LEVEL AND PREDICTORS OF SELF-CARE BEHAVIORS (SCB) AMONG EDUCATED AND UN-EDUCATED HEART FAILURE (HF) PATIENTS IN KARACHI, PAKISTAN

Ambreen Gowani
Research Coordinator
The Aga Khan University Hospital
Cardiovascular diseases cause:

- 16.7 million deaths per year, world wide
- 80% in low income developing countries
- 22% proportionate mortality in Pakistan

*(WHO, 2005)*
Heart Failure

- A progressively worsening clinical syndrome, with decline in the cardiac function

- A result of normal ageing process and final end point of all cardiac disorders

- Poor QOL and increase health care utilization

- “Self-care” a recommendation of AHA

(Klimm et al., 2012)
Self Care Behaviors (SCB)

Activities that individuals initiate and perform on their own, in the interest of maintaining life, health, continuing personal development, and well-being

(Reigel & Carlson, 2002)
Self-care Behaviors (SCB)

Self maintenance
- Medication
- Fluid restriction
- Diet regimen
- Weight monitoring
- Exercise

Self management
- Symptom monitoring
- Symptom management
- Proactive help seeking
SCB in order of their adherence rates

- Medication adherence
- Fluid restriction
- Help seeking
- Exercise
- Following diet regimen
- Symptom/ weight monitoring and interpretation

(Artanian, et al., 2009; Kato et al., 2009…)
Factors affecting SCB

- Age
- Gender
- Experience of illness
- Literacy level of the patients
- Burden of comorbidity
- Marital status
- Social support
- Income
- Shared decision making by the patient and physician
Health literacy is better among educated patients.

Educated patients perform better self-management of their disease as compared to their uneducated counterparts.

Educated patients had better communication with their physicians.
Education appeared to be a key predictor of self care among HF patients.

Self care skills can only be acquired by the educated patients?

What could be the mechanism of understanding of self-care among literacy and numeracy challenged population?
The study aimed to determine the level of self-care among educated and uneducated HF patients in Karachi, Pakistan.
Research Questions

- What is the level of self-care behaviors (SCB) among educated and uneducated HF patients in Karachi, Pakistan?

- What are the factors affecting the SCB of the educated and uneducated HF patients, in Karachi, Pakistan?
METHODOLOGY
Study Design
The study was cross sectional Analytical.

Sample
- 230 HF patients for quantitative survey

Study Settings
4 private tertiary care hospitals of Karachi
Recruitment of Study participants

Inclusion Criteria

- Left ventricle ejection fraction (LVEF) of <45%
- Physician written diagnosis of HF
- Patient should have had at least one prior visit related to HF
- Patient should be a resident of Karachi
- Should not have any cognitive disability
- Could give informed consent
- Did not suffer from any untreated malignancy.
- Able to speak and understand Urdu language.
Ethical Considerations

- Approval was taken from AKUH ERC and research settings.
- Permission of the tool, used in the study from the original author was sought.
- Informed consent was obtained from each participant.
Data Collection

✔ Modified version of the European Heart Failure Self-care behavior questionnaire (EHFScB_9)

- Orem Self-care Model
- 9-item assessment of SCB, on a likert scale
- Lower the score, better is the self care.

✔ Self-developed assessment checklist (clinical and demographic variables)
# Socio-demographic Variables

<table>
<thead>
<tr>
<th>Variable</th>
<th>Educated (n=115)</th>
<th>Un Educated (n=115)</th>
<th>P-Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>58.03+/-13.54</td>
<td>58.81+/-10.54</td>
<td>0.62</td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Males</td>
<td>79%</td>
<td>53%</td>
<td></td>
</tr>
<tr>
<td>Females</td>
<td>21%</td>
<td>47%</td>
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<tr>
<td>Marital Status</td>
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<td></td>
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</tr>
<tr>
<td>Married</td>
<td>90%</td>
<td>95%</td>
<td></td>
</tr>
<tr>
<td>Unmarried/divorced/single</td>
<td>10%</td>
<td>5%</td>
<td></td>
</tr>
<tr>
<td>Average Monthly Income in PKR</td>
<td>52000+/-40000</td>
<td>23000+/-19000</td>
<td>0.000</td>
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**Clinical Variables**

