DEVELOPMENT OF SELF-LEADERSHIP SKILLS TRAINING MODULE BASED ON NEED ASSESSMENT OF NURSING PERSONNEL: MOBILE LEARNING APPLICATION

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ABSTRACT

Self-leadership is a way to maintain the motivation required for fulfilling roles and duties. It may be developed through the use of information technology applications. The aim of this study was to develop a self-leadership skills training module based on needs assessments of nursing personnel, and apply it through using mobile devices. The quasi-experimental study was carried out at the inpatient departments and outpatient clinics in Nile Badrawi Hospital on 101 nurses with different nursing qualifications and a jury group of 30 nursing academic staff and 30 nursing leaders. The data collection tools included a needs assessment sheet, pre-post self-administered questionnaires for nurses and an opinionnaire sheet for jurors. The researchers developed a training module in the form of a video-clip presentation converted through software program to MP4 and 3gp for upload to mobile devices. It was implemented and its effect evaluated. In nurses’ need assessment, self-leadership skills module ranked first. The developed self-leadership skills training module was done validated by the jury group. The post-intervention assessment revealed significant increases in nurses' knowledge scores (p<0.001), as well as in their scores of self-leadership dimensions (p<0.001). The application of a learning module via mobile devices can effect significant improvements in nurses’ knowledge and practice of self-leadership. The study recommends disseminating this training module, and further research with long-term follow-up of its effectiveness.

Keywords: Mobile Learning, Need Assessment, Nursing Training Module, Self-Leadership Skills.
1. INTRODUCTION

Self-leadership is a self-effecting process that individuals experience by maintaining the motivation they require for fulfilling their roles and duties \[1\]. It has been defined as “the influence people exert over themselves to achieve the self-motivation and self-direction needed to behave in desirable ways” \[2\]. Self-leadership is a process that occurs within an individual, rather than an external act, and is an expression of self through self-leadership one can establish the self-direction and self-motivation needed to perform a task. It recognizes that individuals mostly regulate their own actions through various behavioral and cognitive (thought) activities \[3\].

Self-leadership has three dimensions with strategies and components aimed at positively shaping own behavior to enhance overall performance. The first dimension involves behavioral-focused strategies characterized by self-observation, self-goal setting, self-reward, self-punishment, cues, and practice. The second dimension is that of natural reward approach focusing on the natural rewarding aspects of a task. The third dimension includes constructive thought strategies aimed at improving own belief system, using positive self-talk, visualization, comprising identification or replacement of false self-assumptions, and using new or creating mental-imagery \[2\]. More recently six components of self-leadership suggested by \[4\] are personal goal setting, mental practice, designing natural rewards, self-monitoring, self-reinforcement, and cueing strategies.

The practice of self-leadership is influenced by one's unique thought patterns and actions, which when combined become the foundation for which (s)he leads self to desired accomplishments \[5\]. It is often proposed as an effective mechanism that facilitates empowerment \[6\]. The skills of self-leadership can be acquired through training since they are amenable to change \[7\] and not stable as personality traits and training programs demonstrated improvements in these skills \[8,9\].

Before training design issues are considered, a careful needs analysis is required to develop a systematic understanding of where training is needed, what needs to be taught or trained, and who will be trained. Unless such a needs assessment has been adequately performed it may be difficult to rationally justify providing training. Needs assessment should enable an explanation to be given on why the training activities should be done, and also show that training is, in fact, the best solution for the performance problem or development need. As time is often limited, a training module which takes learners’ needs into account can ensure that what is most useful for learners is covered \[10\].

A needs assessment is a systematic process for determining and addressing needs or "gaps" between current conditions and desired conditions or "wants." The discrepancy between the current condition and the wanted one must be measured to appropriately identify the need. The need can be a desire to improve current performance or to correct a deficiency \[11,12\]. A needs assessment is a part of planning processes, often used for improvement in individuals, training organizations, or communities. It can refine and improve a product such as training or service a participant receives. It can be an effective tool to clarify problems and identify appropriate interventions or solutions \[13,14\].

Information technologies are increasingly used in training \[15\]. Their applications have positively influenced the training process through increasing the efficacy of delivery of content to participants with more interactive approaches \[16\]. Mobile learning affords enhanced collaboration among learners, with immediate and ongoing access to information, peers, and experts who can help them determine the value of information found on both the
Internet and in their real-world environments [17]. Mobile devices give learners a unique opportunity to be embedded in a realistic context at the same time, with access to supporting tools [18].

The aim of this study was to develop a self-leadership skills training module based on needs assessments of nursing personnel, and apply it through using mobile devices. It was hypothesized that the application of self-leadership skills training modules through using mobile devise may be lead to significant improvement of nursing personnel for new concepts, knowledge and abilities for themselves.

