

Conceptual and methodological bases for adapting psychological tests to the Algerian environment

أسس مفاهيمية ومنهجية في تكييف الاختبارات النفسية حسب البيئة الجزائرية

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Date of receipt: 2022-02-02 Date of revision: 2022-02-12 Date of acceptance: 2022-05-17

Abstract

In the measurement process, we are concerned with estimating a part or characteristic of each but not measuring all in itself, and undoubtedly, we cannot talk about measurement without directly referring to psychological tests, whether those that measure intelligence, mental abilities or different personality characteristics. This is why the medical examiner and academic researcher face challenges directly related to the application of scales within an environment for which they were not designed. In this scientific article, we will try to address one of the most important difficulties in applying psychological tests to adapt psychological tests to the cultural environment by answering the following questions: What do we mean by adapting psychological tests and what's different from translating them? What are the procedures for adapting psychological tests to be applied in the Algerian environment? What are the criteria to verify the viability of the adapted metrics?

Keywords : Psychological tests - translation - conditioning.

ملخص

نهتم في عملية القياس بتقدير جزء من الكل أو خاصية من خصائصه دون أن نقيس الكل في حد ذاته، ومما لا شك فيه أننا لا يمكننا الحديث عن القياس دون التويه مباشرة إلى الاختبارات النفسية سواء تلك التي تقيس الذكاء أو القدرات العقلية أو سمات الشخصية المختلفة. هذا ما يجعل الفاحص العيادي والباحث الأكاديمي أمام تحديات ترتبط مباشرة بتطبيق المقاييس داخل بيئة لم تصمم من أجلها و عليه سنحاول من خلال هذا المقال العلمي التطرق لأحدى أهم صعوبات تطبيق الاختبارات النفسية تكييف الاختبارات النفسية للبيئة الثقافية، و ذلك من خلال الإجابة على التساؤلات التالية:

ماذا نقصد بتكييف الاختبارات النفسية وفيما يختلف عن ترجمتها؟ ما هي إجراءات تكييف الاختبارات النفسية لتطبيقها في البيئة الجزائرية؟ ما هي معايير للتأكد من صلاحية المقاييس المكيفة؟
الكلمات المفتاحية: الاختبارات النفسية-الترجمة-التكييف.

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INTRODUCTION

Psychometry methods and examination techniques are one of the pillars of the success of clinical practice, as they are used by a psychologist to understand the dynamics of an individual's personality in different environments, to diagnose his or her problems, and to predict the development of his or her medical condition and responses to various types of treatment, with a view to accompanying him or her and achieving maximum psychological and social equilibrium.

In this context, the clinical practitioner in Algeria faces a number of professional difficulties due to several factors: the inability to apply psychological tests and explain their results because of a lack of experience; the limited training to theoretical knowledge; and the lack of proficiency in the foreign language. It also involves training psychology students in the use of psychology scales and in highlighting their psychometric characteristics.

In addition to the above-mentioned problems, it should be noted that the measurement tools of psychological tests and measures available today are mostly not compatible with the application environment, because they are not adapted to the Algerian environment.

Although the Algerian individual does not hold as many values as the European or American individual for whom the test was established, most of the tests used are Anglo - Saxon and American-made tests, which were arabized to serve the practitioner in the Arab environment; despite the different personal characteristics of individuals in Western and Arab societies, as well as cultural and value differences between them.

Also, while dealing with the psychological scale in its original version, the examined in question may encounter difficulties that undoubtedly result in results that do not reflect the value of the characteristic to be measured among the members of the sample. So we find a few clinical examiners who use a literal translation of the test from their original language into a different language to go beyond these problematic. Many scientific studies have also shown that translating tests from one language to another has a significant impact on the degree of validity, especially when difficulties associated with cultural influences are not counted, because psychological testing can hardly be implemented without the cultural factor. (Hambleton and all, 2005, P 365)

The issue of the social and cultural impact of psychological tests is also crucial in the field of psychometry, as the use of measurement tools is increasingly criticized as being subject to literal translation and blind transfer without new cultural creativity in the field psychological testing.

The field of adapting psychological and educational tests is very important in the field of psychometry. However, little - if any - attention has been paid in Africa, where a specialist is forced to apply prizes in environments different from the Arab environment in general and Algeria in particular.

However, we do not deny the many attempts and jurisprudence that have been made and continue to be used to overcome this problem. This is only for the purpose of obtaining tests that are suitable for the Algerian environment and are designed or adapted to form a bank of purposes-varied objective tests that measure the different characteristics of Algerian personality. Each interested in the field of psychometry relies on them as a well-founded and scientifically reliable reference for their use and application.

