

Correlation of emotional disorders as manifestations of geriatric syndrome

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Abstract The article presents generalized data on the relationship between the types of old-age adaptation and emotional disorders as manifestations of the geriatric syndrome. The manifestations of aggression and depression are also considered. The purpose of the study is to identify a correlation between emotional disorders and types of adaptation to old age. The study involved 50 subjects without mental disorders aged between 60 to 80. Analysis of the data obtained showed that there is a correlation between the types of old-age adaptation and emotional manifestations in older people which can be considered as an important factor in the subjective feeling of an old person's well-being. Also, aggressive and depressive manifestations are interconnected with destructive styles of social functioning. There is a statistically significant correlation between emotional disturbances and types of old-age adaptation.

Keywords: geriatric syndrome, aggressive manifestations, depression.

1. Introduction

Ageing of the planet's population and an increase in the time to master modern complex professions determine the urgent need to find resources to prolong active life in older age [1].

Interest in gerontology is revealed, first of all, in a large number of clinical and psychological studies [2,3,4]. From the standpoint of this approach involuntional changes are considered in the context of the geriatric syndrome which is understood as pathological conditions affecting both general somatic status of a person and the capabilities of the psyche [5,6].

In terms of psychology ageing is a process marked by a decrease in efficiency of the cognitive sphere [7,8], manifestations of personal rigidity, sharpening of characterological disproportions [9]. At

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the same time, as the researchers note, the prerequisites for intellectual activity, such as the speed of information processing and concentration of attention, suffer to a greater extent while the regulatory functions change to a lesser extent [10].

Obviously, mental deficiency is not only natural but also compulsory during the period of gerontogenesis [11]. The primary signs of mental decline are energy collapse, a change in the motivational sphere, a decrease in interests. A secondary sign of changes in the mental status of an ageing person may be violation of self-esteem [12], there may develop anxiety, depressive conditions, or defensive aggression because of lessened opportunities.

However, philosophical approach suggests considering senility as a special period that has its own role in the life cycle of a person – contemplation of life in its continuity, integration of knowledge and experience of generations. And at this point, a special role belongs to the effective models of adaptation of an elderly person to a new stage of life [13,14,15].

Therefore, the interrelation of psychological and clinical aspects of ageing is of particular interest. Can we believe that physiological changes are superior and they inevitably determine the social models of an ageing person? Or, can some effective adjustment options reduce the manifestations of geriatric syndrome?

The purpose of the study is to identify and assess the relationship of emotional disorders as manifestations of the geriatric syndrome and types of adaptation to old age. Thus, the following phenomena were identified as the main objects of research: depressive conditions, manifestations and forms of aggressiveness, types of adaptation to old age.

2. Materials and Methods

The experimental sample consisted of a group of 50 people aged 60 to 80, 25 men and 25 women. All subjects have intact intelligence. The selection of the subjects took into account the official data on the diagnosis and the results of the assessment of the cognitive sphere using the MMSE method. To determine age tendencies in the studied phenomena the respondents were divided into two age subgroups – from 60 to 70 years old and from 71 to 80 years old.

As the main research methods the following diagnostic tools were applied: the Buss-Durkee Hostility Inventory, the Beck Depression Test, a questionnaire based on the description of the types of old-age adaptation by D.B. Bromley. All methods were selected taking into account intactness of cognitive functions of the respondents. Methods of mathematical statistics were used to identify patterns and relationships. To check statistical significance of differences in the indicators between two age subgroups, the Student's *t*-test was used; to identify the relationship between the indicators of emotional disturbances and types of old-age adaptation Spearman's correlation coefficient was used.

3. Results

Indicators of emotional disorders are shown in Figures 1 and 2 as a percentage of subjects with different levels of aggression, hostility and depression. The indicators of two age subgroups are considered separately. Age subgroup 1 consisting of 60-70 year old respondents, age subgroup 2 consisting of 71-80 year old respondents. For the convenience of placing the material in Figure 1, the following symbols were used: HI – hostility index; AI – aggressiveness index.

