A cross-sectional study to determine if a family history of osteoporosis impacts on attitudes towards osteoporosis knowledge, beliefs and self-efficacy in middle-aged women from the United Kingdom and Ireland.

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Background
Middle-aged women (MAW) are at risk of osteoporosis, a disease which accounts for the most disability-adjusted life-years (European Commission, 1998). However, MAW often have a low perception of their susceptibility to osteoporosis (Deo et al., 2007). Additionally, MAW’s knowledge of osteoporosis has been defined as ‘poor’ (Terrio and Auld, 2002). Furthermore, MAW often present barriers to osteoporosis prevention behaviours (calcium, physical exercise) (von Hurst and Wham, 2007).

Family history (FH) of osteoporosis can double MAW’s osteoporosis risk. However, after an educational intervention, Endicott, (2013) found no significant differences in self-efficacy and knowledge between premenopausal women with and without a FH.

This study aims to investigate if a family history of osteoporosis impacts on MAW’s knowledge of those at risk of osteoporosis and osteoporosis prevention, MAW’s beliefs of any individual’s susceptibility to osteoporosis and the seriousness of osteoporosis, and MAW’s self-efficacy to undertake osteoporosis prevention behaviours. Additionally, reported barriers to osteoporosis prevention behaviours and participants BMI, age and education level were also analysed.

Methods
A cross-sectional was conducted on 40-60-year-old women. A purposive and opportunistic sample of 20 women with a FH and 20 women without a FH of osteoporosis was recruited from the UK and Ireland. A self-administered quantitative was used to meet the aim of the study.

Results

<table>
<thead>
<tr>
<th>TABLE 1 OSTEOPOROSIS HEALTH BELIEFS</th>
<th>FH</th>
<th>No FH</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. The chances of any individual getting osteoporosis is high</td>
<td>15%</td>
<td>20%</td>
<td>0.372</td>
</tr>
<tr>
<td>2. FH makes it more likely to get osteoporosis</td>
<td>15%</td>
<td>20%</td>
<td>0.298</td>
</tr>
<tr>
<td>3. It would be serious if an individual got osteoporosis</td>
<td>15%</td>
<td>20%</td>
<td>0.093</td>
</tr>
<tr>
<td>4. Regular exercise reduces risks of osteoporosis</td>
<td>15%</td>
<td>20%</td>
<td>0.075</td>
</tr>
<tr>
<td>5. Foods rich in calcium reduce risks of osteoporosis</td>
<td>15%</td>
<td>20%</td>
<td>0.038</td>
</tr>
</tbody>
</table>

Table 1 shows MAW without a FH were more likely to agree with statements 1-4 compared to MAW with a FH. For statement 5 MAW without a FH agreed more with statistical significance (p=0.038).

KNOWLEDGE
• The mean total knowledge score out of 100% was; 69% for MAW with and 70.8% for MAW without a FH of osteoporosis.
• MAW without a FH were more likely to correctly choose 41-64-year-olds to be at risk of osteoporosis (p=0.003)

SELF-EFFICACY for OSTEOPOROSIS PREVENTION BEHAVIOURS
• All participants were ‘willing’ to increase calcium intakes
• Figure 2 shows 95% of MAW without a FH were ‘willing’ or ‘very willing’ compared to 90% of MAW with a FH
• ‘No time to exercise’ and ‘the fat content in calcium rich foods’ were the greatest reported barriers to osteoporosis prevention behaviours.

Discussion and Conclusion
Majority of participants agreed ‘chances of any individual getting osteoporosis is high’ which contrasts findings from Deo et al., (2013). However, the present study addressed anyone’s susceptibility compared to personal susceptibility in Deo et al. (2013). MAW without a FH agreed more that foods rich in calcium reduces risks of osteoporosis which reflects findings from Endicott, (2013).

MAW without a FH had a higher knowledge score which contrasts findings from Terrio and Auld, (2002) that FH could benefit MAW’s osteoporosis knowledge. Many chose broccoli to be highest in calcium which suggests confusion about diet for osteoporosis prevention.

MAW without a FH had a higher self-efficacy (willingness) for bone-promoting exercise which reflects findings from Endicott, (2013). MAW with a higher BMI had a lower self-efficacy for bone-promoting exercise, this suggests these MAW may require more support for osteoporosis prevention behaviours. The reported barriers in this study confirm those reported in von Hurst and Wham, (2007).

To conclude, there was no evidence that a FH of osteoporosis impacted on middle-aged women’s osteoporosis knowledge, health beliefs relating to; any individual’s susceptibility to osteoporosis and the seriousness of osteoporosis or self-efficacy for osteoporosis prevention. This suggests that osteoporosis awareness and education for prevention or management is required for all middle-aged women.

References