Research Paper:
Psychological Distress and Social Integration of Elderly People With Physical Disabilities

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**ABSTRACT**

**Background and Objectives:** Poor physical health can affect the performance of everyday life activities and integration into society. The extent of disability or its influence on the life of an individual is related to his/her physical and social environment. This study aimed to examine the psychological existential orientation and social integration of elders with physical disabilities.

**Methods:** Forty-six people with physical disabilities (with Mean±SD age of 73.7±10.6 years and age range of 53-93 years) were examined regarding psychological existential orientation, social integration, and health-related quality of life, using an extensive questionnaire set, including questionnaire on assistive technology, the Brief Symptom Inventory, and health-related quality of life.

**Results:** The results showed that poor physical health can negatively impact the psyche and integration of the sample into society. Also, the subjects indicated a strong desire for more integration into society, however, they did not significantly participate in society in the last two weeks.

**Conclusion:** Poor health and dependence on the environment in daily life can negatively influence the psychological and social situation and also limit social integration.

**Keywords:** Disability, Psychological distress, Society, Social integration

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**Conflict of interest**
The authors declared no conflict of interests.

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Introduction

When we feel that we can determine ourselves, choose ourselves, be able to make a difference or bring about something on our own, be asked, or even refuse something this increases our well-being and the quality of life. Quality of life also includes the ability to develop relationships, experience security, and develop competencies” [1]. People with health problems may have difficulties recognizing the criteria and opportunities in their activities of daily life; these difficulties impact their quality of life.

The Social Security Code Book defines disability as follows: “Persons are disabled if their physical function, mental capacity, or mental health is likely to deviate from the typical age condition for more than six months, and therefore their participation in the life of society is impaired” [2]. The disability can affect the performance of everyday life activities and integration into society.

A disability is defined as a limitation in performing certain tasks that society expects an individual to do. This restricts a person’s interactions with social and physical environmental factors [3, 4]. For example, cultural, social, personal, and health-related factors can play an important role in the issue of disability.

The Women’s Health and Aging Study in Baltimore, Maryland [5] examined the connection between disability and social interaction among 1002 women (aged 65 years and older) and determined the sociodemographic, socioeconomic, and health-related factors influencing this relationship. The result of this study showed that in a typical week, 23% of the tested subjects did not visit anyone outside their home and 17% did not leave their homes. This study discussed whether a physical disability does not necessarily lead to a social disability, also, it is possible to improve social interaction through the more effective management of certain health conditions and the systematic elimination of possible sociocultural barriers.

The study of the psychological situation [6] examined three groups: (1) people who can carry out their daily activities independently, (2) people who depend on help from others in the individual activities of daily life, and (3) people who need comprehensive care. They have examined the question that to what extent people in need of help and care succeed to cope with the health burdens and functional losses. The 300 people in this study were divided into four subgroups (Table 1).

In this study, 20 out of 31 people in need of care and 9 out of 68 people in need of help were found to have excessive demands on their psychological resources. However, in the group of relatively independent people, no person excessively demanded psychological resources. “This result makes it clear how high the psychological demands are for those in need of care” [7].

Moreover, poor physical health can negatively affect the psyche of those concerned. It can be explained from the positive correlation between the physical complaints of the Freiburg personality inventory and the Global Severity Index (GSI) as well as the negative correlation between the physical aspects of the Munich quality of life dimensions list and the GSI [8].
The term integration means the social relationships between an individual and his/her environment in the different areas of life. The degree and type of disability are determined by the social conditions under which a disabled person lives [9]. Regarding disabled people, social integration refers to the embedding of the individuals in daily life activities and the social interaction in their living environment [10]. From the sociological point of view of disability, integration means the commonality of disabled and non-disabled people in all societal and social areas of society. The central element of integration is that regardless of their disability, disabled people should have the same opportunities to participate in all areas of life as non-disabled people. In practice, however, full integration is not always possible and can only be achieved in some areas, according to the individual circumstances and the degree of disability [11].

The concept of disability as the restriction of daily activities in an individual’s life also includes the social aspects of disability. The successful integration of disabled people can only take place as a joint effort of the whole of society, young or old, disabled, or non-disabled people. The goal of integration is the realization of the best possible opportunities for a disabled person to participate in all areas of life, such as neighborhood, school, job, leisure activities, and family, without making the disabled person feel uncomfortable and dissatisfied [11].

However, the extent of disability or its influence on the life of an individual is related to his/her physical and social environment. When you lead your life in the desired environment, participate in society with other people, and are in regular contact with others in training, at work, in the planning of leisure activities, or the circle of family and friends, this can usually increase self-confidence and support successful integration into society.

