات إحصائية ملحوظة إلا في عامل واحد وهو العامل "O" (الإدراك) لذا فان العمر ليس له أي تأثير في (16PF) الطبعة الخامسة في ما يخص المجتمع الماليزي.

## APPROVAL PAGE

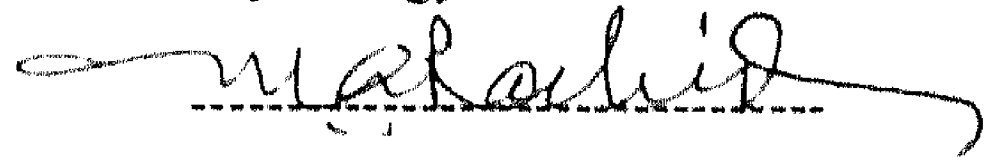
I certify that I have supervised and read this study and that in my opinion, it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as thesis for the degree of Master of Human Science in Psychology.



Mokdad Mohamad  
Supervisor

Date: 21/12/2000

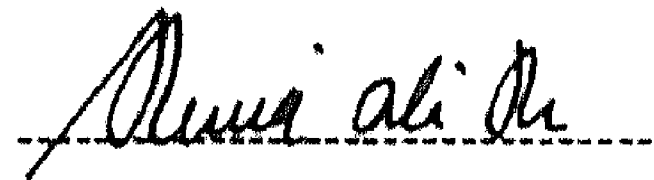
I certify that I have read this study and that in my opinion, it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a thesis for the degree of Master of Human Science in Psychology.



Mohammad Abdur Rashid  
Examiner

Date: 20.12.2000

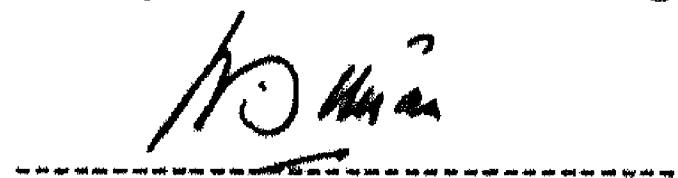
This thesis was submitted to the Department of Psychology and is accepted as partial fulfillment of the requirements for the degree of Master of Human Science in Psychology.



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Knowledge and Human Sciences

Date: 21/12/2000



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A Preliminary Study Of The Standardization Of The Sixteen  
Personality Factor Questionnaire (16PF) Using A Malaysian Sample

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TO

**My Parents, Assane Fall and Mane' Ndoye**  
My Lord! Bestow on them your mercy even  
as they cherished me in childhood

## ACKNOWLEDGEMENTS

Praises be to Allah, subhanahu wa ta'ala, who granted me the ability to complete this work. Initial thoughts on selecting this topic were stimulated by my beloved uncle, Prof. Dr. Nizar M. S. Alani, to whom I owe the success of this work. I would like to appreciate his critical comments, suggestions, and inputs especially about the data analysis. I would like also to thank all individuals whose intellectual contributions are very valuable. First and foremost, I thank my supervisor, Prof. Dr. Mokdad Muhammad for his critical comments of the draft chapters and his constant willingness to support me throughout the entire process. Moreover, I would like to thank Brother Muhammad Sabir Qamar for his tremendous assistance in familiarizing myself with the SPSS and the data analysis, and Prof. Dr. Mahfooz A. Ansari for his help in using his name to purchase the instrument (16PF) from IPAT.

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# CHAPTER ONE

## INTRODUCTION

### Background on Measurement

Testing, in general, and psychological testing, in particular, play a significant role in the decision-making processes. Individuals, as well agencies, whether they like it or not, have to make decisions about people. Some decisions are personal and others are collective, and some are informal and others are formal. Psychological testing, as a discipline concerning evaluation of behavior, mental abilities, and other personal characteristics, provides information that can assist in making informed and appropriate decisions about people.

In developed countries, psychological tests and other assessment instruments are widely used in organizational contexts, such as schools and colleges, psychological clinics and counseling centers, hospitals, business and industry, government and military organizations, and research institutions. Due to the great advantages of using psychological tests for decision-making, in recent years tests have been imported and utilized in the developing countries.

However, there are many problems faced by the users of these tests in developing countries. In the first place, these tests may be biased against gender and ethnic groups. This means that there is no firm indication as to how widely the imported norms of these tests can be applied. Secondly, most of these tests have been designed for people with different values and cultural backgrounds. This also means that there

is no guarantee of the fairness of these tests when used by groups with different values and beliefs. In order to avoid bias and guarantee fairness, tests should be locally checked in terms of the norms, as well as the construct. Therefore, the purpose of the present study is to check the suitability of the American norms of the Sixteen Personality Factor Questionnaire (16PF) Fifth Edition to a Malaysian sample.

Originating from the domain of basic research into personality structure, the 16PF has been a useful tool for applied psychology. Since its first release in 1949, the 16PF has been applied effectively in industry, organizations, counseling, education and research (Cattell, Eber, & Tatsuoka, 1970; Karol & Russell 1999).

