INTRODUCTION

Health education through mass media campaign has been shown to be an effective method to increase knowledge and improve health behaviors such as smoking cessation, physical activity, and health seeking behavior for glaucoma. In remote rural areas where there is a limited access to oral health services and other forms of public media, a community radio program organized by local community may be an appropriate channel for oral health education.

OBJECTIVE

To assess whether a public educational program can increase knowledge and attitude related to oral health, as well as self-care behavior among remote rural area people in Thailand.

METHOD

• Study design: Assessment of attitude, knowledge, and self-care behavior at pre- and post-intervention using interview questionnaires
• Target group: People living in Ban Nayao Village, Sanamchaikhet District, Chachoengsao Province
• Cluster sampling: 2 households from each 34 blocks; one at the northeast corner of the block and the next one in the clockwise direction
• Samples: All members in the selected households, giving a total of 154 persons, age 16-69 years old

• Intervention program
  1) Community radio broadcasting as main educational media: 1 out of 57 messages, each 2-4 minutes long, broadcasted at the beginning of each hour from 8.00-19.00
  2) Posters as adjuncts: 50 posters placed in the community gathering areas and replaced with new ones after 2 months in display
• Duration: February-May 2008

RESULTS

• At post-intervention, 131 (85.1%) persons were available for the evaluation
• Validity: At pre-intervention, only 6 (4.6%) persons gave contradicting answers in 2 cross check questions and only 2 (1.5%) persons at post-intervention

(A) Knowledge (13 questions):
61.1% had increased score, 9.2% decreased score, and 17.6% no change

Table 1: Knowledge scores

<table>
<thead>
<tr>
<th></th>
<th>Pre-intervention (Mean ± SD)</th>
<th>Post-intervention* (Mean ± SD)</th>
<th>p-value**</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>131</td>
<td>54.2 ± 2.2</td>
<td>68.2 ± 2.5</td>
</tr>
<tr>
<td>Age group</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16 - 19 years</td>
<td>25</td>
<td>70.0 ± 2.5</td>
<td>72.6 ± 2.7</td>
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<tr>
<td>20 - 39 years</td>
<td>54</td>
<td>53.3 ± 2.1</td>
<td>59.9 ± 2.6</td>
</tr>
<tr>
<td>≥ 40 years</td>
<td>24</td>
<td>44.6 ± 1.8</td>
<td>50.2 ± 2.2</td>
</tr>
<tr>
<td>Occupation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Farmer</td>
<td>47</td>
<td>54.5 ± 2.3</td>
<td>68.2 ± 2.7</td>
</tr>
<tr>
<td>Hired hand</td>
<td>24</td>
<td>52.2 ± 1.7</td>
<td>70.7 ± 2.5</td>
</tr>
<tr>
<td>Shop owner</td>
<td>21</td>
<td>58.6 ± 2.5</td>
<td>63.3 ± 2.2</td>
</tr>
<tr>
<td>Government officer</td>
<td>3</td>
<td>96.0 ± 1.6</td>
<td>103.5 ± 1.5</td>
</tr>
<tr>
<td>Not working</td>
<td>16</td>
<td>51.0 ± 1.9</td>
<td>64.2 ± 2.1</td>
</tr>
</tbody>
</table>

* No significant change in 3 questions (McNemar Test) ** Wilcoxon Test

(B) Attitude (4 questions):
- "Think that primary teeth are important" *
- "How important of having dental visit every 6 months"
- "Belief in own ability to prevent further dental caries"
- "Belief in own ability to prevent tooth loss"

No significant change except having dental visit every 6 months became more important to hired hand at post-intervention

DISCUSSION

• The young adults and government officers already had high scores at pre-intervention and the increase in knowledge scores was not significant. The campaign increased knowledge in all other age and occupation groups but not significantly in the shop owners and those not working. These two groups stayed in the village during the broadcasting time and might have been watching TV rather than listen to radio.
• The scores at post-intervention, though significantly increased, were only about half of the total scores, except in those who already had high scores at pre-intervention.
• The broadcasted messages were designed mainly for giving knowledge. Therefore, the campaign could not improve attitude toward importance of primary teeth and self-care ability but increase awareness of the important in having dental visit every 6 months in hired hand, the poorest group.
• At post-intervention, the self-care practices of dentate people that were low at pre-intervention (brush before bedtime and brush after every meal) improved significantly. On the contrary, improvement in self-care practices was not observed in denture wearers. Clearer message, longer intervention time, and/or additional motivation methods may be indicated for this group.

CONCLUSION

The public educational campaign through radio program showed initial increases in dental knowledge but not attitude for self-care. There was increased self-care practice among dentate persons but not among denture wearers.