Abstract

Purpose: This study aimed to investigate the relationships of vision disability and learned resourcefulness to depressive symptoms in persons with visual impairment.

Design: Descriptive research.

Methods: The sample consisted of 74 persons with visual impairments aged above 20 years receiving care at the Eye Clinic in the Outpatient Department, Low Vision Clinic, and Eye Ward at Siriraj Hospital. Data were collected from January to February 2006 by means of interview using the demographic characteristic questionnaire, National Eye Institute Visual Function Questionnaire 25, Self-Control Schedule and The Center for Epidemiologic Studies Depression Scale. The obtained data were analyzed and calculated for descriptive statistics and then entered for a type of multiple regression analysis.

Main findings: The average scores of vision disability, learned resourcefulness and depressive symptoms were 46.84, 155.68 and 15.61 (S.D. = 8.42) respectively. Vision disability and learned resourcefulness could simultaneously explain the variance of the depressive symptoms by 61% (Adjusted R$^2$ = .61; p<.05).

Conclusion and recommendations: The findings of this study indicate that vision disability and learned resourcefulness could explain the variance of depressive symptoms and that vision disability was more influential on depressive symptoms in comparison with learned resourcefulness.

Keywords: visual impairment, vision disability, learned resourcefulness, depressive symptoms
Background and Significance of the Study

Vision disability is a significant loss that can lead to significant physical, psychological and social impacts. Persons with visual impairment usually become more dependent on other people due to losing confidence in their abilities as well as decreasing sense of self-respect and self-pride. They may also perceive themselves as worthless and as a burden to the others. If they cannot adjust to their visual problems, they risk losing motivation and losing awareness of their capabilities and their self-actualization needs. Lack of motivation and lack of response to motivation, as stated in the Maslow's hierarchical theory of motivation, can lead to the sense of despair, hopelessness, worthlessness and depression. The depression may become so severe that it develops into ideas of self-harm which can eventually lead to suicide.

Depressive symptoms are indicators of mental health in response to threats or stress in persons with visual impairment. A number of studies show a medium to high level of depressive symptoms related to vision disability. The relationship is found in patients who have vision disability as a direct result from ophthalmic disorders and in patients who have visual impairment from complications of chronic diseases. Moreover, a comparative study of depressive symptoms in persons with vision disability and in people who were diagnosed with cancer and vascular disease, which are life-threatening illness, found that persons with vision disability had depressive symptoms two times higher than patients in other groups. The signs and symptoms of depression indicate that persons cannot cope well with these problems that currently threaten their being. If the persons do not receive help, these depressive symptoms may become increasingly severe and develop into depressive disorders, which can also negatively impact upon the level of vision disability. Nevertheless, if persons with vision disability can cope with visual loss, which is a crisis situation, the risk of having depressive symptoms will be decreased. In order to cope with threatening situations, persons need to have protective factors. These skills will enable the persons to cope with stress.

Learned resourcefulness in the self-control model or enabling skill in the self-help model refers to the set of skills that a person utilizes when coping with events or threatening situations that cause stress. People who have these skills will cope with stressors by using the skills to minimize or eliminate the stressor. A review of related literature has shown that learned resourcefulness has negative relationship to depressive symptoms. It is also found that learned resourcefulness can reduce depressive symptoms and enhance the ability to live a normal life in patients with depressive disorders. Moreover, the studies in patients with chronic illness such as rheumatoid arthritis, SLE, cancer, etc., also found that learned resourcefulness or enabling skills acts as a mediator between self-help behavior and self-care, dependency, and severity of illness, leading to a person's well-being and quality of life.

Among people with functional impairment, vision disability is a chronic disorder that threatens one's well-being and quality of life, like rheumatoid arthritis, diabetes mellitus, SLE, renal disease and cancer. A number of studies found relationships between depressive symptoms and vision disability; however, there is not a study on learned resourcefulness in persons with visual impairment. In addition, several studies confirm that learned resourcefulness promotes self-help and help seeking behavior, as well as the ability to cope with stress, leading to a person's ability to adjust to various changes that threaten his or her life.

Objectives of the Study

To examine the effects of vision disability and learned resourcefulness on the variation of depressive symptoms in persons with visual impairment.

Methodology

This study is a descriptive correlation research, aiming to examine vision disability and
learned resourcefulness to depressive symptoms in persons with visual impairment.