### Materials and Methods

#### Sample

Forty-six people with physical disabilities participated in this study. The sample consisted of 35 females and 11 males with the Mean±SD age of 73.7±10.6 years and the age range of 53 to 93 years. Of the participants, 11 people (24.4%) reported being in a committed relationship, and 34 people (75.6%) single. Regarding nationality, Germans with 43 participants (93.5%) constituted the highest proportion. All persons residing in a nursing or retirement home were excluded from this study.

#### Procedure

The study data were collected employing an anonymous questionnaire set, including a questionnaire on Assistive Technology (AT-24), the Brief Symptom Inventory (BSI), and health-related quality of life (SF-12). The questionnaires were distributed to different organizations, such as nursing services, communities, and municipal facilities, which were in contact with persons with disabilities. Subjects were briefly informed of the content and process of the examination, referred to the voluntary nature of participation, and allowed to stop their participation at any time. In the case that the respondents were willing to participate in the study, a date was set for the processing of the questionnaires. The study took place in Bochum, Nordrhein-Westfalen, Germany. Besides, the consent to this study was presented by the local ethics committee.

#### Research instruments

**The Brief Symptom Inventory (BSI)**

The BSI [8] is a short form of the SCL-90-R. This questionnaire measures the psychological distress symptom of a person within the last seven days. The BSI includes...
nine scales: “somatization” (SOMA) with seven items, “obsessive-compulsive” (ZWAN) with six items, “ interpersonal sensitivity” (UNSI) with four items, “depression” (DEPR) with six items, “anxiety” (ANGS) with six items, “aggressiveness/hostility” (AGGR) with five items, “phobic anxiety” (PHOB) with five items, “paranoid ideation” (PARA) with five items, and “psychoticism” (PSYC) with five items. Also, BSI includes three global figures of “Global Severity Index” (GSI), “Positive Symptom Distress Index” (PSDI), and “Positive Symptom Total” (PST). With four additional items, BSI consisted of 53 items. The incidence was estimated on a 5-point Likert scale with 0= not at all, 1= a little, 2= rather, 3= strong, and 4= very strong. The internal consistency of the BSI scales for the subjects in the present study ranged from α=0.33 (for PSYC) to α=0.80 (for SOMA and ANGS), with a very high internal consistency of α=0.94 for GSI.

The Assistive Technology (AT-24)

The AT-24 [12] is a self-designed questionnaire for identifying assistive technologies regarding the psychosocial existential orientation. The questionnaire consisted of two parts of A and B. Part A consisted of two scales: “aids” with three items (the use of assistive technology in everyday life of people with disabilities/illnesses) and “factors” with four items (effectiveness of aids in daily life). In addition to these scales, we also used the “satisfaction” subscale with three items (satisfaction with aids). Thus, part A includes 10 items. Besides, part B consisted of four scales: “supportive behavior” with two items (social support of environment), “burdening effect” with one item (self-assessment about disabilities that can be a burden to others, such as family or friends), “burdening behavior” with four items (the individual experience, the assessment of person concerned, and a kind of help from others, which may have a negative impact), and “social integration” with three items (participation in the society). Also, there were two additional subscales: “suffering” with two items (disability/illnesses, identifying) and “activity” with two items (activity limitation). Thus, part B consisted of 14 items and the questionnaire included a total of 24 items. The statements were evaluated based on a 5-point Likert scale with 1 = not at all, 2 = little, 3 = rather, 4 = strong, and 5 = very strong.

The health-related quality of life (SF-12)

The SF-12 [13] is a short form of the SF-36 and includes 12 items. This international self-assessment tool measures the physical and mental health-related quality of life. The SF-12 has the following subcales: “physical functionality” (KÖFU) with two items, “physical role function” (KÖRO) with two items, “pain” (SCHM) with one item, “general health perception” (AGES) with one item, “vitality” (VITA) with one item, “social functionality” (SOFU) with one item, “emotional role function” (EMRO) with two items, and two items from the “mental well-being” subscale of the SF-36. The calculation of the total scales includes the following steps.

- Checking the items for values outside of the value range and reversing the polarity of the four items of “How would you describe your health status in general?” “To what extent have the pains hindered you in performing your everyday activities at home and work in the last four weeks?” “How often have you been calm and composed in the last four weeks?” and “How often have you been full of energy in the last four weeks?”

- Indicator variables are created for the response categories. These take the value 1 if they were selected by the respondents and the value 0 if the answer categories were not ticked. No indicator variable is formed for the answer options with the best state of health. Indicator variables are weighted, and total values are calculated for the physical and psychological sum scale. For this, the regression coefficients, namely the weights for the physical and psychological factors from the American norm sample are used.

- The total scales are transformed into values that are standardized on the American norm sample.

Statistical analysis

All statistical analyses were performed using SPSS. In the process, a 2-sided significance test was performed, and the level of significance was set at P < 0.05. Also, the reliabilities were determined by the Cronbach alpha. Furthermore, the Pearson correlation coefficients were calculated and tested for significance.

