

**Medication beliefs predict uptake of preventive therapy in women at increased risk of breast cancer: a Latent Profile Analysis (Abstract only)**

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This document is the Accepted Version [AM]

**Citation:**

THORNELOE, Rachael, HORNE, Rob, SIDE, Lucy, WOLF, Michael and SMITH, Samuel (2019). Medication beliefs predict uptake of preventive therapy in women at increased risk of breast cancer: a Latent Profile Analysis (Abstract only). *Annals of Behavioral Medicine*, S1-S842. [Article]

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## **SBM (Washington DC, 2019) – 2500 characters**

**Title:** Medication beliefs predict uptake of preventive therapy in women at increased risk of breast cancer: a Latent Profile Analysis

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**Background:** Preventive therapies such as tamoxifen are a risk reduction option for women at increased risk of breast cancer. Uptake of preventive therapies is low. The Self-Regulatory Framework identifies the role of beliefs about medication and its impact on treatment decision-making. We examined whether women at increased risk of breast cancer can be categorised into groups with similar medication beliefs and whether belief group membership was prospectively associated with uptake of preventive therapy.

**Methods:** Women ( $n = 732$ ) attending an appointment at one of 20 centres in England to discuss breast cancer risk were approached; 55.7% (408/732) completed a survey containing the Beliefs about Medicines Questionnaire (BMQ) and the Perceived Sensitivity to Medicines (PSM) questionnaire. Self-reported uptake of tamoxifen at 3-month follow-up was reported in 258 (63.2%). The optimal number of medication belief groups were identified using Latent Profile Analysis (LPA).

**Results:** Uptake of tamoxifen was 14.7% (38/258). The LPA model fit statistics supported a 2-group model. Both groups held weak beliefs about their need for tamoxifen for current and future health. Group 2 (38% of the sample) reported stronger concerns about tamoxifen and medicines in general, and stronger perceived sensitivity to the negative effects of medicines compared with Group 1 (62%). In a multivariable model, women classified into Group 2 (low need, higher concerns) were more likely to be: aged  $\geq 50$  years (vs. 36–49 years), OR=0.56, 95% CI: 0.34–0.93,  $p=.024$ ). Women with low necessity and lower concerns (Group 1) were more likely to initiate tamoxifen (18.3%; 33) than those with low necessity and higher concerns (Group 2) (6.4%; 5). After adjusting for demographic and clinical factors, the OR was 3.37 (95% CI: 1.08 – 10.51,  $p = .036$ ).

**Conclusions and implications:** In this UK multi-centre study, uptake of breast cancer preventive therapy was low. An important subgroup of women reported low need for preventive therapy and strong medication concerns. These women were less likely to initiate tamoxifen. Understanding subgroup differences in medication beliefs may enable the development of personalised interventional approaches for supporting informed treatment decision-making.