2. RESEARCH METHODOLOGY

2.1. Research design and setting

A quasi-experimental research design with pre-post assessment was used in carrying out this study in Nile Badrawi Hospital at outpatients’ clinics and six inpatient departments, these included oncology, obstetrics and gynecology, medical, cardiology, surgical, and emergency, in addition to three specialized care units were dialysis, premature, and intensive care.

2.2. Participants

The study sample consisted of two categories, namely a nursing staff group for the intervention and a jury group for validation of the proposed training module and related assessment tools. The nursing group consisted of 101 nurses with different nursing qualifications: bachelor degree (35), specialty diploma (11), technical secondary nursing diploma (7) and secondary nursing diploma (48). Their age ranged from 22 to 30 years, and their experience was mostly less than ten years. The jury group included 30 nursing academic staff included professors, assistant professors and lecturers from Damanhur, Ain Shams, Benha and Mansoura universities, and 30 nursing leaders included leaders from Dar-El-fouad and Ain Shams university hospitals, and Nasser Institute. Of the juries 50% had a doctoral degree, 21.7% a master degree, and the remaining had a bachelor degree in nursing.

2.3. Data collection tools

Three different tools were used for data collection, a needs assessment sheet, pre-post self-administered questionnaires for nurses, and an opinionnaire sheet for juries.

2.3. 1. Needs assessment sheet

This tool was developed by researchers guided by literature [10,19] to assess participants' training needs. It consisted of two parts. The first asking respondent to rank in order of priority ten different training modules: infection control and occupational health, decisions making and problem solving, disaster management, total quality management, motivation skills, self-leadership skills, documentation skills and preceptor training, emotional intelligence, communication skills, and risk management. The second part asked about the preference for the electronic methods - mobile and computer - to be used for application of the module, with three choices for each method. Responses were not mutually exclusive. The tool was appended with a section for socio-demographic characteristics as age, educational qualification, and years of experience.

2.3. 2. Self-administered questionnaires

Pre-post self-administered questionnaires were included a knowledge questionnaire and the Revised Self-leadership Questionnaires (RSLQ).
2.3. 2.1. The self-leadership knowledge questionnaire

It was developed by the researchers guided by pertinent literature [20-22] with modifications and translation to Arabic. It was intended to assess participant's change in self-leadership after implementation of the module. It consists of 30 multiple choice questions (MCQ) covering eight subscales as follows: self-leadership concepts (5 questions), self-management concepts (3 questions), self-leadership objectives (3 questions), abilities (4 questions), characteristics (4 questions), communication skills (3 questions), time management skills (5 questions), and organizational change (3 questions). A correct answer was scored “1” and the incorrect “0.” The points gained for each subscale were summed up, divided by the number of items, and expressed in means and standard deviations.

2.3. 2.2. Revised Self-leadership Questionnaires (RSLQ)

The tool was developed by [23,24]. It is a self-administered survey tool utilizing a 5-point rating scale ranging from "do very well," "do well," "do somewhat well," "do not do well" and "do not do well at all” scored 5 to 1 respectively. The researcher used the tool after modification and translation to Arabic to measure participant's self-leadership behavior and attitudes change after implementation of the module. It has 27 items covering the three main self-learning dimensions. The first dimension (behavioral-focused strategies) has thirteen items categorized in five subscales: self-goal setting (3 items), self-reward (2 items), self-punishment (2 items), self-observation (4 items), and self-cueing (2 items) with Cronbach alpha coefficients ranging from .675 to .919. The second dimension (natural reward strategy) has one subscale of focusing thought on natural rewards building with 4 items, and Cronbach alpha coefficients of .672. The third dimension (constructive thought pattern strategies) has three subscales: mental imagery (4 items), self-talks (3 items), and evaluation of beliefs and assumptions (3 items), with alpha coefficients ranging from .738 to .824. The total tool reliability was excellent with Cronbach alpha coefficient 0.93. The points gained for each subscale were summed up, divided by the number of items, and expressed in means and standard deviations.

2.3. 3. An opinionnaire sheet

Opinionnaire sheet: developed by the researcher guided by relevant literature [25,26] to validate the developed self-leadership training module. The jury members were asked to read the training module and express their agreement or disagreement upon its content whether reflecting the concept intended by the researchers or not. The tool consists of 53 items; one item for face validity form, three items to define data for participant as targets, language, and duration; four items to determine the general content of the module; eight items to identify its goals and objectives, benefits, and methods of trainees evaluation; four items to assess the materials and audiovisual aids to be used; nine items to describe the overview, concepts and dimensions; nine items to evaluate self-leadership abilities and characteristics; fourteen items to summarize for communication skills, time management, and organizational change; and, one item for the applicability of the module in other hospitals. Each item was to be checked as “agree” or “disagree” with comments and/or suggestions.