Results

Psychological distress symptoms

Regarding the answers to the question AT-17 (Are you stressed because of your physical disability?), the mental and social stress reached the Mean±SD values of 3.5±1.3 and 2.9±1.3, respectively. Besides, the correlative relationships between mental and social stress were analyzed in this study. The correlation analysis showed a significant correlation between the two subitems (r=0.69, P=0.0001).
The correlative relationship between the BSI and SF-12 was analyzed (Table 2) to find out whether the health-related quality of life correlates with the psychological distress. The BSI scales were not significantly correlated with the physical health-related quality of life scale of the SF-12. However, negative and significant correlative relationships were found between some BSI scales and the mental health-related quality of life scale of the SF-12, wherein the relationships with SOMA (r=-0.46, P=0.002) and GSI (r=-0.48; P=0.001) were the strongest. Thereby, psychological well-being in everyday life was associated with poor psychological distress.

Physical disabilities can impact family and environment, which can negatively affect their daily life. Therefore, the participants were also asked if they feel that their physical disability is a burden on their family or environment (Figure 1).

AT-23: Do you feel that your physical disability is a burden on your family or environment?

There was a less financial burden on the family or environment. The perceived emotional burden had the largest mean scores (2.3±1.2), followed by physical burden (2.2±1.3).

**Social integration**

The question AT-14a (How are you experienced by your environment?) was asked the subjects based on the three subitems of “being dependent”, “being a burden”, and “support and solidarity in society”. The mean values for the individual points showed that the subjects believed less to be a burden in the eyes of their environment, but felt more strongly that they were dependent on their environment. The feeling of receiving support and solidarity from society was most pronounced among the respondents (Figure 2).

AT-14a: How are you experienced by your environment?

The item AT-15 (How important is it for you to be integrated into society?) deals with the importance of integration into society. The Mean±SD value of this item reached 4.1±0.9 (Table 3). Although the participants

![Figure 1. The burden on the family and environment](image1)

![Figure 2. Experienced by the environment](image2)
showed a strong desire to be integrated into society, special attention should be paid to their low degree of participation in social relationships outside their homes, in the last two weeks. During this time, 16 and 17 persons reported “no” and “2-4 days” of social contacts outside their homes, respectively. Therefore, disabilities, illnesses, age, and environment influence integration into and participation in society (Table 3).

The item AT-20a (How do you feel when someone helps you?) was asked based on five subitems: “I feel dependent”, “I feel a burden for others”, “I feel supported by society”, “I feel helpless”, and “I don’t feel that I am being taken seriously” (Table 4). The comparison of two mean values of the two items of AT-14a (Figure 2) and AT-20a (Table 4) showed that the values of AT-14a in two subitems of “being dependent” and “being a burden” were lower than the values of AT-20a in two subitems of “feel dependent” and “feel a burden for others”. The points of “support and solidarity in society” in item AT-14a and “feel supported by society” in item AT-20a were rated similarly. It means the feeling of being dependent on someone or the feeling of being a burden for others is most pronounced than being dependent or a burden for others in the eyes of others.

The physical and mental health-related quality of life were analyzed in this study. The Mean±SD values for physical and mental health-related quality of life were 28.4±5.7 and 42.3±11.1, respectively. However, these two scales were not significantly correlated to each other (r=-0.22, P=0.170).

In the present study, the life satisfaction of the subjects was examined based on five subitems: “housing conditions”, “financial situation”, “social environment”, “leisure activities”, and “health”. Noticeably, the subjects stated that they were more satisfied with their housing conditions, financial situation, and social environment than with their leisure activities and health. The life satisfaction of the subjects was also examined considering gender differences. The results showed no significant gender effect on the life satisfaction of the participants (Table 5).

### Table 3. The Importance of social integration in everyday life

<table>
<thead>
<tr>
<th>AT-15: How Important Is It for You to Be Integrated into Society?</th>
<th>Mean±SD</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>4.1±0.9</td>
</tr>
</tbody>
</table>

| AT-16: How many days did you participate in social relationships outside your home in the last two weeks? |
|---|---|---|---|---|---|---|
| Days | None | 1 day | 2-4 | 5-9 | 10-13 | 14 |
| No. of persons | 16 | 4 | 17 | 4 | 1 | 4 |

### Table 4. Evaluation of the received social support

<table>
<thead>
<tr>
<th>AT-20a: How Do You Feel When Someone Helps You? (Mean±SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>I Feel Dependent</td>
</tr>
<tr>
<td>------------------</td>
</tr>
<tr>
<td>2.8±1.3</td>
</tr>
</tbody>
</table>

