STANDARDIZATION OF TRADITIONAL IRANIAN MEDICINE TERMINOLOGY

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Abstract: Traditional Iranian Medicine owes its origin to Persia (Iran). However, it has undergone several transformations and is known at present by different names in different parts of the world**.** This project aimed at standardizing and defining the various original Persian and Arabic terms used in Traditional Iranian Medicine in English in order to make them understandable in English. It is indeed a commendable initiative. For the correct pronunciation of the terms, standard diacritical marks were adopted. The current quality-descriptive study evaluated the Iranian traditional reference books, and after data extraction and concept analysis, results were categorized and translated into English and the equivalent terms were English and the equivalent terms were determined. This work contains both clinical and non-clinical terms along with their explanations the current study employed purposive sampling method. The present study results help to provide a better understanding on the classical concepts of Traditional Iranian Medicine After selection of the reference books and extraction of equivalent technical words, the prepared context was translated into a fluent and formal scientific English text on the principles of Traditional Iranian Medicine. Better understanding of Iranian traditional terminology is possible only through the application of terms in the context; hence, giving the equivalents in a dictionary, cannot meet all purposes of the term. The current study aimed at providing the concepts of words, terminology, and technical terms of traditional medicine as the most appropriate and comprehensive context on Traditional Iranian Medicine.

Keywords: Traditional Iranian Medicine, Conceptual Text, Standard Terminology

1. INTRODUCTION

1.1. Historical Background

Traditional Iranian Medicine owes its origin to Persia (Iran). However, it has undergone several transformations and is known at present by different names in different parts of the world, such as Greco-Arab Medicine, Ionian Medicine, Arab Medicine, Islamic Medicine, Traditional Medicine, humoral medicine, etc. (Hysen, 2000). It was the Greek philosopher physician Hippocrates, regarded as the Father of Medicine, who liberated Medicine from the realm of superstition and magic and gave it the form of a science. It advanced with the wealth of scientific thoughts and the influence of men of learning of that age such as Aristotle, Theophrastus, Dioscorides, and Galen. The system traveled to Rome, Alexandria, Byzantine, and finally arrived at Jundishapur in Iran (Ebrahimnejad, 2002). In the middle of the 8th century AD it entered Baghdad under the rule of Abbasid dynasty where it received a warm welcome and the leading luminaries of learning belonged to different religions, Muslims, Christians and others gravitated towards it and focused their energies to translate intellectual heritage of philosophy and Medicine into the Arabic language. Within a span of a century [750¬850 AD], a large number of important works of different sciences were translated into Arabic, paving the way for their further advancement (Tan SY).

1.2. Medical Terminology and Physicians

Ancient medicine men were fully aware of the importance of Humoral Medicine Terminology and nomenclature. Buqrat (Hippocrates) [460 BC-370 BC] laid utmost stress on clear-cut explanations and transmission of correct sense of terms, which is clearly evident in his books, particularly Hippocratic Aphorism. Jalinus (Galen) [131-210 AD] compiled 2 books on terms and nomenclature; Kitab fi Alfaz-i Buqrat and Kitab fi'l Asma al-Tibbiyya. Physician authors of subsequent periods also compiled glossaries and mini-dictionaries on the subject (Jackson, 2001). Excellent work was carried out on the subject during Islamic period. Khawarizmi [d. 980 AD] compiled a book titled Mafatih al-'UlUm to explain the terms used in different arts and sciences. Its 3rd chapter is dedicated to Humoral medical terms. Terms of anatomy, ailments, drugs, weights and measures are elucidated in this chapter. Most of the authors dedicated a part of their books to explain medical terms; eg, a famous but rare book of Muhammad ibn Zakariyya Razi [865-925 AD] entitled Kitab al-Jami' is dedicated to the subject. According to Ibn Abi Usaybi'a [1203-1270 AD], the book comprises of 12 discourses. Nomenclature of drugs, weights and their explanation in the Greek, Syrian, Persian, Hindi and Arabic languages bear high significance. Organs and related diseases are also described. Abu al-Mansur ibnNuh al-Qamari [d. 990AD] authored a book on the topic titled Al-Tanwir fi 'lstilahat al-Tibbiyya in which Humoral Medical terms and relevant words are described under different chapters. Abu al-Qasim Zahrawi (Albucasis) [936-1036AD] dedicated the 30th chapter of his famous book Kitab al-Tasrif to surgery which comprises surgical terms. Copious matter on this subject is also available in Al-Rawda al-Tibbiyya of 'Ubayd Allah Bakhtishu' [11th Century AD]. The branch of writing dictionaries grabbed the attention of humoral physician authors. For instance, Mir Muhammad Mu'min Astrabadi [1552-1627 AD] authored a treatise entitled "Risala Miqdariya" exclusively on dosage of the drugs. A prominent figure of this field is Muhammad ibn Yusuf al-Harwi [16th Century AD], whose book "Bahr al-Jawahir" published in 1321 AH turned to be the most widely read book in the community of Humoral physicians (Pormann et al., 2007; Kahn et al., 2013; Tibi, 2006).