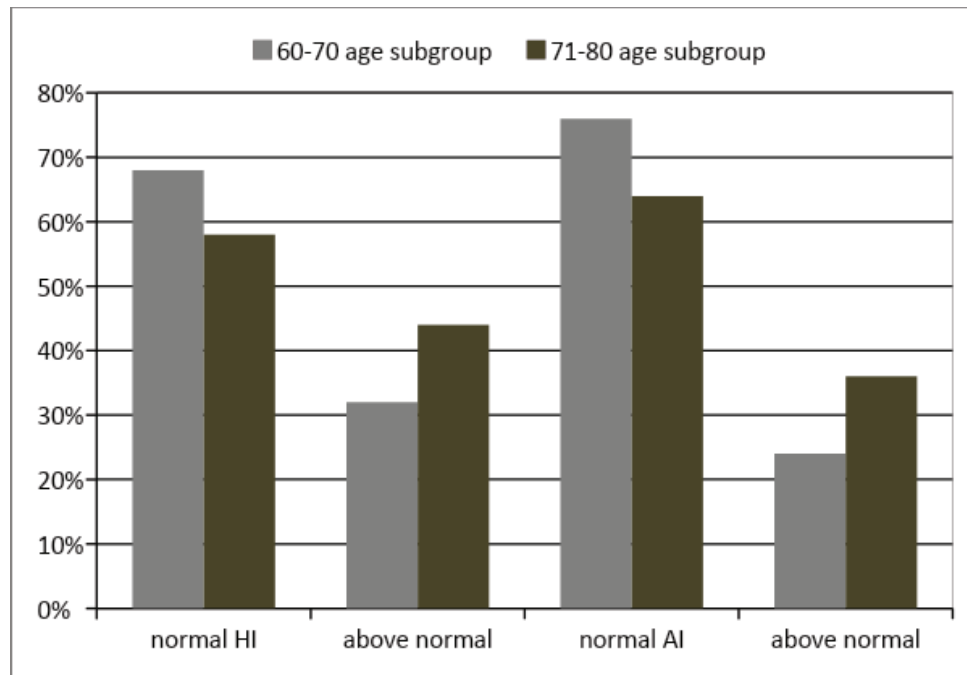
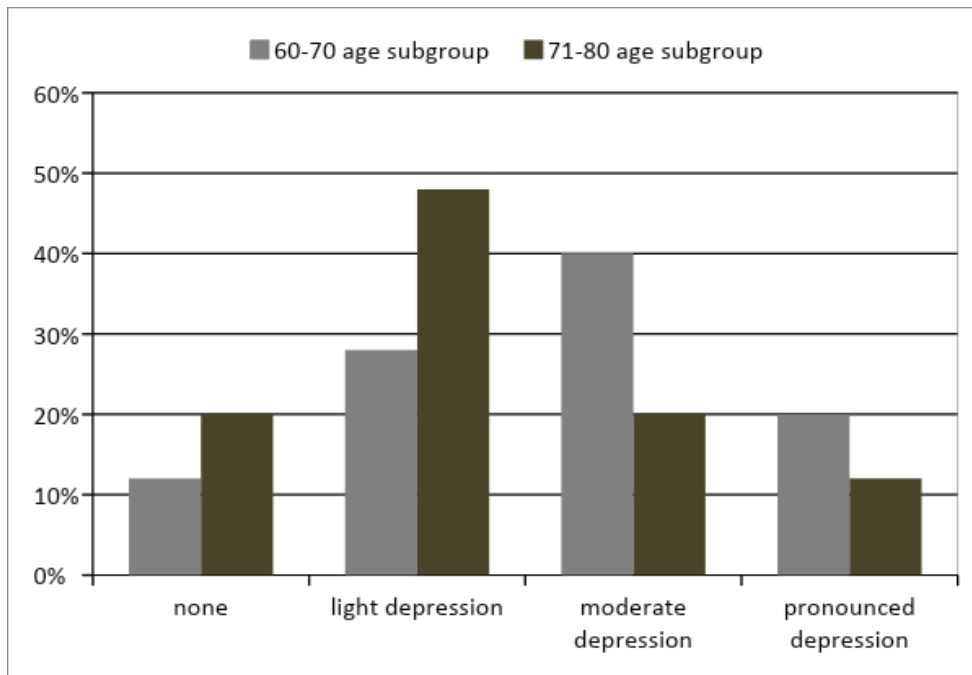


Figure 1. Percentage of subjects with different indicators of the hostility index and the aggressiveness index (the Buss-Durkee Hostility Inventory)

The indicators presented graphically in Figure 1 demonstrate the predominance of a high level of hostility index in the second age subgroup (subjects from 71 to 80 years old). Thus, the index of hostility above normal was found only in 32% of the respondents the age subgroup 1, while in age subgroup 2 44% of the respondents revealed such indicators.

