The Effect of Assessing Barriers and Self-efficacy Enhancement Program on Medication Adherence

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Acknowledgement

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• Thanks to all participants

**Learner objectives**

1. Learners will be able to learn about cross-cultural in nursing

2. Learners will be able to share knowledge and experiences when implementing the intervention
Background

Background

Cardiac Drugs

Treating

Maintaining health

http://www.cvpharmacology.com/Tutorials/tutorials
Background

Acute MI after hospital discharge

Poor medication adherence about 12% to 20%

Cardiovascular management was poor in term of medication because of the influence of barriers
Background

Barriers

- Characteristics of Medication
  - Difficult schedule
  - Frequency dosing
  - Side effects
  - Difficulty swallowing

Forgot

Cost
Overcome barriers to Medication adherence

Self-efficacy
Background

Literature in Thailand

Khuwatsamrit (2006) studied medication adherence in CAD patients
- High self-efficacy in adhering to their medications.
- Low knowledge of why they must be taken.

Polsook (2013) studied factor influencing medication adherence among post-AMI
- Depression
- Self-efficacy
- Barriers
The Purpose of the study

to assessing barriers and examine the effect of self-efficacy enhancement program on medication adherence in post-AMI patients.
Research methods

Quasi-experimental

Two group posttest only

All participants admitted with AMI were recruited from the in-patient department of Police General Hospital.
Research methods

Inclusion criteria
- Thai male and female participants diagnosed with AMI
- age 20 years or older
- no cognitive impairment
- must be literate in Thai

Exclusion criteria
- Participants had a history of any mental illnesses
- any other complications such as heart failure or renal failure
Figure 1. Flow of participant
Research instruments

1. Socio-demographic and clinical profile

2. Barriers to Medication Adherence

3. Self-efficacy for Appropriate Medication Use Scale (SEAMS)

4. Self-report using a patient diary
**Intervention**

**a) Motivation Building**

1\(^{st}\) date assessing barriers and health education (individual teaching about AMI)
- Health education for lifestyle modification and medication taking education (2\(^{nd}\) date)
- Watched video - a model of medication adherence and cardio-drugs (3\(^{rd}\) date)

**b) Skill training**

- Researcher trained participant individually to take their medications
- Participants were also asked to repeat about medication to assess their knowledge (3\(^{rd}\) date)

**c) Monitoring medication adherence**

- Participants were asked to complete a daily diary
- Conducting two telephone follow-ups during the 2nd and 3rd week after discharge from the hospital

**30-45 min per session plus Q&A**
The Thai text appears to be a cover page for a booklet on lifestyle modification. The text includes a heart symbol made from hands and images of fruits and a scale, suggesting themes of health and wellness. The URL provided may lead to more information or resources related to the content.
Medication’s Booklet

คู่มือ
"การรับประทานยาสำหรับผู้ป่วยโรคกล้ามเนื้อหัวใจตาย"

http://utsauk.blogspot.com/2013/04/blog-post_20.html
daily diary
Data collection procedure

• All participants who agreed to participate in the study were asked to sign the consent form and the participants were randomly assigned into experimental or control group

• The study was conducted from August 2014 to March 2015

Ethical consideration

• Ethical approval was obtained from the Police General Hospital ethic committees

• The researcher was explained to the participants and they were assured that their identities were protected at all times
Result

- Demographic and Clinical Characteristics Of the participants (N=44)

