Task Analysis: Adaptation and Application in Africa, Asia and the Caribbean for Health Workforce Strengthening

Global Maternal Newborn Health Conference
Mexico City
Wednesday, October 21st
Presenters and Country/Region of Focus

- Leah Hart  Lesotho
- Tegbar Yigzaw  Ethiopia
- Thida Moe  Myanmar
- Lastina Lwatula  Zambia
- Judith Fullerton  Caribbean

Catherine Carr  Moderator
Definition

- A descriptive research methodology
- Wide application in the health professions
- Particularly useful in assessment and definition of the knowledge, skills and behaviors that define the scope of practice of a health profession or occupation.
The Task Analysis Process

- Feedback is solicited from a cohort of interest, e.g.
  - recent graduates
  - health care staff members
- A task list is developed from
  - relevant and available national/international documents—
    - national treatment guidelines
    - curricula
    - job descriptions
    - scope of practice statements
    - regional and international clinical practice guidelines.
Response Variables

- **Frequency** [how often the task is performed]
- **Criticality/impact** [what effect there would be on patient or community health if the practitioner was not able to perform the task]
- **Ability to perform** [self-rated competency]
- **Where educated/trained** to perform the skill
Approaches to Data Analysis

- A combination of frequencies and cross-tabulations are applied to the data
- Results can be aggregated by groups of interest, for example,
  - by health center
  - educational institution
  - geographic region
  - educational level of health care providers
Approaches to Data Analysis

- The nature of the quantitative data lends itself to higher analytical approaches, as relevant to the study interest.
- A qualitative inquiry can be used to obtain additional task information, e.g., *Is there any task that you are required to perform for which you feel you have not been adequately prepared?*
Exploring the Data

- The most informative results of the task analysis study came from analyzing combinations of variables
  - frequency and criticality
  - criticality and performance.
Using Task Master: Mining for Data™ for Data Collection in Lesotho’s Nursing Task Analysis Study

Presented by Leah Hart
Washington D.C.
Population – 2.2 million

>70% live in rural/difficult to reach areas

Mountainous! Has the highest lowest point of any country (1,400 meters above sea level).

Ministry of Communications, Maseru, Lesotho. 2013.
Number of health personnel per 1,000 population by region:
- Northern – 1.33
- Central – 2.04
- Southern – 1.33

WHO global recommendation: 2.3 nurses, midwives and physicians per 1,000

Examples of Urban/Rural Health Care Service Disparities

<table>
<thead>
<tr>
<th>Health Service</th>
<th>Urban</th>
<th>Rural</th>
</tr>
</thead>
<tbody>
<tr>
<td>Family planning needs met</td>
<td>80%</td>
<td>62%</td>
</tr>
<tr>
<td>Births attended by skilled birth attendant</td>
<td>88%</td>
<td>54%</td>
</tr>
</tbody>
</table>

Lesotho Task Analysis – 154 Total Participants

<table>
<thead>
<tr>
<th>Variable</th>
<th>Group 1: Tasks 0-51 N</th>
<th>Group 2: Tasks 52 - 102 N</th>
<th>Total (%)</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td></td>
<td></td>
<td>0.587</td>
</tr>
<tr>
<td>Female</td>
<td>62</td>
<td>60</td>
<td>122 (79.2)</td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>15</td>
<td>16</td>
<td>31 (20.1)</td>
<td></td>
</tr>
<tr>
<td>Facility level</td>
<td></td>
<td></td>
<td></td>
<td>0.755</td>
</tr>
<tr>
<td>Clinic</td>
<td>22</td>
<td>27</td>
<td>49 (31.8)</td>
<td></td>
</tr>
<tr>
<td>Hospital</td>
<td>39</td>
<td>38</td>
<td>77 (50.0)</td>
<td></td>
</tr>
<tr>
<td>Referral hospital</td>
<td>14</td>
<td>10</td>
<td>24 (15.6)</td>
<td></td>
</tr>
<tr>
<td>Specialised hospital</td>
<td>2</td>
<td>2</td>
<td>4 (2.6)</td>
<td></td>
</tr>
<tr>
<td>Geographical Location</td>
<td></td>
<td></td>
<td></td>
<td>0.820</td>
</tr>
<tr>
<td>Urban</td>
<td>58</td>
<td>60</td>
<td>118 (76.6)</td>
<td></td>
</tr>
<tr>
<td>Rural</td>
<td>17</td>
<td>16</td>
<td>33 (21.4)</td>
<td></td>
</tr>
</tbody>
</table>
Task Master: Mining for Data™
A fun and interactive game for workforce analysis
Data Collection for Task Analysis Using Task Master: Mining for Data™

Task analysis data collectors
Demographic Sheet Information Matched to Anonymous Participant ID

<table>
<thead>
<tr>
<th>District where employed:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Place of work:</td>
<td>□ Community □ School □ Health facility □ Other ____________</td>
</tr>
<tr>
<td>Type of facility:</td>
<td>□ Government □ CHAL □ Private □ Other ____________</td>
</tr>
<tr>
<td>Current Designation:</td>
<td>□ Social Worker □ Auxiliary Social worker □ Other ____________</td>
</tr>
</tbody>
</table>

|                        | □ <1994 |

| Years of experience:    | □ 0-1 □ 2-5 □ 6-10 □ 11-15 □ 16-20 □ >20 |

<table>
<thead>
<tr>
<th>Institution of graduation:</th>
<th></th>
</tr>
</thead>
</table>

| Highest level of education obtained: | □ Certificate □ Diploma □ Bachelor’s Degree □ Master’s Degree |
Frequency Round of the Task Master: Mining for Data™ Game

- **Monthly**: Completes task less than once per week but at least once per month
- **Weekly**: Completes task less than once per day but at least once per week
- **Daily**: Completes task less than once per day but at least once per week
- **Rarely**: Completes task less than once per month
- **Never**: Lacks opportunity to perform task
Frequency cards are played face-down by participants...

- Daily, Daily, Weekly, Daily
- Rarely, Monthly, Daily, Daily
- Daily, Daily, Weekly, Weekly
- Weekly, Weekly, Daily, Daily

How frequently do you Obtain Vital Signs? .................................................................

How frequently do you provide family planning counseling?

Private Data Recording Area
Frequency (5 cards):
- Daily
- Weekly
- Monthly
- Rarely
- Never

Performance (3 cards):
- Proficient
- Competent
- Not comfortable to perform

Location (4 cards):
- Pre-service
- In-service
- On-the-job
- Never trained

Criticality (3 cards):
- High
- Medium
- Low
Lesotho Nursing Task Analysis: Key Findings

- What are particularly critical tasks that nurses report they struggle to perform? 
  *(High Criticality + Not Competent)*

- What critical tasks are nurses not prepared to do? 
  *(High Criticality + Never Trained)*

- What tasks are highly critical and done infrequently, requiring a schedule of practice drills to maintain competency? 
  *(High Criticality + Low Frequency)*

- TB screening and treatment
- Gender-Based Violence
- Cancer Screening
- Prepare emergency transport for laboring mother
- Provide resuscitation
- Care of child exposed to poison
- Care of patient with anaphylactic reaction