One recent scientific attempt to adapt a psychological test in the Arab world was the Touma Matar study (2009), in which she adapted the Wechsler cognitive test (WISC IV) to obtain the appropriate Arabic version of the Lebanese individual characteristic (V. Matar & Y Moussallem, 2016).

At the national level, we would like to mention some Algerian universities and their academic studies in the field of psychology, as well as the scientific laboratories in the field of psychometry, foremost among them are a number of researchers in the field of psychology who have carried out scientific studies to make adjustments to certain psychological tests, such as: Kadour Rabah (1981), he tried to adapt D 48 test to measure general intelligence. Also Halit Nassima also attempt (1992) to modify the aphasia test, as well as Bizat Omria studu (2000) in which she adapt linguistic aphasia F.Hamouni to measure oral and written language from his native environment to the Algerian cultural context and there is an attempt made by Larbi Noria (2005) to adapt Arabic pronunciation in the Kabyle dialect. (بوزيان، 2008)

These scientific efforts ascertain us the determination and refusal of researchers not to maintain all aspects of psychological testing with cultural connotations different from the application environment and the

characteristics of the sample in question, without adapting it to local community requirements.

There are even those who have completely refrained from adopting it as a measurement tool in standard practice because its results are unreliable and the criteria on which it was built do not correspond to those of the Algerian environment.

1. The difference between translation and adaptation of psychological tests:

Before going through the procedures for adapting psychological tests, we should clarify the difference between the adaptations and translation.

“Translation” is a Latin-derived word. "Translatio" which means "communicating through", and he translated speech i.e explain it in another language, the purpose of translation is to be able to transfer speech either literally or freely from one language to another no more no less so that the reader or listener understands the translated text as understood by the reader of the original text or its listener. (AM.Razick,ACF.Fainas ,2015,p213)

The translation process therefore involves transferring the text from the source language to the target language without increasing or decreasing its real meaning, while the overall translation of a psychological test gives a corresponding meaning to the word it contains, but does not change its context. In other words, the literal translation of the test does not take into account the prevailing language or the cultural context of the environment in which it is applied.

This means that the psychiatrist has resorted to this procedure, leading him to false, distorted and subjective results. Where is the importance of adapting psychological and educational tests to the sociological and cultural elements of the context in which they are applied?

And by the process of adapting psychological tests, we mean all the procedures that the researcher follows, from an assessment of whether the test can estimate the same composition when moving the test from one culture to another toward an his attempt to obtain concepts, terms and expressions that are culturally, linguistically and psychologically equivalent to the new culture of the test.

So we can consider adaptation as the process of subjecting scale items to adding, changing, modifying and experimenting according to psychological approaches and statistical procedures to be eventually codified and become a compatible tool for the study community with generalizable results.

The process of adapting a psychological test according to Mohammad Riad Ben Rajab also includes "following a certain theoretical plan and defining cultural and linguistic characteristics, customs, traditions and the religion of a society from which the test comes from ».

(بوزيان، 2008، ص 21)

In fact, the adaptation takes on dimensions that go beyond literally translating the contents of the scale from one language to another to include the sum of logical modification according to sequential stages requiring scientific evidence to confirm that the final test is applicable and its results apply to the sociological and cultural characteristics of the new sample.

From all the above, we understand that the adaptation of psychological tests means not only a process of translation of its contents, but in fact it is about creating new ones, as far as the various processes of conversion, addition and substitution are concerned, in addition to various theoretical justification and statistical processes, as the resulting items are subject to experimentation within the new society in order to legalize them.

Thus, the process of adapting psychological tests to one particular environment over another - As it is a very complex process- requires appropriate modifications to the circumstances of the new environment in order to enable it to be used, this adaptation occurs with all the variables of the environment, most of which are cultural, social and educational factors.

The objective of adapting psychometrics is to guide those who oversee the process during the adaptation steps, as well as to assist them in selecting the scale that meets the required purpose. Here we refer to the definition of the service that the adapted scale is required to provide.

The goals of psychological scale's adaptation are summarized to overcoming in the tools that address the measurement of a particular characteristic for the purpose of diagnosis, selection processes, school or vocational guidance, and the possibility of using them for the purpose of testing scientific hypotheses at the level of academic research.

2. Intellectual property rights for psychological tests:

Psychological testing is an absolute right of its author and no one may act on this right without his or her consent. Psychological testing, like other intellectual products, is subjected to the Intellectual Property Convention signed by many world States.

Under this Convention, the author or publisher of the test is entitled to sue those who override the test without their prior authorization. (رسول، كاضم، 2005، ص 61)

Thereby, every researcher wishes to adapt the approval measure from his/her author, but it is not so simple, as it is difficult for the researcher to obtain such licences.

