Level of anxiety and anxiousness with adult children based on their relationship to the parents with diagnosed nonspecific chronic disease

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Abstract
The study is aimed at searching and finding the differences in the chosen constructs of respondents: adult children and their parents diagnosed with nonspecific chronic disease, the group of adult children hospitalized with diagnosed chronic disease and the group of adult children with healthy parents. A part of the work deals with relationship of parents and children, characteristics of chronic disease and coping with strenuous life situation. The research sample was created by 88 respondents (N=88). Standardized questionnaire STAI was used for finding the significant changes of anxiety and anxiousness. The paper is aimed at patients diagnosed with chronic disease and the great influence of the disease to the nearest relatives.

Various scientific disciplines such as medicine, social work, psychology ... deal with chronic disease issue, where the impact of this type of disease on patient's life is undeniable. The person has to "fight" the changes and limitations bound with physical, but also mental health. Within treatment period, the patient has to face various obstacles, and due to treatment procedure and frequent medical consultations the person is often limited in social, labour as well as the private life.

The chronic disease course is lengthy, usually does not end with total recovery and irreversible changes are kept in the affected organ, so the chronic disease occurs with all the somatic, and psychological effects. The chronic disease can later come to the phase, called remission, where the disease symptoms are almost negligible. When the disease becomes active again, relapse may occur, symptoms return or there is an acute exacerbation, what leads to acute disease onset. The hallmark of chronic disease is alternation of relapses, remissions and acute exacerbations, leading to the gradual deterioration of affected organ functioning (Kopecká, Kopecky, 2003).
According to the Slovak Alliance for Chronic Diseases, 63% of chronic disease caused deaths (36 million people) in 2008, the most people succumbed to cardiovascular disease (48%) and cancer (21%). According to WHO projections on status quo maintenance in 2030, the number of deaths from chronic diseases reaches 55 million. In Slovakia, in 2008 passed away 53 164 people and of the number was 53% of cardiovascular disease and 23% as a result of cancer (http://www.hpi.sk/cdata/SACHO/medzinarodny_kontext.pdf).

Professional publications, journals, and scientific databases show chronic disease research, mainly focused on examining the patient's life. Researchers have come to a number of interesting facts in this area. Patients involved in various support programs during their treatment, are able to manage their disease better than those who are not involved in the programs (Bonsaksen et al., 2014). The same author examines the construct of self-efficacy in his research, mainly in patients with chronic obesity and chronic obstructive pulmonary disease. From the results comes out that the application of educational program for patients, both groups manifested higher levels of self-efficacy, prior to the beginning of the program, which contributes to the overall positive management of the disease. Other studies point towards the fact, that patients with chronic neurological disease have significantly lower levels of ability to suppress anger (Janowski et al., 2014).

The above mentioned research results show that chronically ill patient has to go through a number of life changes. In order to control the condition and reduce anxiety symptoms with chronic disease patients it is important to change their lifestyle. As a part of this change the social support of family members or close friends is inevitable (Bonsaksen et al., 2012). Chronically ill individual often seeks and finds support with the closest relatives, partner, parents, or own children. Relationship of a child and parents has being already built in the prenatal period, which is called the longest, the most enduring and the most solid relationship, created in the course of our life. According to Lamb (2010), were earlier researches in this area focused mainly on differences of the mother and the father. Recent researches refrain from unilateral perspective and the researchers realized that mothers and fathers significantly and similarly affect their children. Their warmth, parental care, closeness and safety, secure relationship with the child and form the major part of positive relationship performance between them.

When studying the literature, we mainly faced area solving the chronic disease problems of the child and its impact on the parents. We noticed the lack of research or studies in the
opposed problem, how the child copes with a chronic disease of the own parent. As it is known, the relationship of a parent and a child changes throughout the life, but in most cases we still talk of a lasting and stable relationship. It is clear that chronic disease of a parent will differently affect the child in preschool or school age and other the adult child.

For our research we chose a group of adult children. Our aim was to determine the difference of selected constructs between the adult children and their parents who are diagnosed with nonspecific chronic disease, further the adult children whose parents are diagnosed with a chronic disease and are hospitalized, and compare them with the adult children with healthy parents.

The aim of work and research results

The whole research is focused on determination of differences in selected constructs of the group of children and their parents who are diagnosed with nonspecific chronic disease and of the adult children whose parents are not diagnosed with any serious illness.