### Table 5. Mean score of life satisfaction and its subscales based on sex

<table>
<thead>
<tr>
<th>Life Satisfaction</th>
<th>Mean±SD</th>
<th>T*</th>
<th>P</th>
<th>Za</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total</td>
<td>Male</td>
<td>Female</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Housing conditions</td>
<td>4.0±1.0</td>
<td>3.5±1.5</td>
<td>4.1±0.7</td>
<td>-1.294</td>
<td>0.230</td>
</tr>
<tr>
<td>Financial situation</td>
<td>3.5±1.0</td>
<td>3.3±1.1</td>
<td>3.6±1.0</td>
<td>-0.896</td>
<td>0.396</td>
</tr>
<tr>
<td>Social environment</td>
<td>3.5±1.2</td>
<td>3.5±1.2</td>
<td>3.5±1.2</td>
<td>-0.252</td>
<td>0.819</td>
</tr>
<tr>
<td>Leisure activities</td>
<td>2.8±1.2</td>
<td>2.8±1.3</td>
<td>2.7±1.2</td>
<td>0.143</td>
<td>0.887</td>
</tr>
<tr>
<td>Health</td>
<td>2.3±1.1</td>
<td>2.6±1.2</td>
<td>2.2±1.1</td>
<td>-0.973</td>
<td>0.359</td>
</tr>
</tbody>
</table>

*The t test; "The U test
The correlative relationships of the items of housing conditions, financial situation, social environment, and leisure activities with health status were analyzed in this study. The correlation coefficient \( r \) indicates a positive correlation between health and life situations, including “housing conditions” \((r=0.29, P=0.053)\), “financial situation” \((r=0.34, P=0.024)\), “social environment” \((r=0.35, P=0.017)\), and “leisure activities” \((r=0.43, P=0.003)\). The better was the health status, the more satisfaction was with life situation regarding housing conditions, financial situation, social environment, and leisure activities.

**Discussion**

The present results showed that GSI was positively correlated with the physical complaints of the Freiburg Personality Inventory (FPI-R-8) and negatively with the physical aspects of the Munich quality of life dimensions list [8]. Therefore, poor physical health can negatively affect the psyche of those concerned. According to the current study, health status restricts the ability to carry out life activities in daily life and causes dependency on the environment, above all family and care workers. Such circumstances damaged the psychological and social situation of the participants. Moreover, this situation continues to be a burden for the environment and can also have a negative psychological effect on those concerned. For the tested subjects, the physical and mental health-related quality of life is in line with low expectations. Besides, the psychological stress level for the subjects is also entirely high. Concerning social support, the study participants reported the feeling of being dependent on society. Disability can lead to dependency and reduced daily activities. This can evoke psychological and social problems [7].

In the present study, although the subjects reported a strong desire for more integration into society, they did not significantly participate in society. Thus, poor health can affect social integration, when the opportunities to participate are not perceived because of health reasons. As expected, there were major restrictions on the physical quality of life for the study sample. In line with expectations, the degree of satisfaction with the health status was low and significantly and positively correlated with the satisfaction with leisure activities and the social environment. An improved social environment represents a better possible way of spending free time and it means more participation in society. This explains the positive correlation between satisfaction with the social environment and satisfaction with leisure activities. Because of the physical disabilities of the participants in this study, psychological distress was assessed among the tested subjects; this variable was positively related to the social burden, which can also limit social integration. Therefore, the physical environment plays an important role in participation in society and must not be neglected. Physical disability can impact social integration, and in this respect, causes psychological distress. Successful integration is not just a matter of one side, it results from an interaction between individuals and their environment [5, 10, 11]. Health status, physical and social environments, and personality can influence the situation of social integration, and therefore, result in psychological distress.

**Ethical Considerations**

Compliance with ethical guidelines

All ethical principles were considered in this research.

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Authors’ contributions

All authors contributed in preparing of the research.

Conflict of interest

The authors declared no conflict of interests.

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مقاله پژوهشی
فشار روانی و یکپارچگی اجتماعی سالمندان دارای ناتوانی

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چکیده

فسف در سلامت فیزیکی، مالک سر، رویه و یکپارچگی اجتماعی ناتوانی و جامعه را تحت تاثیر قرار می‌دهد و طریقی مشترک دارد. هدف این پژوهش، بررسی تاثیر آگاهی روانی و یکپارچگی اجتماعی در جامعه بر روی وضعیت روانی و یکپارچگی اجتماعی سالمندان ناتوانی بوده است.

نتایج حاکی از این بود که ضعف بحث در سلامت فیزیکی، بحث در رویه و یکپارچگی فرد در جامعه تاثیر مثبتی بر وضعیت روانی و یکپارچگی اجتماعی دارد.

کلیدواژه‌ها: ناتوانی، ضعف الرانی، جامعه، یکپارچگی اجتماعی

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