Since the terms of Traditional Iranian Medicine are unfamiliar to most of the Iranian modern physicians, translation of Nobel and original words and terms applied in the traditional medicine to introduce and realize the Traditional Iranian Medicine to the world in a scientific manner (Naseri). The following items are the ultimate goals of the current study:

1- Paying more attention, better understanding, and accordingly more employment of the terms by the local scientists and scholars; based on the results of the current study the translated terms are equivalent to those of modern medicine.
2- The Traditional Iranian Medicine benefits from an international terminology and it can be perceived and understood better by the scientists and medical experts.
3- It is possible to exchange experiences and scientific achievements with the overseas scientists and reach consensus on scientific issues.

1.3. Objectives

1.3.1. The main objective

To provide a brief overview on Traditional Iranian Medicine in English compromised of the following:

Introduction and fundamental concepts, the seven naturals, the six essential principles, causes and symptoms, Principles of Diagnosis, fundamentals of Treatment (Naseri et al., 2014).

The secondary objective
1- Providing equivalent terminology of Traditional Iranian Medicine in English based on the selected contexts (Young, 1983).
2- Introducing a structure as a reference for the Iranian traditional terms in English to the Iranian medicine researchers (Cimino et al., 1994)
3- Providing a context to introduce Traditional Iranian Medicine in the form of international terminology understandable for the medical society (Young, 1983; Cimino et al., 1994).

1.4. Applicable objectives of the study

The main applicable objectives of the work were to provide a reliable reference for the equalization of terms and concepts of Iranian medicine in the process of knowledge production and publication of articles indexed by international scientific indexing (ISI) journals to accordingly achieve an internationally acceptable and exact perception on the premium doctrine of the study.

2. MATERIALS AND METHODS

The current quality-descriptive study evaluated the Iranian traditional reference books, and after data extraction and concept analysis by the inductive content analysis method, data were categorized and translated into English, and the terms were exchanged (12). Also, the focus group discussions (FGD) method was used for the equivalent of the challenging terms (Edmunds, 2000).

The current study employed the purposive sampling method. Unlike other pre-designed sampling methods, the purposive sampling method is continued during the whole study without any pre-design. In the beginning, the reputable and available reference books were used (Srivastava et al.).

2.2. Sampling

A) To determine the exact and accurate equivalents, the reputable general dictionaries were used.

B) To extract the concepts of the terms, the medical reference books from the establishment of translation movement by Muslims to recent centuries were evaluated.

2.3 Selection of a brief context based on the maximum scientific terms

After preliminary selection of reference books, the outlines of traditional medicine were studied and the data were collected and accordingly, the ethical considerations of physicians in the old time were emerged during note taking; hence, to increase the validity of the study, the extracted data were discussed in the individual interview sessions and notes were also taken from the discussions. The notes were codified and classified. Then, every class was separately analyzed (Rabiee, 2004).

2.4. Equivalents

At this stage, the concepts of words and terms were evaluated. The concepts were taken from the general and professional dictionaries and also the mentioned traditional medicine books. The equivalents may be applied for 2 or more words; even 2 or more different concepts may be addressed with one word. Such concepts and terms were taken separately and evaluated based on the content analysis (WHO).

2.5. Surfing the internet databases

At this stage, all reliable and available articles on traditional medicine were evaluated meticulously; specifically, the ones that explained the terms, keywords, and concepts of traditional medicine.

2.6. Data collection tools and the procedure

The population of the study included all Traditional Iranian Medicine reference books in Arabic, Persian, and English, in addition to the Traditional Iranian Medicine professors who met the inclusion criteria, which were being reference, applicable, etc. (Wade).