2.4. Study intervention

The study was implemented through preliminary, development, application, and evaluation stages, total study duration was 5 months from July 2013 to November 2013. as the following:
2.4.1. Preliminary stage: Official permissions were obtained through letters directed from the Dean of the Faculty of Nursing at Helwan University to hospital director and nursing director explaining the study aim and procedures. Then, the researchers met with every participant to explain the purpose of the study and to obtain written consent to participate. Those who accepted were handed the needs assessment sheet to fill it out. Each sheet took 10-15 minutes to be filled. Based on the analysis for the data obtained, the self-leadership training module was identified as the most needed.

2.4.2. Development stage: According to baseline data the researchers developed the training module along with the validation opinionnaire and the self-administered questionnaire. The module was in the form of a video-clip presentation in Arabic language prepared by the researchers. It was then converted through software program to MP4 and 3gp for upload to the three mobile devices (annex 1). The module and the tools were face and content validated by jury groups, and finalized according to their opinions. Prior to data collection, the tools were pilot-tested on a group of five nursing hospital managers to identify any ambiguous questions. Accordingly, minor changes were done in the form of re-wording or re-phrasing.

2.4.3. Application stage: the researchers used video calling for to collect pre-intervention data from each participant. Each questionnaire took 20-35 minutes to be completed. The researchers evaluated answers and provided immediate feedback to participants. This was followed by distribution of a software copy of the developed training module to the head nurse office in every department and unit. The copy was uploaded on three assigned mobile phones in the nursing director office for use in training and data collection. The total duration of the module was 24 hours. It was applied 4 hours/day for 6 days, at 10:00 am to 12:00 pm and 10:00 pm to 12:00 am.

2.4.4. Evaluation stage: After the end of the module, each participant was asked to fill the post-intervention forms through mobile call at a agreed upon time. The researchers evaluated the answers and gave immediate feedback to participant.

2.5. Ethical considerations and human rights

The study letters were approved by the pertinent authorities in the Faculty of Nursing at Helwan University. The nursing group participants gave their written informed consent to participate after receiving clear explanations of the study aim and method of study application. They were informed about their right to refuse to participate or withdraw at any time without giving reason. Confidentiality was assured to all participants, and all the forms used were identified by codes. Any obtained information was only used for research purposes.

2.6. Statistical analysis

Data entry was done using Microsoft Excel 2010 computer software package, while statistical analysis was done using SPSS 12.0 statistical software package. Cronbach alpha coefficient was used to assess the reliability of the scales used in the tools. Qualitative categorical variables were compared using chi-square test. Comparisons of pre-post scores were done using paired t-test. Statistical significance was considered at p-value <0.05.
3. ANALYSIS AND RESULTS

One hundred and one nurses participated in this study, the majority (74.3%) less than 30 years old (Table 1). Slightly less than half of them (47.5%) had secondary nursing diploma, while approximately one-third (34.7%) had a bachelor degree in nursing. Their experience years were mostly less than ten (76.2%).

Table 2 illustrates that in nurses' need assessment, self-leadership skills module ranked first with slightly more than half of them (51.5%) expressing their agreement upon it. Concerning their preference of the electronic methods for implementation, the use of mobile camera was selected by more than two-fifth of them (44.6%), while the use of the internet came second (35.6%). As for computer use, the highest percentages were for CD (29.7%) followed by E-mail (27.7%).

The validation of the developed self-leadership skills training module was done through experts' opinions. Table 3 illustrates the agreement of the jury groups of nursing leaders and nursing academic staff. The percentages of agreement ranged between 73.3% and 96.7% for the nursing leaders group, and 60.0% and 90.0% for the academic group. The only statistically significant disagreement between the two groups was related to the organizational change clarity, applicability, scientific and comprehensiveness (p=0.01). Nonetheless, for the two groups, it was higher than 60.0%.

Table 4 shows statistically significant increases in nurses' pre-post knowledge scores regarding to the self-leadership (p<0.001). This was evident in all areas of knowledge, with the highest mean of pre-post difference for self-leadership abilities (0.79). At the other extreme, the lowest mean difference was for self-management concepts (0.71). Similarly, Table 5 illustrates statistically significant pre-post improvements in nurses' scores of self-leadership dimensions (p<0.001). This was noticed in all dimensions, with a mean pre-post difference ranging from 2.20 for the dimensions of self-goal setting, self-reward, and evaluating beliefs and assumptions, to 2.29 for the dimension of self-cueing.