In order to check statistically significant differences between the two age subgroups we used the Student's *t*-test. The data obtained $t = 3.2$ with $p \leq 0.05$ equal to 2.01 and $p \leq 0.01$ equal to 2.68 fall into the zone of significance, therefore, the differences between the indicators of the two age subgroups are statistically significant.

The trend is also proved in the indicators of aggressiveness. It is obvious that the level of aggressiveness is higher in the older age subgroup. Use of the Student's *t*-test for comparative analysis allowed us to obtain the following values: $t = 17.14$ with $p \leq 0.05$ equal to 2.01, and $p \leq 0.01$ equal to 2.68 falls into the zone of significance. Thus, even in this case, it can be argued that differences between the indicators of the aggressiveness index in the two age subgroups are statistically significant.



In general, normal level of hostility and aggressiveness prevails in the sample.

Figure 2. Percentage of subjects with varying degrees of depression (the Beck Depression Test).

It is obvious that the respondents are more likely to have a mild form of depression. In the age subgroup 2 48% demonstrated a mild form of depression. More pronounced depressive symptoms (moderate form of depression) are specific to the age subgroup 1. Such indicators were found in 40% of the respondents aged between 60 to 70. Pronounced form of depression was also found, mainly in the age subgroup 1 (20%).

Judging by the results of the analysis the predominant variant is mild depression which can be characterized as a subdepressive condition.

A comparative analysis of the indicators of the first and second subgroups using the Student's t-test demonstrated the presence of statistically significant differences: $t = 2.3$ with $p \leq 0.05$ equal to 2.01, and $p \leq 0.01$ equal to 2.68 falls into the zone of significance only with $p \leq 0.05$, therefore, the differences obtained can be considered reliable with $p \leq 0.05$.

Figure 3 presents generalized indicators of the types of adaptation to old age identified using the D.B. Bromley questionnaire.

For the convenience of presentation the following abbreviations were used:

C.T. – a constructive type of adaptation to old age;

Dp.T. – a dependent type of adaptation to old age;

Df.T. - a defensive type of adaptation to old age;

H.T. – a hostile type of adaptation to old age;

S.T. – a self-hating (hostile towards oneself) type of adaptation to old age.

According to the data, the constructive type of adaptation to old age is dominant in the sample. Indicators of such an adaptive model were found in 28% of respondents aged 60-70 and 44% of respondents aged 71-80. The second most frequent is the dependent type of adaptation to old age. It prevails in the group of subjects aged 60 to 70 years old (24%).