Sample
The sample of this study consisted of people who were clinically diagnosed as persons with visual impairments and received medical care and rehabilitation at the Eye Clinic in Outpatient Department, Low Vision Clinic, and Eye Ward at Siriraj Hospital. The criteria for eligibility included being above 20 years of age, vision measurement with the Snellen Chart indicating best visual acuity lower than 20/70 and/or visual field less than 30 degrees.

Protection of Subject’s Rights
Siriraj Ethics Committee of research site, The Faculty of Medicine, Siriraj Hospital approved the research project prior to collecting data. The recording of data did not include the participants’ name or address. The obtained data were analyzed as a whole and would be used for academic purpose only.

Participants of this study independently responded to the interview with willingness. Their refusal to give information or to answer any questions would not have any impact on the services they were receiving from the hospital.

Research Instrument
The instrument of this study was an interview questionnaire consisting of four main parts, as detailed below.

Part 1: Demographic characteristic questionnaire, gathering information about gender, age, occupation, income, diagnosis, visual acuity, co-morbidity and duration of visual impairment.

Part 2: National Eye Institute Visual Function Questionnaire (NEI-VFQ 25), developed by the National Eye Institute is a self-report measure, consisting of 25 question items measuring the impacts from visual impairment in 11 domains: general health, general vision, ocular pain, near activities, social functioning, mental health, role difficulties, dependency, driving, color vision and peripheral vision. The NEI-VFQ 25 was translated into Thai by Associate Professor Dr. Pruet Harnutsaha and used at low vision clinic, Ramathibodi Hospital. The response of the questionnaire was given in a 6-level Likert scale format. The scoring criteria were 1 (no difficulty at all) to 6 (stopped doing this for other reasons or not interested in doing this). Scores on the overall NEI-VFQ 25 and each of the subscales can range from 0 to 100, with 100 indicating no disability.

Content validity of the NEI-VFQ 25 was examined by a panel of three experts at the Siriraj Hospital to ensure the appropriateness of language and question order, as well as the relevance and coverage of questions regarding operational terms and conceptual framework of the study. Reliability was reported with Cronbach’s alpha coefficient at .92.13,14

Part 3: Learned resourcefulness(LR) questionnaire or Self Control Schedule(SCS) developed by Rosenbaum (1980) consisted of 36 items, divided into the measurement of learned resourcefulness in four domains; self-control skill, delay immediate gratification, problem-solving skill and self-efficacy. The SCS was translated and edited into Thai by Rungnapa Panittarat with the range of reliability coefficient at .67 – .87.15

The response for each statement was given in a 6-level Likert scale format. Each item was rated on a scale of 1 to 6. The scale represented the possible responses ranging from 1 (this is surely not my character) to 6 (this is my character), with a possible score range of 36-216. The score of learned resourcefulness indicated the level of learned resourcefulness of each respondent. The respondents with higher scores had higher levels of learned resourcefulness.

Part 4: The Center for Epidemiologic Studies Depression Scale, (CES-D) is a gold standard self-report measure of depressive symptomatology constructed to be used with community population. The instrument was translated and back translates for Thai people by Wilai Kuptaniratsaikul and Panom Kateman. Its reliability was .92.17 The questionnaire was composed of 20 statements, divided into four domains of major depressive symptoms:
depressed affect, positive affect, somatic and retarded activity and interpersonal relationship. Each item was rated on a scale of 0 to 3. The scale represented possible responses ranging from 0 (rarely or none of the time) to 3 (most or all of the time), with a possible score range of 0-60.

Reliability of the instruments.

The instruments of this study were examined for reliability with Cronbach's alpha coefficient by trying out the questionnaire with 15 persons with visual impairment, whose characteristics met the inclusion criteria at the Low Vision Clinic, Siriraj Hospital. Reliability of the NEI-VFQ 25, SCS and CES-D were .96, .74 and .87 respectively.

Results

The results are presented in three parts:

Part I: Demographic characteristics of persons with visual impairment.

The numbers of the female (50%) and male subjects (50%) were equal. Almost half of the sample (48.90%) were 41 to 60 years old with the mean age of 48.23 (S.D. = 14.48). Approximately half of the sample (52.70%) were diagnosed with retinal diseases. Out of 74 subjects, 32 or almost half of the sample reported that they had complications or comorbidity (43.20%). Diabetes mellitus was the most common co-morbidity with the frequency of 18.90 percent. Nearly two thirds of the subjects reported that they had been diagnosed as having low vision for 1-5 years (63.50%) and 41.90 percent of the sample had received rehabilitation service. The average duration for receiving rehabilitation services was 10.77 months (S.D. = 18.11). More than two thirds of the sample reported that they received high family support (70.30%). Lastly, only 4.10% of them had had a psychiatric consultation.