3. Test adaptation procedures:

The procedure of adapting tests is a complex process that requires investment in time, efforts and money. This process cannot be done less than a year because it's going through three big stages:

- a) Translation and redressing equivalence.
- b) Experimental validation of the translated version.
- c) Adaptation to cultural context and development of standards. (Caron, J, 1999 .P 1)(Hambleton,1996)

Each of these stages requires a set of steps in order to achieve a proper issuance of the adapted tool, in this case the researcher has many options with its advantages and disadvantages.

These steps are described below:

3.1 Test selection:

The researcher must choose a test that is from a different language and culture closer to the purpose and take into account from the outset the process of adapting the test. If he fails to do so, this results in difficulties in the adaptation process, which in turn reduces the credibility of the adapted test. The researcher should ask the following question:

Can the test assess the same property when adapted and transferred from one culture to another?

Because the choice of test taking into account vocabulary, structure of sentences, positions and other aspects may be difficult to translate and thus be an impediment to adapting the test.

This view must also include an objective assessment in the credibility of standards measurement specifications in the culture of origin,

since extensive use of the tool does not imply the viability of the tool. (Hambleton and all, 2005, P 440)

This stage is considered to be a pre-emptive step ahead of the adaptation process and is intended to reduce problems later.

3.2 Review of items and response forms:

Before starting with the translation step, items and answer forms must be reviewed to test the methods of specific cultural groups or international groups.

3.3 Translation for the preparation of the prototype:

This step is to prepare a first model of the scale in the target language, and there are several methods that can be used to obtain the translated version. Among these, we would mention traditional translation, translation by the expert group and retrospective translation translation.

Here, it must be pointed out that the first method is not optimal, because a traditional translation in which a researcher relies on himself or a single translator makes him vulnerable to many errors and problems and thus makes the prototype not the same as the original version. (Vallerand, 1989, p665)

a-Selection and training of translators

The success of translation depended primarily on the efficiency of translators, and access to qualified translators was therefore important. Here, it must be noted that one translator is not sufficient to achieve the purpose. Consequently, the translation process cannot be assigned to a single selected translator because he is easily accessible based on a family relationship of kinship, friendship or a person who can be hired in a small amount, since using a single translator, whether qualified or not, does not amount to a valuable interaction between different translators to find solutions to many points that arise during translation.

It should also be pointed out that translators must be more than qualified persons in the languages used, and must even know cultures well, especially the culture for which the test is adapted.

The best translation is also the one to which the researcher who built the original test contributes so that it can be consulted in cases of confusion and ambiguity. (Vallerand, 1989,P 668).

b- Dialect selection:

Dialects in a language and culture may be a problem for translation because then the dialect to be adopted in translation must be determined based on the most important dialect in the language to which the test is to be translated. The issue must therefore be resolved before the test is translated.

c-Critical judgment plans for the translation of tests:

As already mentioned, there are several methods that can be adopted in the translation process, but the most commonly used are the following:

- **Early translation:** A group of translators adapts the test from the source language to the target language. The equivalence between the two versions is then assessed by a second set of translators, and a third review of the translated version can be performed by a third person not necessarily a translator but also a proofreader to make the test smoother.

The process could also be enhanced by a small group of persons subject to testing in order to provide translators with their observations on the test, guidance, content and general format of the test.

- **Retrospective translation:** They are most common in test adaptation because they are memorizing critical judgment of the tests, with one or several translators adapting the test from the source language to the target language.

A second group then translates the test into the original language. The translated and retranslated versions are compared and the equivalence is fixed. If they are the equivalence, parity is approved. (Daouk, Zeinoun, 2017)

d- Establishment of test items equality:

The translation process must ensure that equivalence is maintained. Equivalence has several types, such as a deductive equivalence; this means getting the same conclusions from the translated version and the original version.

Literal translation (semantic equivalence) is not useful from one culture to another because of the distinctive vocabulary and rules of each language. We note that some literally translated phrases have no meaning in another culture. Therefore, appropriate expressions must be found for the targeted culture to preserve the meaning of the items (equality of expressions). Also, certain attitudes in the culture of the original version may not correspond to reality in the targeted culture. These attitudes must

therefore be replaced by appropriate ones while preserving the objective and meaning (empirical equivalence).

Finally, the same process should be applied to concepts, since literal translation does not permit the same representation from one culture to another (conceptual equivalence). (Caron,1999 , P 2).

This is for verbal tests, in contrast, non-verbal tests or so-called “culture free tests” we will be caught up in a problem of its space saturation’s factor and the influence of local environmental experiences as well as poor validity coefficients. For example, the tree painting test did not show sufficient validity in some Arab countries, including Iraq; besides, it's a test specifically elaborated for middle American class children.

