

Research Article Synopsis:

The Theory of Planned Behavior (TPB) and Its Application to Oral Health Behavior

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## Summary

Yvonne Buunk-Werkhoven and her colleagues sought to develop a new index for oral health behavior (OHB), which could be used to assess and evaluate a person's oral hygiene self-care practices. Previous studies have shown how health models and health behavior theories have been applied, but many of them were seemingly limited. Past studies focused on the *intention* to perform OHBs rather than actually performing them. They also incorporated simple and incomplete measures of actual OHBs, failing to take into consideration precise tooth brushing details—like using a soft toothbrush to brush at least twice daily, brushing softly or without any pressure in a stepwise manner by applying small strokes to the teeth and gums—and additional self-care OHBs—such as the use of floss and tooth sticks in thorough interdental cleaning, the use of fluoride-containing toothpaste, and tongue-cleaning—as recommended by the American Dental Association (ADA). In collaboration with oral health care professionals and the public's participation in the study, they sought to improve upon previous indexes created in the past so that future researchers could have an all-encompassing OHB index for future use (Buunk-Werkhoven et al, 251).

In order to collect data for their study, Buunk-Werkhoven and her colleagues teamed up with a group of oral health care professionals—which included dentists, dental hygienists, dentistry students, professors, and dieticians—to create a one hundred and twenty-two item survey. It was divided into seven parts and included a few demographic questions concerning gender, age, nationality, education, and marital status. They began by administering the survey to a sample population in the Netherlands between October 31, 2005 and December 19, 2005. Eventually, the survey was published online and invited participants to fill it out through various oral health care websites. Radio broadcasts, the encouragement of dental practices of their clients

to participate via email, and advertisements on the University of Groningen and the Hanze University of Applied Sciences' (also in Groningen) school newspapers attracted even more participation in the survey (Buunk-Werkhoven et al, 252-253).

A total of four-hundred eighty-seven participants were examined in which 82% were women; 97% were of Dutch nationality; the mean age was 28.4 years-old; 65% were unmarried; 77% had no children; and the highest level of education for 42% of the participants was at the high school level. Attitudes towards OHB were positive and participants were fairly knowledgeable when it came to oral health knowledge (OHK). Participants greatly perceived the positive social outcomes of having healthy teeth. Most expressed having a considerable amount of control and having hardly any external pressure from their social environment in performing OHBs. Correlation analyses show that OHB correlated positively and significantly to *attitudes*, *perceived behavioral control*, *expected social outcomes* and OHK, and negatively with *subjective norms* which contradicts the TPB model. *Perceived behavioral control* was the best predictor of OHB, followed by *attitudes*, OHK and *expected social outcomes*. The results suggests that there's a correlation between a person's level of *self-efficacy* and their *expected social outcomes*, although further testing on the specific role of *self-efficacy* on OHB was not explicitly studied at this time. For future studies, it is suggested that data from a wider demographic of the sample population is needed since the participants in this particular study were overwhelmingly young women (Buunk-Werkenhoven et al, 255-258).

### **How the Applied Theory Works**

The Theory of Planned Behavior (TPB) is the model often used by social psychologists and researchers in mapping out the psychological causes of health behaviors (Buunk-Werkhoven et al, 251). It focuses on the rational, cognitive decision-making processes of an individual, and

helps predict and understand motivational influences on behavior by examining three psychological factors: *attitudes* (a person's positive or negative feelings about a given behavior), *subjective norms* (the consideration of what other people think about performing or not performing the behavior), and *perceived behavioral control* (a person's perception of his/her capabilities to perform a given behavior). Unlike the Health Belief Model (HBM), TPB takes an individual's social environment into consideration in deciding whether or not to perform a behavior, together with their personal attitudes towards it. These two factors lead to *behavioral intention* in which Ajzen and Fishbein, the theorists behind the behavioral model, believe to be a more predictive indicator of actually performing a particular human behavior. Even if a person intends to perform a behavior, they may not necessarily carry it out, so *perceived behavioral control* takes this into consideration. It factors in the amount of power a person believes he/she has over performing a behavior despite what they personally feel will make it easy or difficult to do (Edberg, 39-41).

### **Its Theoretical Application**

In this particular study, TPB was used to predict the psychological determinants of OHB and to assess whether *social outcomes* could be utilized as a possible measure of OHB.

“According to the TPB model, individuals make rational decisions based in part of their [OHK].

In addition, people who have assimilated OHK and experienced some control over their personal health are more likely to adopt OHB” (Buunk-Werkhoven et al, 252). In applying the concept of TPB to OHB, the model suggests that the more positive the *attitude* towards oral self-care practices, the stronger the *social norms*, and the higher the *perceived behavioral control*, the more likely it is that an individual will perform an optimal OHB (Buunk-Werkhoven et al, 251).

## **Analysis**

This article was very helpful in explaining the application of TPB to a particular health behavior that one can actually relate to on a daily basis. In class, Professor Mercedes Guillaum lectured heavily on the subject matter and applied it to various health behavior studies that were on the local, national, and international levels. Based upon the lecture material alone, the complexities of the psychological determinants included in TPB were very confusing at first and not fully understood until now. I found that having the opportunity to actually analyze and critique a study more helpful in understanding the application of TPB once it was put into action. From a health educator/promoter's perspective, studies like the one mentioned above help one to understand how models and theories are implemented into program planning, implementation, and evaluations that are geared towards helping the needs of the community. In the case of OHB, the study sought to evaluate and improve previous studies to further explain what factors motivate people to perform OHBs and self-care practices through the application of TPB.

## References

- Buunk-Werkhoven, Y., Dijkstra, A., & der Schans, C. v. (2011). Determinants of Oral Health Behavior: A Study Based on the Theory of Planned Behavior. *Community Dentistry and Oral Epidemiology*, 39(3), 250-259. Retrieved March 8, 2013, from the Wiley Online Library database at California State University, Long Beach University Library.  
<http://onlinelibrary.wiley.com/mcc1.library.csulb.edu/doi/10.1111/j.1600-0528.2010.00589.x/pdf>
- Edberg, M. (2007). Individual Health Behavior Theories. *Essentials of Health Behavior: Social and Behavioral Theory in Public Health* (pp. 39-42). Sudbury, MA: Jones & Bartlett Learning, LLC.