Within the research we set the following research objectives:

1. Determine the level of anxiety and anxiousness for participants, who have a parent with a chronic disease and compare it with participants who have a parent without any diagnose of chronic disease, that means a healthy parent.

2. Identify the level of anxiety and anxiousness with participants whose parent is chronically ill, compared with participants whose parent is chronically ill and currently hospitalized in a medical facility.

Research material and methodology

The research sample initially had 100 participants, but 12 administered questionnaires could not be included in research because of their incompleteness or improper fulfilment. From total amount of 88 questionnaires, the research sample consisted of 61 women and 27 men, with the average age 35.6. The selection of participants was based on the following criteria: age over 20 with both alive parents. Further was the sample group divided to three groups.

- **S1** – 42 adult children (47.7%), whose parents are healthy,
- **S2** – 24 adult children (27.3%), whose parents are diagnosed with nonspecific chronic disease,
- S3 – 22 adult children (25%), whose parents are diagnosed with nonspecific chronic disease and recently hospitalized at the Teaching Hospital in Trnava or at the Hospital with Policlinics in Nové Mesto nad Váhom at one of the departments (oncology, neurology, internal, long-term ill).

For the research we used STAI (The State - Trail Anxiety Inventory) questionnaire - by Spielberger, Gorsuch, Lushene, Vagg, Jacobs (1983), to measure the level of anxiety and anxiousness, which was developed as a method for anxiety assessment (it can be defined as anxiety, fear or discomfort caused by different situations that are perceived as danger for individuals, and this type of anxiety is considered as temporary), and anxiousness (bound with feelings of tension, fear, restlessness experienced in everyday life. This type is long-lasting and steady for individuals).

Based on the STAI questionnaire collected data, we conducted the descriptive analysis (Table No.1), where we calculated minimum and maximum ranges of the raw scores of individual scales x-1 and x-2, the average sum, and standard deviation.

<table>
<thead>
<tr>
<th>Dimension</th>
<th>N</th>
<th>Min</th>
<th>Max</th>
<th>Average</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>x-1 anxiety</td>
<td>88</td>
<td>27.00</td>
<td>72.00</td>
<td>43.70</td>
<td>10.763</td>
</tr>
<tr>
<td>x-2 anxiousness</td>
<td>88</td>
<td>26.00</td>
<td>67.00</td>
<td>40.70</td>
<td>7.889</td>
</tr>
</tbody>
</table>

**Hypothesis, interpretation and discussion**

We assume that adult children with healthy parents (S1) have lower levels of anxiety, as adult children whose parents are diagnosed with nonspecific chronic disease (S2) and/or are diagnosed with nonspecific chronic illness and hospitalized (S3).

Based on the test of normality and data distribution we decided to choose a non-parametric Kruskal-Walis H-test, because within the groups was not found normal distribution of values. The resulting significance of Kruskal-Walis H-test shows that among the groups exist the significant differences in the level of anxiety ($\chi^2 (2) = 13.181, p = 0.001$). On the basis of shown significant differences in Kruskal-Wallis H-test in the level of anxiety, we further used the Mann-Whitney U-test for finding the differences among S1 and S2, S3 and S1, S2 and S3. The resulting significance was achieved in the Mann-Whitney U-test, where were the results compared to the adjusted significance level by the Bonferroni corrections. The results are shown in Table No.2
<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>Average score</th>
<th>Mann-Whitneyho U-test</th>
<th>Exact significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>S1</td>
<td>42</td>
<td>28.26</td>
<td>264,000</td>
<td>0.003</td>
</tr>
<tr>
<td>S2</td>
<td>24</td>
<td>42.67</td>
<td></td>
<td></td>
</tr>
<tr>
<td>S1</td>
<td>42</td>
<td>27.40</td>
<td>248,000</td>
<td>0.002</td>
</tr>
<tr>
<td>S3</td>
<td>22</td>
<td>42.23</td>
<td></td>
<td></td>
</tr>
<tr>
<td>S2</td>
<td>24</td>
<td>24.19</td>
<td>247,500</td>
<td>0.717</td>
</tr>
<tr>
<td>S3</td>
<td>22</td>
<td>22.75</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Results of Mann-Whitney U-test showed, that there is significant difference in the level of anxiety of a group of adult children whose parents are healthy (S1) and the group of adult children whose parents are diagnosed with nonspecific chronic disease (S2), where S1 has significantly lower level of anxiety, than the group S2 ($U = 284,000$, $p = 0.003$). Furthermore, we demonstrated a significant difference in the anxiety level of the group of adult children whose parents are healthy (S1) and a group of adult children whose parents are chronically ill and currently hospitalized (S3), S1 have lower level of anxiety than S3 ($U = 248,000$ $p = 0.002$). So the hypothesis was confirmed.