Sampling was conducted in 2 groups:

A) The preliminary samples were provided from the reference books; based on the principles of the qualitative research, the sampling was continued till the end of the study (Patton, 1990).

B) Samples were collected from the traditional medicine professors including the ones who participated in the individual interviews; they cooperated with the study in data collection and data analysis. At this stage, concepts of the terms were extracted and analyzed following the interviewing the eligible subjects, using the face-to-face in-depth interview method and semi-structured questions (Wengraf, 2001).

C)

2.7. Calculation of the sample size
Sampling method and sample size

According to the reference books of the qualitative researches, using a very large sample size is not recommended for the qualitative researches and such studies should be conducted on small size populations; but, the evaluations should be performed in depth and the sample size does not indicate the reliability of data (Marshall, 1996). On the other hand, sample size is large or small based on the study questions such as type of study, deadline, and also the number of authors; sampling should be performed properly and adequately, and may be continued till the end of the study based on the study requirements until data saturation, without any pre-design (Barlett, 2001). Study population in the current study included all Traditional Iranian Medicine reference books, which the inclusion criteria were considered for some of them (Sandelowski, 1995).

Sampling was conducted using the purposive or criterion-based sampling methods (Holloway, 1997).

A) Medicine reference books: Samples were selected out of 2 groups of book. The first included the books written from the 8th to the 19th century A.C. The timespan started from the 8th century as the medicine books were translated into Arabic from the Greek or Syriac languages by Muslims and the main references for the Islamic physicians were truly such translated copies. The second group included general and medical dictionaries on words and terms, valid articles, and the recent English translations on traditional medicine, specifically the book "Canon" by Avicenna. The inclusion criteria were as follows (Hagberg et al., 1994).

1- The author of the book should be known as one of the reliable medicine men in the history of medicine.
2- The samples should be written during different eras of the history of medicine, from the onset of medical contexts translation movement to the recent medicine men.
3- The applied dictionary should have adequate comprehension and vocabulary.

B) Another group of samples should include the votes of FGD participants, which should meet the following inclusion criteria (Hagberg et al., 1994; Elo et al., 2008):
1- At least 5 years' familiarity with traditional medicine
2- Expert in the field of Traditional Iranian Medicine.
3- Expert in the principles of Traditional Iranian Medicine
4- The participants should meet the maximum variation of sample index; in other words, they necessarily should have different ideas and lines of thoughts.
5- Willingness to cooperate with the study.

2.8. Data calculation and data analysis methods to reach the study objectives

The current study data were collected from eligible traditional medicine books and FGD meetings were held on disputes and the issues could not be perceived and understood by the author, or based on the recommendations of the supervisor. The prepared context was also evaluated based on the content analysis.

Data analysis was performed based on the inductive content analysis. According to this method, the notes of a certain class are evaluated together, the theme is extracted out of each note, and all the themes obtained from a certain class are presented in a new note. Then, through the conclusion of such themes, the concepts and other required data are extracted accordingly (Elo et al., 2008).

2.9. Ethical considerations

1- The references of all contexts extracted from books and articles were mentioned meticulously.
2- The integrity was considered in all expressions and data from different and various books were cited perfectly, without manipulation or commentary.
3- Name of the subjects who attended the individual interview were kept confidential.
4- Participation in the individual interview programs was completely voluntarily and subjects were free to withdraw from the study any time they wished.
5- The subjects who somehow cooperated with the study were thanked (Munhall, 2001).

3. RESULTS

As cultures grow and spread to new territories, they merge with native civilizations, and adapt to local norms and languages. However, in the current global era, one of the languages which bind the globe is English. Hence, there is a need for standard terms that may be understood universally. In this regard, such exercises for Traditional Iranian Medicine were organized (Sigerist, 1987).

The task was completed in a period of 24 months. However, the current work is restricted to just clinical and non-clinical terms and does not represent Traditional Iranian Medicine as a whole; it is not possible to encompass the works of great scholars spread over centuries in a minuscule. Still, an attempt was made to include as many terms as possible, and the current volume carries over 1000 terms.

Totally, 11 subjects participated in the study, with the mean age of 42 years (minimum 32 and maximum 72 years), out of which 8 were physicians, 2 pharmacists, and 1 had basic science education.

The average time of familiarization with traditional medicine in the study subjects was 22 years (minimum 6 and maximum 54 years) and the average working experience in this field was 16 years (minimum 6 and maximum 54 years). All subjects were active in teaching and research, 9 on compilation and translation of the books, and 7 in traditional medicine treatment.

