

Applying the Health Belief Model and Theory of Planned Behaviour to mammography screening

David Ritchie

D Ritchie¹, G Van Hal¹, S Van Den Broucke²

¹Universiteit Antwerpen, Antwerpen, Belgium

²Université catholique Louvain, Louvain La Neuve, Belgium

Contact: david.d.ritchie84@gmail.com

The Health Belief Model (HBM) and the Theory of Planned Behaviour (TPB) are frequently used to predict cancer screening attendance. Although several meta-analyses have been conducted, none have compared these models in respect of mammography screening.

A systematic review was performed between September and November 2016. Data were extracted from the search results and coded using a comprehensive data extraction template based on closed-ended questions on the key characteristics of the studies. No restriction was placed on the date of publication of studies.

A total of 541 papers HBM studies, and 443 TPB studies, were recovered. Of these, 39 HBM studies and 14 TPB studies met the eligibility criteria for review. Between 34.7% and 63% of the variance in mammography screening participation was explained by HBM (mean $R^2 = 0.498$). The explained variance for TPB ranged from 17% to 81% (mean $R^2 = 0.401$).

The HBM and TPB demonstrate positive predictive validity for mammography screening participation, although studies using TPB focus more intention to screen. Most studies examine the individual cognitive constructs of both models, displaying considerable heterogeneity in operationalising the individual constructs. Thus, the application of the complete models to predict mammography participation is under-reported.

Key messages:

- The operational definitions of the cognitive components of both models differ in the application to the study of mammography screening.
- The studies fail to consistently report on the effectiveness of the models, focusing instead on cognitive components of both models.