Part II: Descriptions of vision disability, learned resourcefulness and depressive symptoms in persons with visual impairment.

<table>
<thead>
<tr>
<th>Variables</th>
<th>Possible Range</th>
<th>Actual Range</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>-Vision disability</td>
<td>0 – 100</td>
<td>8.13 – 94.62</td>
<td>46.84</td>
<td>19.31</td>
</tr>
<tr>
<td>-Learned resourcefulness</td>
<td>36 – 216</td>
<td>119 - 198</td>
<td>155.68</td>
<td>18.16</td>
</tr>
<tr>
<td>-Depressive symptoms</td>
<td>0 – 60</td>
<td>2 – 45</td>
<td>15.61</td>
<td>8.42</td>
</tr>
</tbody>
</table>

From table 1, it can be concluded that the vision disability of the sample in this study was marginally moderate. In other words, they perceived that they were able to perform daily activities at moderate level and rather highly resourceful. Based on the scores of 19 are used as a cut point for depression, the sample in this study had a low level of depressive symptoms.

Part III: The explanation of vision disability and learned resourcefulness to depressive symptoms in persons with visual impairment.

<table>
<thead>
<tr>
<th>Variables</th>
<th>B</th>
<th>SE B</th>
<th>β</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vision disability</td>
<td>-.24</td>
<td>.04</td>
<td>-.55*</td>
</tr>
<tr>
<td>Learned resourcefulness</td>
<td>-.17</td>
<td>.04</td>
<td>-.37*</td>
</tr>
</tbody>
</table>

Adjusted R² = .61 (n = 74, P < .01), * p < .05
Before applying multiple regression statistics, normal distribution, linearity, homoscedasticity and multicollinearity were tested according to assumptions of the statistics used. No sign of violation of the assumption was detected. A multiple regression analysis with enter method was performed to assess the predictive strength of vision disability and learned resourcefulness on depressive symptoms. The findings presented in table 2 demonstrate that the linear combination of vision disability and learned resourcefulness was significantly related to the depressive symptoms, $F_{(2,71)} = 57.50$, $p = .01$. Both vision disability and learned resourcefulness could simultaneously explain the variance of the depressive symptoms at 61% (Adjusted $R^2 = .61$) with the statistical level of .05. The $\beta$ of vision disability and learned resourcefulness was .55 and .37, respectively. The results of $\beta$ showed that vision disability had higher influence on depressive symptoms than learned resourcefulness.

**Discussion**

This study found that vision disability and learned resourcefulness could simultaneously explain the variance of the depressive symptoms by 61 percent (Adjusted $R^2 = .61$) at the statistical level of .05. These standardized coefficients indicated that vision disability is a better predictor of depressive symptoms than learned resourcefulness. It is noteworthy that there was not a study examining the influence of learned resourcefulness on depression in persons with visual impairment as previously mentioned. Therefore, the following discussion on the present study in comparison with previous studies and the effects of learned resourcefulness on depression is based on the available evidence and theory.

The influence of vision disability on depression found in this study was supported by Rovner and Casten's study. Rovner and Casten found that depression is influential on depressive symptoms with the standardized coefficient ($\beta$) of .45. A number of previous studies also found that learned resourcefulness can reduce depressive symptoms and enhance the abilities to live a normal life in patients with depressive disorders. In addition, several studies in patients with chronic illness such as rheumatoid arthritis, SLE, cancer, etc., also found that learned resourcefulness as a mediator between self-help behavior and self care, dependency, and severity of illness, had an impact on a person’s well-being and quality of life. Moreover, Zauszniewski, Chaeweon and Karen found that learned resourcefulness had effects on depressive symptoms in elders.

It could be explained that visual impairment, which is a situational factor in itself, has direct influence on the affected individuals holistically. The impact of visual impairment is somewhat concrete, and affects many aspects of individuals simultaneously, including physical, emotional, social and economic aspects, as well as their daily living. Moreover, the impact constantly affects an individual’s life. The influence of vision disability on depressive symptoms could be in either direct or indirect form. However, only the direct effect was examined in this study. Learned resourcefulness is a personality repertoire or set of behavioral and cognitive skills, beliefs, and self-control behaviors that were measured as individual’s resources in this study. To diminish stress, LR has to work as a process thus taking some time to be active. Furthermore, it is believed that LR might have another kind of relationship with depressive symptoms such as a mediating or moderating effect, which was not tested in this study. However, a number of studies showed that LR can also contain either moderator or mediator variable. The aforementioned reasons, therefore, may explain why vision disability is a better predictor than learned resourcefulness.

