The Fesibility Study of Reflection of Iranian Traditional Medicine's Potential in the International Paradigm of Unified Medical Language System (UMLS)

A. Valinejadi MSc, M. Karimi MD, M.R. Shams Ardekani PhD, H. Bouraghi MSc

Abstract:

Introduction: This research analyzes mapping scheme of Iranian Traditional Medicine (ITM) in the structure of metathesaurus and Semantic network of Unified Medical Language System (UMLS), for the reflection of potential of ITM -at least in the level of its concepts- in a universal paradigm.

Methods: The method of this research has three phases: System analysis method, Documentary method and System designing method. In the first phase, the structure of UMLS and ITM are studied and UMLS structure is searched for the ideal location of ITM. In the second phase, literature and resources of ITM analyzed, then three examples prepares which includes: "Urine color" sign, "Epilepsy" disease, and "valerian" herbal drug, with whole of their branches, was extracted from among of total category of ITM science. Finally in the last phase, the examples that was extracted in second phase, was mapped with the UMLS concepts. In this case, conceptual and semantically relations analyzed and some new semantically relation are proposed for the first time.

Findings: Outcome of this research is a prototype of ITM structure and it's semantically relation with UMLS concepts in the UMLS.

Discussion and conclusion: The results indicate that although the current domain of UMLS has been covered suitable number of ITM's concepts, but UMLS cannot reflex complete and formal structure from ITM's knowledge. In this thesis, the hierarchical structure of ITM is designed for the first time in the base of international models. On the other hand, the location of ITM science in UMLS structure and conceptual relation between ITM concepts and UMLS concepts are proposed for the first time.

Keywords: Iranian Traditional Medicine, Traditional Medicine Terminology, Unified Medical Language, UMLS.

Corresponding Author: A. Valinejadi
Email: a_valinejad@razi.tums.ac.ir