<table>
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<th>Educated (n=115)</th>
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<th>P-Value</th>
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<tr>
<td><strong>Functional Class</strong></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>I</td>
<td>21%(24)</td>
<td>10%(11)</td>
<td></td>
</tr>
<tr>
<td>II</td>
<td>39%(45)</td>
<td>45%(52)</td>
<td></td>
</tr>
<tr>
<td>III</td>
<td>30%(34)</td>
<td>28%(32)</td>
<td></td>
</tr>
<tr>
<td>IV</td>
<td>10%(12)</td>
<td>17%(20)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Educated (n=115)</td>
<td>Un Educated (n=115)</td>
<td></td>
</tr>
<tr>
<td>------------</td>
<td>-----------------</td>
<td>---------------------</td>
<td></td>
</tr>
<tr>
<td>Self-Care</td>
<td>27.07 (7.11)</td>
<td>32.40 (5.31)</td>
<td></td>
</tr>
<tr>
<td>VARIABLES</td>
<td>B- Coeff Value</td>
<td>P-</td>
<td>β- Coeff Value</td>
</tr>
<tr>
<td>----------------------------</td>
<td>----------------</td>
<td>-----</td>
<td>----------------</td>
</tr>
<tr>
<td>Gender</td>
<td>-2.293</td>
<td>0.192</td>
<td>-0.781</td>
</tr>
<tr>
<td>Income</td>
<td>-0.000034</td>
<td>0.001</td>
<td>-0.000048</td>
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<td>Chronicity of HF diagnosis</td>
<td>-0.006</td>
<td>0.097</td>
<td>-0.007</td>
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<tr>
<td>Age</td>
<td>-0.028</td>
<td>0.601</td>
<td>-0.050</td>
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</table>
Education Status

- Updated Knowledge
- Confident in discussing illness and its management
- Able to follow telephonic instructions
- Physician guided self adjustment of diuretics

Mere education is not a predictor of SCB
Stromberg, 1999

Better SCB among educated as compared to uneducated counterparts
Rockwell & Riegel, 2001
Experience of Illness

- A learning Experience
- Improved Symptom Monitoring
- Anticipation of Warning signs
- Skills of Self-Assessment

- Fear of re-hospitalization
- Painful Suffering.

HELP SEEKING BEHAVIOR

- Positive association between Experience and Adherence to SCB
  (Carlson et al., 2001; Riegel & Carlson, 2002; Cameron et al., 2009)

- Experience is not a predictor of Self-care
  (Kato et al., 2009)

- Severity of symptom drives active self-care
  (Rockwell & Riegel, 2001)

Experiential learning is common in most of the Eastern and Western HF Studies
Financial Status

- Affordability for medications, private health care facility, or private nurse enhanced SCB.
- Quick access to the best healthcare facility.
- Despite absence of active efforts, both maintenance and management behaviors enhanced.
- Unaffordability; A significant barrier to help seeking and medication compliance

- Prophylactic Medical help may not be a priority
- Difference of insurance culture
- Lower rates of help seeking than previous studies

(Kato et al., 2009)
Health Care system

- Lack of communication between patients and physician.
- Free Access to tertiary care: A Significant Facilitator for Patient Behaviors.
- Time consuming hospital visits
- Difficult accessibility
- Cost of the private health care facility

Scotto, 2005
Practice

- Initiation of Community based Services to improve accessibility.
- Development of Flexible HF management Programs
- Home based services would improve Patients’ and their family’s participation in HF management.
- Special Educational Sessions
  Multiple teaching modalities
Research Implications

- Patient outcomes such as QOL, ER visits, and cost analysis are important to quantify.
- Exploration of self care practices will be helpful to develop educational programs within the cultural context.
Thank you