| Table 1: Socio-demographic characteristics of nurses in the study sample (n=101) |
|---------------------------------------------|--------|-----------------|-----|
| Age (years):                                | Frequency | Percentage |     |
| <30                                         | 75      | 74.3          |     |
| 30-                                         | 17      | 16.8          |     |
| 40+                                         | 9       | 8.9           |     |
| Range                                       |         | 2.0           |     |
| Mean ± SD                                   |         | 1.4±0.6       |     |
| Nursing qualification:                      |         |                |     |
| Bachelor                                    | 35      | 34.7          |     |
| Technical institute                         | 7       | 6.9           |     |
| Specialty diploma                           | 11      | 10.9          |     |
| Secondary nursing diploma                   | 48      | 47.5          |     |
| Experience (years):                         |         |                |     |
| <10                                         | 77      | 76.2          |     |
| 10-                                         | 7       | 6.9           |     |
| 20+                                         | 17      | 16.9          |     |
| Range                                       |         | 2.0           |     |
| Mean ± SD                                   |         | 1.4 ± 0.8     |     |

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**Table 2:** Arrangement rank order of the need assessment training module as perceived by participating nurses (n=101)

<table>
<thead>
<tr>
<th>Needs assessment items</th>
<th>Agree</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td>%</td>
</tr>
<tr>
<td>1- Training module needs:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>[1] Self-leadership skills</td>
<td>52</td>
<td>51.5</td>
</tr>
<tr>
<td>[2] Infectious disease &amp; occupational health</td>
<td>41</td>
<td>40.6</td>
</tr>
<tr>
<td>[6] Total quality management</td>
<td>20</td>
<td>19.8</td>
</tr>
<tr>
<td>[7] Disaster management</td>
<td>19</td>
<td>18.8</td>
</tr>
<tr>
<td>[8] Documentation skills &amp; Preceptor training</td>
<td>18</td>
<td>17.8</td>
</tr>
<tr>
<td>[9] Emotional intelligence</td>
<td>18</td>
<td>17.8</td>
</tr>
<tr>
<td>[10] Motivation skills</td>
<td>16</td>
<td>15.8</td>
</tr>
<tr>
<td>2- Electronic method of applications:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I- Mobile:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>[1] Use camera</td>
<td>45</td>
<td>44.6</td>
</tr>
<tr>
<td>[2] Use internet</td>
<td>36</td>
<td>35.6</td>
</tr>
<tr>
<td>[3] Use flash memory</td>
<td>33</td>
<td>32.7</td>
</tr>
<tr>
<td>II- Computer:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>[1] CD</td>
<td>30</td>
<td>29.7</td>
</tr>
<tr>
<td>[2] E mail</td>
<td>28</td>
<td>27.7</td>
</tr>
<tr>
<td>[3] Chat camera</td>
<td>15</td>
<td>14.8</td>
</tr>
</tbody>
</table>

*Response is not mutually exclusive.

**Table 3:** Agreement of jury nursing groups upon developed self-leadership skills training module form and components

<table>
<thead>
<tr>
<th>Components</th>
<th>Jury nursing groups</th>
<th>Chi-Square Test</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Leaders (n=30)</td>
<td>Academic (n=30)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>No.</td>
<td>%</td>
<td>No.</td>
</tr>
<tr>
<td>- Self-leadership training module faces validity (form).</td>
<td>28</td>
<td>93.3</td>
<td>24</td>
</tr>
<tr>
<td>- Determine target participants.</td>
<td>27</td>
<td>90.0</td>
<td>24</td>
</tr>
<tr>
<td>- Identify language of module.</td>
<td>25</td>
<td>83.3</td>
<td>23</td>
</tr>
<tr>
<td>- Suitable duration of module.</td>
<td>27</td>
<td>90.0</td>
<td>23</td>
</tr>
<tr>
<td>- A method of trainees' evaluation was measurable.</td>
<td>23</td>
<td>76.7</td>
<td>21</td>
</tr>
<tr>
<td>- Material of training was suitable and applicable.</td>
<td>22</td>
<td>73.3</td>
<td>18</td>
</tr>
<tr>
<td>- Audio visual aids were suitable and applicable.</td>
<td>23</td>
<td>76.7</td>
<td>25</td>
</tr>
<tr>
<td>- Module goal was clear, scientific and comprehensive.</td>
<td>27</td>
<td>90.0</td>
<td>24</td>
</tr>
<tr>
<td>- Module objectives were clear, scientific and comprehensive.</td>
<td>26</td>
<td>86.7</td>
<td>21</td>
</tr>
<tr>
<td>- Benefits of self-leadership training module.</td>
<td>25</td>
<td>83.3</td>
<td>24</td>
</tr>
</tbody>
</table>
Table 4: Pre-post knowledge scores regarding to the implementation of self-leadership skills training module among participating nurses (n=101)