Measurement is one of the useful tools to check the suitability of the norms of any test. In this case, it is used to investigate whether the American norms of the 16PF are applicable to the Malaysian population or not. According to Allen and Yen (1979) measurement is defined as “the assigning of numbers to individuals in a systematic way as a means of representing properties of the individuals” (p.2). The assignment of numbers to the individuals must be a carefully prescribed and repeatable procedure.

Bernstein and Nunnally (1994) define measurement as a concept that “consists of rules for assigning symbols to objects so as to: 1) represent quantities of attributes numerically (scaling) or 2) define whether the objects fall in the same or different category with respect to a given attribute (classification)” (p.3).

Thus, measurement is concerned with the assignment of numbers that reflect the quality of attributes of the individuals, and with the classification of individuals

according to the group. Since one does not measure individuals as such but the attribute of the individuals, the nature of an attribute should be considered before attempting to measure that attribute. To compare the attributes of different populations, there is a possibility that different populations have different attributes and responses to the same stimuli due to cultural and environmental factors. Therefore, responses may differ when the Muslim Malay culture and values are compared to the American culture and values. Therefore, the American norms of the 16PF Fifth Edition may not be suitable for the Malaysian Muslim students in Malaysia.

According to Nunnally (1994) "rules" for assigning attributes to individuals are important aspects of standardization. A measure is standardized when: it has clear rules, it is practical to apply, it does not demand great skill of administrations beyond their initial training, and it does not depend upon specific administrator for its results. Thus, standardization means that different users of a given instrument should obtain similar results. By applying the above rules to the 16PF Fifth Edition, the results of this study should be similar to the American norms if the American and Malaysian norms are alike.

According to Karl and Russell (1999) the standardization of the 16PF Fifth Edition is the result of a final experimental form that was administered to a larger group (N = 4,449). Then, a stratified random sampling was used to create the final normative sample of 2,500. The stratification was done based on gender, race, age, and educational variables, with the target number of each variable being derived from 1990 U.S Census figures. The present study is an attempt to revise the original norms

of the 16PF Fifth Edition and compare them to a Malaysian Muslim sample using students of the International Islamic University Malaysia (IIUM).

Standardized measures or tests are based upon well-developed rules, usually including norms that describe the scores obtained from the target population. Since measurement is far from perfect, standardized psychological tests have been criticisms and most of the criticisms concern the representativeness of samples in the standardization and the transferability of the measures to other populations which were not included in the original sampling. So, validity, reliability, item bias, constructs of the test, etc. are the major objections to the standardized tests. However, there are several advantages of standardized tests over non-standardized tests or personal judgements:

- 1) Standardization allows the objectivity of any findings to be independently verified by other researchers. One of the key principles in science is that any statement of fact made by one scientist should be independently verifiable by other scientists.
- 2) The numerical results of standardized tests can be reported in better detail than personal judgement, and the quantification of results also permits the use of more powerful methods of mathematical analysis, which is often essential to the elaboration of theories and the analysis of experiences.
- 3) Standardization facilitates effective communication among scientists. Since science progresses, the past findings should be cross-culturally compared with results of others scientists working on the same problem.
- 4) The development of standardized measures helps to save time and money.
- 5) Standardized measures allow a scientific generalization of findings from the

sample to the population (Nunnally, 1994).

## Muslim Contribution to Measurement

Narrated by al-Hakim, on the authority of Ibn 'Abās (R.A) the Prophet (S.W.) said "Whoever appoints a person for a job while knowing that there is a better person for that job than the selected person, the person who appointed him has deceived Allah, His Prophet, and the Muslim community". One of the main purposes of psychological testing has been stated in this hadīth of the Prophet (S.W) which is making decisions related to selecting people, individually or in groups. Since decisions about people must be made, measurement and evaluation provide necessary information regarding individual differences, which help decision makers to make informed and appropriate decisions (Robert et al., 1991). The issue of making decisions about individual differences lies at the heart of psychological testing and measurement. One can strongly argue that without the concept of individual differences, there would be no need for psychological testing.

Early Muslim scholars classified human characteristics or traits into several categories. Ibn al-Jawzī (509-597h) in his book, kitābu al-adhkiyā (the book of intelligent people) classified human characteristics into two common categories that determine the intelligence and personality of a normal person:

- 1) Physical characteristics, which are based on physical appearance of the individual, such as fitness, shape of the skull, etc.
- 2) Psychological characteristics, which are the most important because they are the factors that reflect behavior of the individual, such as, calmness, smoothness in thoughts and movements, etc.

The same author, in his book akhbār al-hamqā wa al-mughaffalīn, ( the stories of idiots and foolish) also classified the characteristics of abnormality into physical and psychological characteristics:

- 1) Physical characteristics, which are the skull, the neck, the form of the body, etc.
- 2) Psychological characteristics, which include observable behavior, inner thoughts, feelings and motives, etc.

