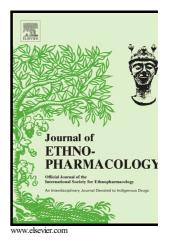# Author's Accepted Manuscript

Classifying Diseases and Remedies in Ethnomedicine and Ethnopharmacology

Peter O. Staub, Matthias S. Geck, Caroline S. Weckerle, Laura Casu, Marco Leonti

Cite this article as: Peter O. Staub, Matthias S. Geck, Caroline S. Weckerle, Laura Casu and Marco Leonti, Classifying Diseases and Remedies in Ethnomedicine and Ethnopharmacology, *Journal of Ethnopharmacology,* http://dx.doi.org/10.1016/j.jep.2015.08.051

Classifying diseases and remedies in ethnomedicine and ethnopharmacology

Peter O. Staub[a], Matthias S. Geck[a], Caroline S. Weckerle[b], Laura Casu[c], Marco Leonti[a*]

[a]Department of Biomedical Sciences, University of Cagliari, 09124 Cagliari, Italy
[b]Institute of Systematic Botany, University of Zürich, 8008 Zürich, Switzerland
[c]Department of Life and Environmental Sciences, University of Cagliari, 09124 Cagliari, Italy

*Corresponding author, Tel.: +390706758712; fax: +390706758553.
E-mail addresses: marcoleonti@netscape.net; mleonti@unica.it

Abstract

Ethnopharmacological relevance: Ethnopharmacology focuses on the understanding of local and indigenous use of medicines and therefore an emic approach is inevitable. Often, however, standard biomedical disease classifications are used to describe and analyse local diseases and remedies. Standard classifications might be a valid tool for cross-cultural comparisons and bioprospecting purposes but are not suitable to understand the local perception of disease and use of remedies. Different standard disease classification system exist but their suitability for cross-cultural comparisons of ethnomedical data has never been assessed. Depending on the research focus, (I) ethnomedical, (II) cross-cultural, and (III) bioprospecting, we provide suggestions for the use of specific classification systems.

Materials and methods: We analyse three different standard biomedical classification systems (the International Classification of Diseases (ICD); the Economic Botany Data Collection Standard (EBDCS); and the International Classification of Primary Care (ICPC)), and discuss their value for categorizing diseases of ethnomedical systems and their suitability for cross-cultural research in ethnopharmacology. Moreover, based on the biomedical uses of all approved plant derived biomedical drugs, we propose a biomedical therapy-based classification system as a guide for the discovery of drugs from ethnopharmacological sources.

Results: Widely used standards, such as the International Classification of Diseases (ICD) by the WHO and the Economic Botany Data Collection Standard (EBDCS) are either technically challenging due to a categorization system based on clinical examinations, which are usually not possible during field research (ICD) or lack clear biomedical criteria combining disorders and medical effects in an imprecise and confusing way (EBDCS).

The International Classification of Primary Care (ICPC), also accepted by the WHO, has more in common with ethnomedical reality than the ICD or the EBDCS, as the categories are designed according to patient's perceptions and are less influenced by clinical medicine. Since diagnostic tools are not required, medical ethnobotanists and ethnopharmacologists can easily classify reported symptoms and complaints with the ICPC in one of the "chapters" based on 17 body systems, psychological and social problems. Also the biomedical uses of plant-derived drugs are classifiable into 17 broad organ- and therapy-based use-categories but can easily be divided into more specific subcategories.

Conclusions: Depending on the research focus (I-III) we propose the following classification systems:

I) Ethnomedicine: Ethnomedicine is culture-bound and local classifications have to be understood from an emic perspective. Consequently, the application of prefabricated, "one-size fits all" biomedical classification schemes is of limited value.