A model for temperament (Mizaj) recognition based on fuzzy decision tree in traditional Persian medicine

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Abstract:

Background and purpose: The concept of temperament (Mizaj) is one of the most important concepts in traditional Persian medicine. Many prescriptions for maintaining health, diagnosis, and treatment of diseases are based on the specified temperament (Mizaj) of each person that varies from one person to another. Achieving standard methods for determining the temperament (Mizaj) is one of the main priorities of research in traditional Persian medicine. The fuzzy decision tree is one of the intelligent algorithms for data classification. The conclusion tree is the process of using specific examples and reaching a general model whose purpose is to learn how to classify the samples.

Methods and Materials: In this paper, the data related to temperament (Mizaj) was used for data mining and modeling of the temperament (Mizaj) diagnosis. To this end, the fuzzy decision tree was trained with fuzzy ID3 algorithm.

Results: Two trees were made for warmness/coldness and wetness/dryness. The produced rules were evaluated by traditional Persian medicine practitioners regarding their clinical application and accuracy.

Conclusion: This was the first research in the field of diagnostic intelligence in traditional Persian medicine which can be used at the operational level by the experts of the field. Moreover, it can accept other research fields using optimization and other intelligent algorithms and even manipulative diagnostics.

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