<table>
<thead>
<tr>
<th>Self-leadership training module knowledge (max=1)</th>
<th>Pre (n=101)</th>
<th>Post (n=101)</th>
<th>Difference</th>
<th>Paired t-test</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean SD</td>
<td>Mean SD</td>
<td>Difference</td>
<td>Mean SD</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self-leadership concepts</td>
<td>0.17 0.17</td>
<td>0.94 0.11</td>
<td>0.77 0.20</td>
<td>39.274</td>
<td>&lt;0.001*</td>
</tr>
<tr>
<td>Self-management concepts</td>
<td>0.21 0.24</td>
<td>0.92 0.18</td>
<td>0.71 0.30</td>
<td>23.723</td>
<td>&lt;0.001*</td>
</tr>
<tr>
<td>Objective of self-leadership</td>
<td>0.18 0.23</td>
<td>0.95 0.13</td>
<td>0.77 0.27</td>
<td>28.265</td>
<td>&lt;0.001*</td>
</tr>
<tr>
<td>Self-leadership characteristics</td>
<td>0.21 0.23</td>
<td>0.93 0.14</td>
<td>0.72 0.26</td>
<td>27.984</td>
<td>&lt;0.001*</td>
</tr>
<tr>
<td>Self-leadership abilities</td>
<td>0.16 0.21</td>
<td>0.95 0.12</td>
<td>0.79 0.23</td>
<td>34.744</td>
<td>&lt;0.001*</td>
</tr>
<tr>
<td>Effective communication skills</td>
<td>0.20 0.26</td>
<td>0.92 0.17</td>
<td>0.73 0.29</td>
<td>24.990</td>
<td>&lt;0.001*</td>
</tr>
<tr>
<td>Time management skill</td>
<td>0.22 0.27</td>
<td>0.94 0.12</td>
<td>0.72 0.28</td>
<td>25.964</td>
<td>&lt;0.001*</td>
</tr>
<tr>
<td>Organizational change</td>
<td>0.22 0.29</td>
<td>0.93 0.13</td>
<td>0.72 0.30</td>
<td>23.733</td>
<td>&lt;0.001*</td>
</tr>
</tbody>
</table>

(SD) Standard deviation  (*) statistically significant at p<0.05

(*) Statistically significant at p<0.05
Table 5: Pre-post scores in the implementation of self-leadership dimensions among nurses participating in the intervention (n=101)

<table>
<thead>
<tr>
<th>Self-leadership Dimensions (max=5)</th>
<th>Pre (n=101)</th>
<th>Post (n=101)</th>
<th>Difference</th>
<th>Paired t-test</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>SD</td>
<td>Mean</td>
<td>SD</td>
<td>Mean</td>
</tr>
<tr>
<td>Self-goal setting</td>
<td>2.64</td>
<td>1.23</td>
<td>4.85</td>
<td>0.44</td>
<td>2.20</td>
</tr>
<tr>
<td>Self-reward</td>
<td>2.67</td>
<td>1.33</td>
<td>4.87</td>
<td>0.48</td>
<td>2.20</td>
</tr>
<tr>
<td>Self-punishment</td>
<td>2.62</td>
<td>1.29</td>
<td>4.88</td>
<td>0.45</td>
<td>2.26</td>
</tr>
<tr>
<td>Self-observation</td>
<td>2.65</td>
<td>1.27</td>
<td>4.86</td>
<td>0.44</td>
<td>2.21</td>
</tr>
<tr>
<td>Self-cueing</td>
<td>2.56</td>
<td>1.29</td>
<td>4.86</td>
<td>0.46</td>
<td>2.29</td>
</tr>
<tr>
<td>Focus thought on natural reward</td>
<td>2.60</td>
<td>1.28</td>
<td>4.84</td>
<td>0.45</td>
<td>2.24</td>
</tr>
<tr>
<td>Self-talk</td>
<td>2.63</td>
<td>1.25</td>
<td>4.88</td>
<td>0.44</td>
<td>2.26</td>
</tr>
<tr>
<td>Mental imagery</td>
<td>2.65</td>
<td>1.24</td>
<td>4.88</td>
<td>0.44</td>
<td>2.23</td>
</tr>
<tr>
<td>Evaluating beliefs &amp; assumptions</td>
<td>2.64</td>
<td>1.26</td>
<td>4.84</td>
<td>0.46</td>
<td>2.20</td>
</tr>
</tbody>
</table>

(SD) Standard deviation (*) statistically significant at p<0.05

4. DISCUSSION

The study findings indicate low baseline scores of self-leadership knowledge and dimensions among nursing participants. The application of the self-leadership skills training module via mobile devices led to significant improvements in their scores, which leads to acceptance of our research hypothesis. The results give support to similar previous studies that demonstrated the positive effect of self-leadership training module on nursing participants’ abilities, the implication of the finding is that self-leadership enables organizations to practice shared or collective leadership since it is believed that to have the capacity to lead people one have the capacity to lead self [27].