In conclusion, the finding of this study indicated that the vision disability and learned resourcefulness could explain the variance of depressive symptoms and that vision disability was more influential on depressive symptoms in comparison with learned resourcefulness.

**Recommendation for nursing practice**

1. Although the finding indicated that the higher vision disability, the more depressive symptoms. Nurses should still be aware of early screening for the prevention of depressive
symptoms in persons with visual impairment.

2. Based on these demographic data, nurses should be aware of the complications of diabetic mellitus such as eye diseases, which are severe complications. Therefore, a protocol for early detection of eye diseases in patients with diabetes mellitus should be developed.

**Recommendations for further studies**

1. There should be an experimental design study to test the effectiveness of the nursing intervention for promoting learned resourcefulness and the impact on the level of depressive symptoms in person with visual impairment.

2. The relationships of visual disability and learned resourcefulness to depressive symptoms should be examined in combination with other variables such as family support, socioeconomic status, physical health, and so on.

**References**


ความสัมพันธ์ของความบกพร่องในการมองเห็นและแหล่งทักษะภายในตนเองต่ออาการซึมเศร้าในผู้ที่สูญเสียการมองเห็น*

ศิรดา เกษรศรี, รุ้งนภา ผาณิตรัตน์, อัจฉราพร สี่หิรัญวงศ์, ภารพันธ์ บำรุงสุข

การศึกษาครั้งนี้มีวัตถุประสงค์เพื่อศึกษาความสัมพันธ์ของความบกพร่องในการมองเห็นและแหล่งทักษะภายในตนเองต่ออาการซึมเศร้าในผู้ที่สูญเสียการมองเห็น

วัตถุประสงค์: การศึกษาครั้งนี้มีวัตถุประสงค์เพื่อศึกษาความสัมพันธ์ของความบกพร่องในการมองเห็นและแหล่งทักษะภายในตนเองต่ออาการซึมเศร้าในผู้ที่สูญเสียการมองเห็น

รูปแบบการวิจัย: การวิจัยเชิงบรรยาย

วิธีดำเนินการวิจัย: กลุ่มตัวอย่างเป็นผู้ที่สูญเสียการมองเห็นและมารับการตรวจและการดูแลสุขภาพรวมทั้งการฟื้นฟูที่หน่วยตรวจโรคจักษุศึกษา โรงพยาบาลจุฬาลงกรณ์ คลินิกสายตา โรงพยาบาลศิริราช และหอพยาบาลผู้ป่วย โรงพยาบาลจุฬาลงกรณ์ โดยมีอายุ 20 ปีขึ้นไป จำนวน 74 คน เก็บข้อมูลโดยการสัมภาษณ์ในระหว่างเดือนมกราคม – กุมภาพันธ์ พ.ศ. 2549 ที่โรงพยาบาลศิริราช

วิธีจัดเก็บข้อมูล: วิธีการจัดเก็บข้อมูล ได้แก่ ข้อมูลส่วนบุคคล ความบกพร่องในการมองเห็น แหล่งทักษะภายในตนเอง และแบบประเมินอาการซึมเศร้า

ผลการวิจัย: ผลการศึกษาพบว่าความบกพร่องในการมองเห็นและแหล่งทักษะภายในตนเองมีผลต่ออาการซึมเศร้า มีค่าเฉลี่ยเท่ากับ 46.84, 155.88 และ 15.61 ตามลำดับ ความบกพร่องในการมองเห็นและแหล่งทักษะภายในตนเองสามารถอธิบายการเกิดอาการซึมเศร้าในผู้ที่สูญเสียการมองเห็นได้ร้อยละ 61 (Adjusted R² = .61, p < .05)

สรุปและข้อเสนอแนะ: ผลการศึกษาพบว่าความบกพร่องในการมองเห็นและแหล่งทักษะภายในตนเองสามารถอธิบายการเกิดอาการซึมเศร้าในผู้ที่สูญเสียการมองเห็นได้ โดยความบกพร่องในการมองเห็นมีอิทธิพลต่อการเกิดอาการซึมเศร้ามากกว่าแหล่งทักษะภายในตนเอง

คำสำคัญ: ความบกพร่องในการมองเห็น, แหล่งทักษะภายในตนเอง, อาการซึมเศร้า, ผู้ที่สูญเสียการมองเห็น

*วิทยานิพนธ์หลักสูตรพยาบาลศาสตรมหาบัณฑิต บัณฑิตวิทยาลัย มหาวิทยาลัยมหิดล