Results of the current study were divided into 1 main and 2 subsidiary theme:

1- Clinical terms

2- Non-clinical terms

3.1. Contents of terminology in Traditional Iranian Medicine

The technical terms included in the current research are classified into 2 groups; ie, non-clinical and clinical, comprising of the following subjects prescribed by Ministry of Health and Medical Education of Iran in its current syllabus for the 4-year PhD degree course of traditional Iranian medicine (Rezaeizadeh et al., 2009).

1- Preface and philosophy
2- Seven natural principles (basic components of life)
3- Six essential principles
4- Causality and signs of diseases
5- Principles of diagnosis
6- Principles of treatment

The project was directly monitored by the Principal Investigator (PI) and the progress and the quality of the work were evaluated periodically.

3.2. Transliteration table

The following letters were transliterated with diacritical marks included against each:

ا	a	ز	z	م	m
ب	b	س	s	ن	n
پ	P	ش	sh	ن	<u>n</u>
ت	t	ص	s.	و	w/v
ط/ت	<u>t</u>	ض	d.	ه	h
ث	th	ط	t.	ى	y
ج	J	ظ	z.	به-	<u>bh</u>
چ	Ch	ع	'	په-	<u>ph</u>
ح	h.	غ	gh	ته-	th
خ	Kh	ف	f	ته-	<u>th</u>
د	d/<u>d</u>	ق	q	چه-	<u>ch</u>
ذ	dh	ک	k	ده-	<u>dh</u>
ر	r	گ	g	که-	<u>kh</u>
ر	<u>r</u>	ل	l	گه-	<u>gh</u>

'ا is transliterated with elevated coma (') if used in the middle or end of the words followed by the relevant vowel and this elevated coma is not expressed at the beginning and only related vowel are used directly.

Letter ع as Arabic letter is transliterated as elevated inverted coma (')

Letter و as Arabic letter is transliterated as W and as Persian letter is transliterated as V

ﻩand ﻩare not expressed in both pause and construct forms.

Article الis transliterated as *al-* (*'l-*in construct form) whether followed by a lunar or helical letter.

و as a Persian conjunction is transliterated as (-o-) and as Arabic conjunction is transliterated as *wa*.

Short vowel (**-**) in Persian/Urdu passive or in conjunction form is transliterated as (-i-).

3.2.1.   *Unification and Standardization*

As English equivalents for a number of Iranian traditional medical terms are available often cause confusion, unification and standardization of these terms gain immense importance for better understanding of nuances and concepts.

3.2.2.   *Principles of Description in English*

Accuracy in reflection of original concept of terminology in Traditional Iranian Medicine: Possible English equivalents for the terms in Traditional Iranian Medicine were included in the current study. These equivalents were taken from universally recognized English, English-Arabic or vice versa, English-Persian or vice versa dictionaries and glossaries. These equivalents were given in italics to make them distinct. In exceptional cases, the terms were derived from available English words with slight modification. In unavoidable circumstances, no English equivalent was given. In such cases, a simple description was made to convey the real sense of terminology in Traditional Iranian Medicine.

It may be noted that though the description of IMT was closely related to the appropriate translation, it was not merely simple translation and may not be treated as such.

4.   DISCUSSION AND CONCLUSION

In the current study, 2 categories of technical terms used in Traditional Iranian Medicine, were mentioned; classical and non-classical. Classical terms were the ones used originally by Persian physicians of medieval period (Zargaran et al., 2012). Non-classical terms were the ones coined from the middle of the 20th century AD and are included in the literature of Traditional Iranian

Medicine to provide the books of the subjects in the Persian language for the students.

Needless to say that most of the terms used in the classical literature date back to over 1 to 2 thousand years and even today are used in the original sense. However, many terms evolved with the language while many new terms were devised.

Hence, terms selected from ancient literature were evaluated in the light of recent advancements and incorporated to convey the real sense of terms in Traditional Iranian Medicine. The terms were taken as documented in the books referred to in most of the cases, but a few were modified to maintain the uniformity of the document.

Since all the technical terms of Traditional Iranian Medicine were selected from classical

Persian and Arabic literature, transliteration of such terms with correct pronunciation in English was extremely challenging. Therefore, diacritical marks were incorporated as a priority to facilitate its understanding and acceptability at the global level. Transliteration table given below makes consultation easier for readers (Virga et al., 2003).

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