The current study revealed that the topic with the highest training priority as expressed by the participants was that of self-leadership. This might reflect a real need to know about the subject given the special importance of leadership skills in nursing, and the participants' feeling of lack of related knowledge. This is quite plausible given that more than half of the sample were diploma nurses whose training curricula have a deficiency in this area. Another explanation is that the term "self-leadership" is new for many and is at the same time appealing curiosity and eagerness to know. This eagerness might explain the considerable improvement in participants' scores after the intervention. Participants may thus have realize the importance of the subject to their career development, which is in congruence with the previous evidence of the positive relation between self-leadership and organizational citizenship behavior, empowerment, job satisfaction, and organizational commitment [28] proactive and adaptive work role performances [29] as well as stress management [30].

According to the present study, the participants' knowledge of self-leadership was very low before implementation of the intervention. This was particularly evident as regards self-leadership abilities and concepts. The findings are expected given the novelty of the subject to them. Meanwhile, the knowledge scores demonstrated significant improvements particularly in these areas as well as for time management and communication skills. This
might be due to the fact that nurses are more acquainted with these skills from their study and daily practice.

Similarly, the present study participants' pre-intervention scores of self-leadership dimensions were low, which is in congruence with their pre-intervention knowledge scores. The implementation of the module led to significant improvements in their scores in all dimensions. This provides evidence of the success of the intervention in enhancing participants' self-leadership skills such as self-observation and self-cueing and other techniques that should help them to assess the importance of their own contribution to the team outcomes and consequently enhance the instrumentality. In agreement with this, [31] emphasized that by continually evaluating and improving leadership skills, health care workers and organizations can develop a work environment that encourages individual growth and trains leaders for future success.

Regarding the electronic methods of application of the self-leadership skills training module, the current study revealed a higher preference to mobile use compared with computer use. This might be due to the fact that mobile phones are easy to carry anywhere at any time, and with no need for power source. Moreover, its use does not need special skills as computers do. Added to this is the widespread ownership and use of mobile phones in our community. However, the use of new technology in learning is a double-edge weapon with advantages and disadvantages. Among the main barriers identified by [32] to use mobile learning by nurse practitioners are the cost, lack of knowledge about technology and software, difficulty to set-up, and technology failures. In the present study, participants had varying levels of technological proficiency prior to the study. Those who had prior experience with mobile technology found it easier to use in learning, and this in itself could be a factor enhancing their acquisition of information. In line with this, reported a positive relationship between self-leadership and informatics competency among nurses [33].

5. CONCLUSION AND RECOMMENDATIONS

The study findings lead to the conclusion that the knowledge and practice of self-leadership are deficient among nursing participants; however, the application of a learning module via mobile devices can effect significant improvements. However, the findings need to be cautiously interpreted due to the limitation that the assessment of the self-learning dimensions depended on self-reporting, which might have some bias. Nonetheless, the study recommends disseminating this training module in other similar settings since improving self-leadership behavioral areas can lead to better personal and professional effectiveness as a leader or follower, as well as the organizational performance. Further research is needed in this area, with long-term follow-up of the effectiveness of the module.

6. ACKNOWLEDGEMENTS

I would like to express my deep thanks to medical director, nursing director and nursing staff in Nile Badrawi Hospital for their participate in study and I would like to thanks, academic staff in Damanhur, Ain Shams, Benha and Mansoura universities and nursing leaders in Dar-El-fouad, Ain Shams university hospitals, and Nasser Institute for their participate in juries. Finally, deep thanks to my dear husband and my lovely sons for their cooperation, encouragement and sustained moral support at the home during work study.
7. REFERENCES


RECOMMENDED REFERENCES


ANNEX 1

TRAINING MODULE
SELF-LEADERSHIP SKILLS

1. Target Participants; all nursing staff agreed to participate for self-leadership mobile learning based on need assessment.

2. Language; is Arabic presentation.

3. Duration of module; the trainees should be achieved 24 hours; one week 4 hours / day for 6 days. At 10 am to 12 pm OR 10pm to 12am daily. Start with Saturday to Thursday.

4. Fees of training; free training module fees.

5. Evaluation of trainees; are written sheet record pre & post-test through video call of mobile.

6. Material of training; video clip presentation upload in mobile.

7. Audio visual aids; Three Audio visual aids used to apply the self-leadership developed training module. Two Samsung Galaxy Tab 2 Dual Core (10.1, and 7.0) packs multimedia, communication and top internet functionality in one highly portable tablet devise. Features include numerous entertainment-oriented Samsung hubs and application and voice call, video group chat, 3MP camera. Powered by latest Android OS and connected to various networks for seamless performance and great all-round usability. Samsung Galaxy Tab 2, Dual Core 10.1 have 32 GB and Samsung Galaxy Tab 2, Dual Core 7.0 have 16 GB. Its have Full HD
(1080p) playback and HD recording, Wi-Fi, and Bluetooth (3.0). Third Audio visual aid used is Nokia 6700 Slide smartphone with Symbian v9.3 operation system. Slider phone in optimal form 5.0 megapixel cameras with autofocus, LED flash and DVD quality video recording, Screen: 2.2 inch 16.777, resolution 240 x 320 pixels, digital camera with a resolution of 5+ M with digital zoom.