<table>
<thead>
<tr>
<th>Demographic and Clinical Characteristics</th>
<th>Control Group N (%)</th>
<th>Experimental Group N (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>19 (86.4%)</td>
<td>19 (86.4%)</td>
</tr>
<tr>
<td>Female</td>
<td>3 (63.6 %)</td>
<td>3 (63.6 %)</td>
</tr>
<tr>
<td><strong>Age (years)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>41 – 50</td>
<td>3 (13.6 %)</td>
<td>4 (18.2 %)</td>
</tr>
<tr>
<td>51 – 60</td>
<td>6 (27.3 %)</td>
<td>7 (31.8 %)</td>
</tr>
<tr>
<td>61 – 70</td>
<td>8 (36.4 %)</td>
<td>7 (31.8 %)</td>
</tr>
<tr>
<td>71 – 80</td>
<td>5 (22.7 %)</td>
<td>3 (13.6 %)</td>
</tr>
<tr>
<td>81 – 90</td>
<td>-</td>
<td>1 (4.6 %)</td>
</tr>
<tr>
<td><strong>Average age</strong></td>
<td>62.6 (SD = 9.4)</td>
<td>60.5 (SD = 10.8)</td>
</tr>
<tr>
<td><strong>Status</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Single</td>
<td>3 (13.6 %)</td>
<td>1 (4.5 %)</td>
</tr>
<tr>
<td>Married</td>
<td>14 (63.7 %)</td>
<td>21 (95.5 %)</td>
</tr>
<tr>
<td>Widow</td>
<td>5 (22.7 %)</td>
<td>-</td>
</tr>
<tr>
<td><strong>Education</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non education</td>
<td>2 (9.1%)</td>
<td>1 (4.5 %)</td>
</tr>
<tr>
<td>Primary school</td>
<td>4 (18.2 %)</td>
<td>6 (27.3 %)</td>
</tr>
<tr>
<td>Secondary school</td>
<td>4 (18.2 %)</td>
<td>5 (22.7 %)</td>
</tr>
<tr>
<td>High school</td>
<td>3 (13.6 %)</td>
<td>2 (9.1 %)</td>
</tr>
<tr>
<td>Diploma</td>
<td>1 (4.5 %)</td>
<td>2 (9.1 %)</td>
</tr>
<tr>
<td>Bachelor degree</td>
<td>7 (31.8 %)</td>
<td>4 (18.2 %)</td>
</tr>
<tr>
<td>Master degree</td>
<td>1 (4.5 %)</td>
<td>2 (9.1 %)</td>
</tr>
<tr>
<td><strong>Income</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0-10,000 Baht</td>
<td>7 (31.8 %)</td>
<td>8 (36.4 %)</td>
</tr>
<tr>
<td>10,001-20,000 Baht</td>
<td>5 (22.7%)</td>
<td>6 (27.3%)</td>
</tr>
<tr>
<td>20,001-30,000 Baht</td>
<td>4 (18.2 %)</td>
<td>3 (13.6 %)</td>
</tr>
<tr>
<td>30,001-40,000 Baht</td>
<td>1 (4.6 %)</td>
<td>3 (13.6 %)</td>
</tr>
<tr>
<td>40,001-50,000 Baht</td>
<td>2 (9.1 %)</td>
<td>1 (4.6 %)</td>
</tr>
<tr>
<td>More than 50,000 Baht</td>
<td>3 (13.6 %)</td>
<td>1 (4.6 %)</td>
</tr>
<tr>
<td><strong>Type of health care coverage</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Universal Coverage Scheme (the 30- Baht Scheme)</td>
<td>7 (31.8 %)</td>
<td>5 (22.7%)</td>
</tr>
<tr>
<td>Social security</td>
<td>-</td>
<td>3 (13.6 %)</td>
</tr>
<tr>
<td>Pay by themselves</td>
<td>1 (4.5 %)</td>
<td>-</td>
</tr>
<tr>
<td>Government coverage</td>
<td>13 (59.1%)</td>
<td>14 (63.6 %)</td>
</tr>
<tr>
<td><strong>Cardiac Canadian Society Class</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Class 1</td>
<td>12 (54.5 %)</td>
<td>9 (40.9 %)</td>
</tr>
<tr>
<td>Class 2</td>
<td>8 (36.4 %)</td>
<td>6 (27.3 %)</td>
</tr>
<tr>
<td>Class 3</td>
<td>2 (9.1 %)</td>
<td>2 (9.1 %)</td>
</tr>
<tr>
<td>Class 4</td>
<td>-</td>
<td>5 (22.7%)</td>
</tr>
</tbody>
</table>

SD= Standard deviation
Result

Experimental group

Barriers to medication adherence

- High = 0%
- Moderate = 27.3% (N=6)
- Low = 72.7% (N=16)
## Results

- **Effectiveness of the program**

<table>
<thead>
<tr>
<th>Group</th>
<th>Variable</th>
<th>Descriptive stat.</th>
<th>Levene’s test</th>
<th>T-test</th>
<th>95% CI of Dif.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Mean SD F Sig.</td>
<td>t df p</td>
<td>Lower</td>
<td>upper</td>
</tr>
<tr>
<td>Experimental</td>
<td>Medication adherence</td>
<td>30 0.00 30.64 0.00</td>
<td>-2.77 21 0.00</td>
<td>-1.33</td>
<td>-0.19</td>
</tr>
<tr>
<td>Control</td>
<td>Medication adherence</td>
<td>29.23 1.31</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*p < .05, ** p < .01
SD, Standard deviation
The plausible explanation in improvement can be that the self-efficacy enhancement program had promoted self-confidence in Thai participants with AMI.
Discussion

The effectiveness of the program

- SEP assisted
- Nurses and health care team
- Supporting the participants
- Overcome poor medication adherence
Discussion

• The effectiveness of the program

The program could have been enhanced by using motivation-building activities by

• 1. increasing the practices of medication adherence
• 2. training for medication adherence
• 3. monitoring of the practices of medication.
Discussion

- The effectiveness of the program

**Ooteron-Caló et al. (2013) and Sheridan et al. (2011)**

- The self-efficacy program also enhanced patient’s confidence in taking their medication because they believed that the medications improved their health

**Knecht (2014)**

- Patient living with heart failure had better medication adherence if they had self-efficacy.
Limitations

1. Too short duration of intervention

2. Medication adherence use self-report. It is easily distorted by the participant susceptible to error.
Conclusion

1. SEP was an effective strategy for improving medication adherence in post-AMI participant during first three month after discharge from the hospital.

2. It is important for the nurses, clinicians and clinical researcher to implement the SEP to assess the long-term effectiveness of the program in order to enhance medication adherence.

3. Future conduct a study to examine the correlations of medication adherence in decreasing clinical symptoms and re-hospitalizations and increase quality of life of persons with AMI.