This is one of the most important stages of adaptation, where data are collected to correct the equivalence of test items from language to language. The plans for the preparation of the items equalization are as follows:

- **Bilingualism:** Testing a sample of 20 individuals, who are fluent in the original and translated languages, and comparing their results, in order to assess the items equivalence and then to investigate the validity of the results.
- **Monolingualism:** Students speaking the original language and students using the language for which the test was translated are taken, and then the equivalence of the items is recognized by the students' results in the two tests. (Vallerand, 1989).

3.4 Items Adaptation:

Any scale that is designed ultimately consists of a set of units or items, and in fact each constructing unit should be adapted, so that it becomes in shape, composition, difficulty, and sequencing in the scale that is appropriate and viable.

Each item is therefore studied according to its possible adaptation to the new culture. Some items cannot be transferred directly and are therefore compensated or neglected by other alternatives. This was prior to the development of an experimental version for use in the exploratory study. (Hambleton and all, 2005, P 441).

3.5 Conducting an exploratory study to experiment the adapted test:

The experimental version is applied in the new culture to obtain models with a concordance in the groups to which the scale was applied, during this phase it also happens:

- a. Check that instructions are valid for examiners.
- b. Reach an estimate of the time taken by the scale.
- c. Stability on the optimal sequencing of paragraphs.

3.6 Analysis of data obtained when applying the experimental model:

During which, the structure and sample of the tool are studied and compared with the original tool structure and sample, and here researchers can decide that some of the previous steps should be reinstated before continuation.

3.7 Performing statistical analysis to validate the adapted scale:

After the researchers have stabilized the development of the experimental model, the next step is to carry out statistical analysis in order to demonstrate the validity of the adapted scale, at this stage - as a minimum- the degree of internal persistence of the items, the validity of the scores and different criteria are calculated.

3.8 A study of structure and validity of criteria:

The criteria mean the degrees converted as opposed to the rough grades, which give the degree meaning and signification, so the final step in the adaptation process is to study the structure and validity of the criteria consistent with the purposes the tool intends to use in the receiving culture, when a tool is developed in a particular culture, criteria are usually established to give meaning and signification to the results both to the individual and to the average group as compared to a wider reference group.

The same phenomenon can appear in the target culture but with a different intensity or frequency. It is therefore important to compare the distribution of scores resulting from the translated version with the distribution of scores in the original version. Among the statistical indicators used are arithmetic average and standard deviation, which are used to assess measurement change.

It is important to verify these indicators for men and women. Significant differences in averages and deviations standard between the results of the two versions may mean:

- 1-The problem is in the selected sample.

2-The phenomenon considered in the targeted culture has its own specificities.

3-The distribution is very different, which may suggest that the measure is not appropriate for the targeted culture.

Where differences are acceptable, it becomes important to establish criteria for the targeted culture. These should include a test (Z) or a test (T). The selection of the appropriate sample for criteria setting depends on the purpose of the scale; if the tool is intended for persons with mental health problems, the sample selected should reflect this problem. (Haccoun, 1987, P-P,33-34).

The validity of the tool gives users, publishers and distributors confidence in the tool and emphasizes that the tool is ready for field use. (Hambleton, 1996)

It should be emphasized that these steps are in line with the International Test Commission « ITC » Guidelines for Translating and Adapting Tests.

4. Criteria to verify the viability of adapted scales:

Scales adapted to the new application environment have criteria that confirm their viability:

- The scale must have a guide showing how it is used, its objectives, its degree of validity and reliability, as well as instructions, the key to correction and the way the results must be interpreted.
- To consider the date of preparation of the test and the studies carried out in order to verify its viability in the environment in which it is intended to be applied;
- Validity and reliability studies must be re-examined in the new society in which they will be applied.
- Establish the responsibility of those applying the test and the need for them to obtain the scientific qualification and field competence that would allow them to apply the test.
- To create the appropriate physical conditions for the application of the test with the necessary conditions for application.
- Protect the rights of those tested by ensuring the strict confidentiality of the results.

- Create appropriate physical conditions in accordance with the conditions and factors required by the test to facilitate the application process. (بوسالم، 2015، ص 24)

CONCLUSION

In order to achieve effective harmonization between scientific theories and field practices, there is a need to strengthen cooperation between psychometry researchers and clinical practitioners. This will undoubtedly require that the proposed new measurement tools be subject to institutional practice, the necessities of reality and the complexity of life.

Most, if not all, of the psychological tests adopted in Algeria, either in the field of clinical practice or in academic studies, have not been invested in the adaptation process and have not been subject to the prerequisites of the Algerian environment.

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18 جانفي 2020