8. Goal and objectives

General Goal; the participants will acquire concepts and skills of application of the self-leadership through individual self-directed learning and achieve greater success.

Objectives; by the end of this module participants should be able to

1. Comprehend self-leadership concepts and overview.
2. Understand the self-management concepts.
3. Enumerate self-leadership objectives.
4. Explain the five sequential stages of self-leadership.
5. Distinguish three dimensions of self-leadership.
6. Illustrate the characteristics of self-leadership.
7. Identify self-leadership abilities.
8. Appreciate the usefulness of time management skill.
9. Assist organizational change causes.
10. Comprehend effective communication skill.

9. Benefits of self-leadership training module

1. Becoming more in self-control of your future.
2. Increase earning potential.
3. Develop self-change.
4. Improve goal-setting skills.
5. Understand self-management.
6. Use interpersonal communication skills.
7. Improve time management skills.
10. Develop listening skills.

10. Areas covered under this module

1. Introduction.
2. Self-Leadership concepts and overview.
3. The three dimensions of self-leadership.
5. Self-Leadership characteristics.
6. Communication skills.
7. Time management skills.
8. Organizational change.
11. Summary for the self-leadership training module content

11.1 Introduction

Individuals cannot be reengineered, may be empowered by organizations, and leaders to be innovative or courageous. All change should be self-change, they have to do it themselves, self-change involves emotions and requires helping them to help themselves; remember change requires self-leadership, leaders must look within themselves to decide what they want, what they value, and where they stand or individual choice remains the key to creating high-performance teams; a great team cannot be built with a collection of passive members. Self-leadership based on knowing yourself and seeking reliable counsel. (1)

11.2. Self-Leadership concepts and overview

- **Leadership** is the process of directing the behavior of others toward the accomplishment of some common objectives. "Leadership is influencing people to get things done to a standard and quality above their norm and doing it willingly." (2)

- **Self-leadership** describe as the process of influencing oneself. Self-leadership is defined as the influence people exert over themselves to achieve the self-motivation and self-direction needed to behave in desirable ways. (3) Self-leadership identified as “a process through which individuals control their own behaviour, influencing and leading themselves through the use of specific sets of behavioural and cognitive strategies.” (2) The practice of self-leadership is influenced by our unique thought patterns and actions when combined, become the foundation for which we lead ourselves to desired accomplishments. (1) Self-leadership is a process that occurs within an individual, rather than an external act. It is an expression of who we are as people. (4)

- **Self-Management** is the “degree to which an individual takes responsibility for the managerial aspects of his or her job above and beyond the mere execution of traditional role responsibilities such as working toward pre-set goals and the self-administration of consequences such as rewards and punishments.” (4)

11.3. The three dimensions of self-leadership include

1. **Behavioral focused strategies;** seek to heighten an individual’s self-awareness so that behavior can be managed, especially when confronted with necessary but unpleasant tasks, it are characterized by self-observation, self-goal setting, self-reward, self-punishment, cues, and practice. (3)

   - **Self-observation;** involves obtaining information about why and under what circumstances we use certain behaviors.
   - **Self-goal setting;** focused approach used to change undesirable behaviors.
   - **Self-reward;** involving giving yourself something positive in return for achieving your goals and can be as simple as saying to yourself “great job” or treating yourself to a night out.
   - **Self-punishment;** self-applied consequences of behavior but involves negative rather than positive applied results to decrease undesired behaviors.
**Self-cues**: the strategy of using physical objects or images to remind us of the things that we need to do to achieve our objectives or behave in desirable ways.

2. **Natural reward approach focuses on**: natural reward seeks to utilize one's feelings of competence, self-control, and purpose as motivators to accomplish undesirable, but necessary tasks, the positive aspects of a given task or activity. Natural or intrinsic rewards result when incentives are built into the task itself; such as these, an individual can increase performance levels by focusing on the pleasant aspects of work.

3. **Constructive thought pattern approach**: includes improving your belief system, using positive self-talk, visualization, and using new or improved mental scripts.