There are derivative characteristics in each of the above categories and when they are grouped together they form a construct, i.e. the personality of an individual. The qualities or attributes to be measured must be identified and defined. Thus, measurement involves three common steps:

- 1) Identifying and defining the quality or an attribute that is to be measured;
- 2) Determining the set of operations by which the attributes may be isolated and displayed; and
- 3) Establishing a set of procedures or definitions for translating observations into quantitative statements of degree or amount (Thorndike et al., 1991).

The identification of attributes in order to determine individual differences, is implicit in Ibn al-Jawzī's classification. He classifies the attributes of normal and abnormal individuals so that it is possible to obtain them in constructs and to determine the derivative characteristics of each construct.

Based on a case study, Ibn Ṭufayl (...571 H = 1150 C.) in his book, Hay bin Yaqzan, proposes general steps that reflect the mental abilities, emotions, physical

characteristics, and skills, which are expected to develop in a normal person. In order to assess the intelligence and personality of any person, he proposes a life cycle of human development, which comprises several stages, each is about seven years.

The first stage is divided into two. The first part starts from birth till the end of two years. The second part starts at the age of three and ends at the age of seven. In the first part, the child's development depends on the caregiver: if the child is well taken care of, he will grow up in a proper way. In the second part, the mental abilities and personality characteristics of the child start developing. In order to assess the changes a child undergoes in each stage, Ibn Ṭufayl lists common abilities that he assumes to develop in a person. In describing a baby who was born and thrown to the river. As a matter of fact, the waves landed him to an island called Qawqā, whereby he grown up among the animals, Ibn Ṭufayl wrote "the child [Hay Bin Yaqzān] keeps imitating antelope sounds in a way that none can distinguish the two sounds; he repeats all sounds he hears from different kinds of birds and animals in order to satisfy his needs and to defend himself from animals till the animals are acquainted with him and he is acquainted with them. When Hay bin Yaqzān was capable of recalling the image of objects in their absence, he developed a tendency to accept some and reject others" (Ibn Ṭufayl, p.129).

Thus, Ibn Ṭufayl implies the development of the sensory systems and motor movements, such as hearing and vision, speech, perception, recognition, imagination, verbal communication, attitudes, feeling and motives, self protection, etc., which developed in Hay bin Yaqzān. In order to assess a person's personality and mental development, the sensory systems as well motor movements should be considered, as

Ibn Ṭufayl described.

The second stage starts at the age of eight and ends at the age of fourteen. Ibn Ṭufayl lists some major traits or attributes and skills that develop during this stage, such as learning abilities, nonverbal reasoning, skill development, acute observation, judgement, abstract thinking, morality, etc. He wrote, "when he [Hay bin Yaqzān] was above seven years old, his thoughts prompted him to take the skin of dead animals and to cover himself, but he learnt that living animals do not come close to the dead one. Therefore, he did not till one day he found a dead eagle, he then took the feathers and the skin and created a sort of garment and covered his body". (Ibn Ṭufayl, p. 132).

The third stage starts at the age of fifteen and ends at the age of twenty-one. Ibn Ṭufayl lists some major attributes and skills that develop during this stage, such as planning ability, comparison, experimentation, classification and generalization, accommodation, livelihood, hygiene, prevention and health, comprehension, etc.

The fourth stage starts at the age of twenty-two and ends at the age of twenty-eight. Ibn Ṭufayl again lists some major attributes and skills, such as ability to see commonality and uniqueness of different objects, ability to recall from long term memories, ability to see components of objects and superiority among the components, ability to quantify objects, to understand their length, depth, and ability to draw conclusions, etc.

The fifth stage starts at the age of twenty-nine and ends at the age of thirty-five. Some major attributes and skills listed by Ibn Ṭufayl include ability to understand metaphysical concepts such as finite, infinity, God's attributes, etc.

The sixth and seventh stages overlap; they start at the age of thirty-six and end at the age of fifty. During these stages the ability to perceive the concept of soul or spirit and its infinity, good and bad, right and wrong, devotion, salvation, God's mercy, happiness and misery, etc. develops.

The last stage starts at the age of fifty-one and goes till death. Some major attributes and skills, which develop are ability to actualize one's self and self-control, humility, love, sympathy, patience, teaching, help, etc.

In summary, Ibn Ṭufayl conceptualizes human personality as an interaction between the environment and the individual, which shapes the attributes of the individual. He classifies human development into different stages. In each stage, a person gradually moves from one to other. Based on Ibn Ṭufayl's analysis, one can argue that the two common steps in measurement are clear in his ideas, i.e. identifying and defining the attributes to be measured; and determining operations in order to isolate and display the attributes. This is obvious in his classification of traits according to stages. He identifies major attributes of each stage and defines the set of constructs to be isolated and displayed from other sets. By so doing, quantification would be possible because it requires the transformation of sets into numbers. Therefore, one can strongly argue that Ibn Ṭufayl has made a significant contribution for the development of