From the results can be concluded that the objectives of our work were met, it means we detected a difference in some constructs of adult children with parents diagnosed with a chronic disease and adult children with healthy parents. The assumption is that adult children with healthy parents (S1) have lower levels of anxiety, than the adult children whose parents are diagnosed with nonspecific chronic disease (S2) or diagnosed with nonspecific chronic disease and recently hospitalized (S3), was confirmed, and it is clear from the above mentioned results. We managed to prove that there is a significant difference of the adult children whose parents are healthy and the adult children whose parents are diagnosed with nonspecific chronic disease. There is also a significant difference in the level of anxiety of adult children whose parents are healthy and whose parents are chronically ill and hospitalized at the same time.

The hypothesis was set based on our knowledge. The chronic diseases we considered as difficult life situations and these type of situations are often accompanied by anxiety feelings. Nakonečný (1997) defines anxiety as a negative emotion that a person experiences as a feeling of threat, which has no its specific source and is accompanied by internal tensions. It is a feeling of insecurity and worry about somebody. Chronic disease of a parent is the entire situation that strongly influences the family. Family, especially children, experience a long period of time with unclear end, fear, whether the parent state remains in a long-term...
remission or the relapse can occur. In case of relapses, and necessity of a parent hospitalization, the family is getting into a new situation, when it is necessary to adapt to a new situation, without the presence of the patient at home, divide his tasks and handle household with the patient’s absence. If the child has own family and does not live in the same household with the chronically ill parent, the concern about the state of the parent may be higher and often must be suppressed because of urgent obligations related to job or education of own children. Such a person may experience anxiety, whether from remorse, that is not around their parents or because is unable to help the parent, or facilitate disease.

Researchers have demonstrated higher rates of anxiety in patients with chronic disease. As an example can be mentioned the study, dealing with biomedical and psychological factors of coronary heart disorders and their interconnection. The team of authors in the study focuses, except for the other things, on the level of anxiety of the patients with chronic disease. The result of this study is that people with heart failure scored significantly higher level of anxious and depression survival (Skorodenský al., 2007). Further study proved the presence of anxiety in patients with chronic disease, high level of anxiety occurrence, over 20%, of patients with cancer. The authors of the study also point to the fact that patients utilizing cognitive coping strategies aimed at patient’s problem, reach higher anxiety score levels (40% of patients) (Wu, Li-Min et al., 2013).

Confirmation can also come from the other side. The above mentioned studies demonstrated presence of anxiety in patients with chronic diseases. Within our research, these patients play the role of parents in their everyday life. From various studies come out, that children of parents, who suffer from symptoms of anxiety and anxiety disorders, have a higher probability of anxiety disorders development than the children of parents who have never suffered from this disorder or have never had the symptoms. Furthermore, the studies suggest that parents, usually women with children diagnosed with anxiety disorders, reach higher level of anxiety, in comparison with the parents of children without anxiety symptoms (Perier et al., 2014). Form the above mentioned comes out the possible explanation and confirmation of our hypothesis, that the relationship between parent and child is as strongly linked as the feelings and anxiety states are able to pass from the parent to the child and vice versa.

To sum up we can state, that based on our mentioned results, the adult children with healthy parents have lower anxious level than the adult children of parents with diagnosed nonspecific chronic disease and hospitalized.
Within the comparison of groups of adult children whose parents are diagnosed with a chronic disease and a group of adult children whose parents are chronically ill and hospitalized, we found no significant difference in the level of anxiety (p = 0.002). The group of adult children whose parents are diagnosed with chronic disease reaches, based on the questionnaire, higher level of anxiety, as a group of adult children whose parents are chronically ill and hospitalized.

Conclusion
In conclusion we have to mention, that the results offer a new perspective on chronic disease, but not from the patient viewpoint, but from the perspective of the relatives, their children, who play a very important and significant role in the course of treatment. For general validation of results and demonstration of interconnection of parent chronic illness is required further subsequent examination. Our next aim is to extend the research oriented at detection the differences in experiencing the survival of subjective well-being with adult children whose parents suffer from chronic illness and the adult children who have healthy parents.

Bibliography


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