- **Visualization**: involving imagining the successful completion of tasks or events before they are physically completed.
- **Evaluating beliefs & assumptions**: propose that beliefs and assumptions should be evaluated, controlled, and changed if the beliefs and assumptions result in negative or non-productive results. An individual's underlying beliefs and assumptions influence how they respond or behave in a given situation and what to think about the world around them.
- **Self-talk**: represented by the statements we tell ourselves either out-loud or in our minds. These statements “serve as a self-fulfilling prophecy, because what you tell yourself everyday usually ends up coming true”.
- **Visualization**: involving imagining the successful completion of tasks or events before they are physically completed.
- **Evaluating beliefs & assumptions**: propose that beliefs and assumptions should be evaluated, controlled, and changed if the beliefs and assumptions result in negative or non-productive results. An individual's underlying beliefs and assumptions influence how they respond or behave in a given situation and what to think about the world around them.

11.4. **Self-Leadership abilities**: individual should be able to effective communication, good motivation, know his self-abilities, adaptability, decision making skill, delegation process, and passion. Moreover, vision, emotional intelligence, empower, trustworthy, risks, focus and follow through.

11.5. **Self-Leadership characteristics**: self-leadership characterized by compassion, calmness, clarity, curiosity, confidence, courage, creativity, and connectedness. Moreover, characteristics of self-leadership effectiveness are comfort with ambiguity, empathy, insight, persistence; frustration tolerance, effective communicators, politically astute, able to use humour, emotional self-control, self-aware.

11.6. **Communication Skills**

**Communication skills** are essential for self-leadership to influence others. Poor communication causes conflict, loss of relationships, productivity and profit. Communication means to create ‘shared meaning and understanding’ and yet most people define communication as ‘getting your point across’.

Communication should be easy, but even when we all speak the same language and are from the same culture—misunderstanding and confusion occurs. In today's global world with people from different cultures with
different first languages all working together the problem has been amplified. It is essential that every company has an effective communication skills training program because communicating effectively takes real skill. Communication Skills Training that equips participants with the mind-set and techniques to create shared meaning and understanding in the workplace as well as teaching how to ‘get your point across.’ It is an effective foundational program for all employees and especially supervisors, sales people, customer service and those who work in teams. Effective communication skills can overcome ‘silo mentality’ or ‘them and us’ thinking. Participants learn a communication model that starts with the premise that people respond not to reality but to their internal mental map of reality. With this realisation we learn to listen more effectively, prepare and deliver our communication more precisely and ask effective questions to check for understanding.

11.7. Time Management Skills

Time management is the act or process of planning and exercising conscious control over the amount of time spent on specific activities, especially to increase effectiveness, efficiency or productivity. Time management may be aided by a range of skills, tools, and techniques used to manage time when accomplishing specific tasks, activities and goals complying with a due date. This set encompasses a wide scope of activities, and these include planning, allocating, setting goals, delegation, analysis of time spent, monitoring, organizing, scheduling, and prioritizing. Initially, time management referred to just business or work activities, but eventually the term broadened to include personal activities as well. A time management system is a designed combination of processes, tools, techniques, and methods. Time management skills often include a time clock and give participants' insights into their workforce, allowing them to see, plan and manage participants' time. Doing so allows participants' to control labour costs and increase productivity. Time management skill automates processes, which eliminates paper work and tedious tasks.

• Self-leadership time management strategies are including :

- Goal setting.
- Goal planning.
- Goal achievement.
- Decision making.
- Problem solving.
- Balanced action plan between professional and personal lives.

11.8 Organizational change

Organizational change is probably one of the few constants organizational members can rely on to happen now and in the future. Logically, those that implement change would hope for a successful outcome that benefits the majority of those involved, as change is an inevitable part of organizational life, it is refers to the making of changes in a planned and managed or systematic fashion. Organizational change is the changing of the way in which the group is organized. This can be something as simple as an organization restructuring itself to some as complex as an imposed organizational change occurring during a takeover. However, these internal changes might have been triggered by events originating outside the organization environment.
Four Basic Change Management Strategies:

1. **Empirical-Rational**: People are rational and will follow their self-interest once it is revealed to them. Change is based on the communication of information and the proffering of incentives.
2. **Normative-Reductive**: People are social beings and will adhere to cultural norms and values. Change is based on redefining and reinterpreting existing norms and values, and developing commitments to new ones.
3. **Power-Coercive**: People are basically compliant and will generally do what they are told or can be made to do. Change is based on the exercise of authority and the imposition of sanctions.
4. **Environmental-Adaptive**: People oppose loss and disruption but they adapt readily to new circumstances. Change is based on building a new organization and gradually transferring people from old one to new one.

REFERENCES

5. The Centre for Self-Leadership, (2010).www.selfleadership.org/glossary-of-terms.html P.O.Box 3969, Oak Park, IL 60303, Email: info@selfleadership.org / SelfLeadership.org


