

## **What Is “Meaningful Change” When Working with Transtheoretical Model (TTM)?**

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The TTM is the most popular research and practical model in the field of health education and promotion. It assumes that people move through five stages when a behavior change occurs. According to the evidences, it is expected that an individual at the fourth change stage has made a meaningful change in the past six months. There is no consensus on definition of the “meaningful change” in various research reports. The main reason is the imprecise description of the research method. Some shortcomings are: First, it is not specified which alterations will be considered as significant changes in the study, prior to conducting the research. For instance, what is the criterion for promotion of fruit and vegetable consumption behavior among the housewives? Would it be eating 5 servings of fruits and vegetables per day, or increase of

the meals consumed number? Second, it is not determined how various behavioral changes in different participants would be interpreted. Will be different levels of change categorized between two levels of preparation and action? In the above example, the behavior of the women who were consuming one serving of fruit and vegetables per day has increased to 3 daily servings consumption a few months after the educational intervention; it is a meaningful change but is not optimal; i.e. the ideal behavior has not been fully adopted. Or, in a study to increase the Decay- Missing- Filled (DMF) index through brushing behavior promotion, may someone claim that a meaningful change has occurred in brushing behavior of the students who never used to brush their teeth and now brush at least twice a day? Is it right? Is not it important to focus on the efficiency and effectiveness of the

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brushing? In other words, how will we put such valuable stage development and unchanged DMF index together in terms of not brushing with a desired quality? Backstage of all the above mentioned shortcomings is our negligence to the change processes. It is rarely matched the better process of changes with stages of the change. For example, Horwath et al. cited “Self-liberation” as the best match with fruit and vegetables consumption behavior [1].

To sum up, it is time to contemplate more on what bases Clark [2], Velicer [3] and Prochaska [4] concluded. It is time to design and report our TTM-based researches better, in order to modify some shortcomings of this popular model, specifically when it comes to describe the change stages precisely among the people who do not fulfill the behavior thoroughly or do not carry out quality work. Besides, it is time to engage ourselves in matching the stages of change with the processes of change and clearly explain our research method.

## References

- [1] Horwath CC, Schembre SM, Motl RW, Dishman RK, Nigg CR. Does the Transtheoretical Model of Behavior Change Provide a Useful Basis for Interventions to Promote Fruit and Vegetable Consumption? *American Journal of Health Promotion* 2013; [In press].
- [2] Clark PG. Toward a transtheoretical model of interprofessional education: Stages, processes and forces supporting institutional change. *Journal of interprofessional care* 2013; 27(1): 43-9.
- [3] Velicer WF, Brick LAD, Fava JL, Prochaska JO. Testing 40 Predictions from the Transtheoretical Model Again, With Confidence. *Multivariate Behavioral Research* 2013; 48(2): 220-40.
- [4] Prochaska JO. Moving beyond the transtheoretical model. *Addiction* 2006; 101(6): 768-74.