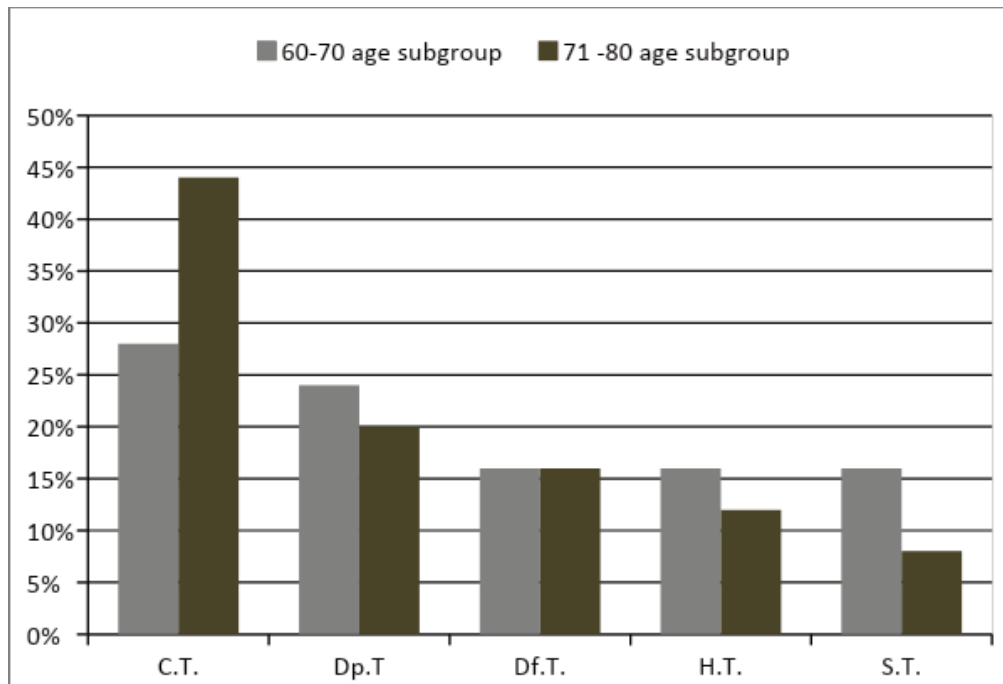


Figure 3. The percentage of subjects with different types of adaptation to old age (D.B. Bromley questionnaire)

Minimal values are found in relation to the hostile to oneself type of adaptation. In the age subgroup 2 less than 10% of respondents demonstrated this type. Also, defensive and hostile types showed low occurrence.

To identify a relationship between emotional disturbances and the type of adaptation to old age a correlational analysis was carried out using the Student's *t*-test. At the same time we introduced a conditional ranking based on the characteristics of the types of old-age adaptation. The types of old-age adaptation were differentiated as more or less harmonious. As a result, a statistically significant relationship was found between the manifestations of emotional disturbances and the types of old-age adaptation.

The correlation coefficient of the type of adaptation to old age and the aggressiveness index has the following value: $r_s = 0.54$ for $N = 50$ with $p_{0.05} = 0.27$, and $p_{0.01} = 0.35$ indicates the significance of the relationship.

The correlation coefficient of the type of adaptation to old age and the aggressiveness index has the following value: $r_s = 0.712$ for $N = 50$ with $p_{0.05} = 0.27$, and $p_{0.01} = 0.35$ indicates the significance of the relationship.

The correlation coefficient of the type of adaptation to old age and the aggressiveness index has the following value: $r_s = 0.715$ for $N = 50$ with $p_{0.05} = 0.27$, and $p_{0.01} = 0.35$ indicates the significance of the relationship.

That is, the more pronounced the emotional disorders are, the less harmonious the type of adaptation to old age is in the respondent.

4. Discussion

Comparison of the data obtained makes it possible to differentiate some trends in the manifestation of emotional disturbances. It turned out that aggression and hostility are more typical for the age period from 71 to 80 years old. In clinical practice such symptoms are often associated with the onset of senile dementia. However, when selecting respondents, their intelligence was assessed with MMSE, therefore, it is possible to exclude the influence of this factor.

It was also found that depression is more pronounced in the group aged 60 to 70 years old. This trend can be viewed in the context of geriatric syndrome. The beginning of involuntal degenerative

changes in the brain, which is typical of this period, are manifested in the deficiency of the first block of the brain and restructuring of the functions of the hypothalamus. Physiological changes are expressed in senile asthenia. Against this background dystonic disorders can take the form of subdepressive manifestations.

On the other hand, this trend can be considered in the context of psychological patterns, namely, as a reflection of the process of gradual adaptation to a new age and social status. That is, a higher level of aggression in the age subgroup between 71 to 80 years old may be the outcome of the completion of the transition period, the inclusion of adaptive mechanisms aimed at searching for resources and protecting personal boundaries.

This assumption is confirmed in the data concerning the types of adaptation to old age. Predominance of the constructive type of adaptational model among the respondents of the second age group indicates the completion of the transition period and the acceptance of a new status by the respondents aged 71 to 80. The constructive type of adaptation is generally characterized by inner balance, a sense of satisfaction with communicative and emotional contacts with people around them. It is supposed to preserve sanity and a sense of humor both in relation to oneself and in relation to other people. Successful adaptation involves finding one's place in the social system taking into account the completion of a professional career, and awareness of the approach of death as a natural and inevitable event.

As already mentioned, the dependent type of adaptation to old age turned out to be quite common, being in the second position in the examined sample. It can also be considered as a harmonious, preserving adaptive resources type where family bonds play a leading role. The characteristic of this type suggests a disproportion between social activity and family functions in favor of the latter. At the same time, dependent type of old-age adaptation helps to save resources for successful management of emotional manifestations and overcome current situational stresses.

Correlation analysis revealed a statistically significant relationship between the manifestations of emotional disorders and destructive types of adaptation to old age.

Defensive positions that disguise helplessness, fear of death, hostility directed at others and oneself have a relationship with aggressive and depressive manifestations.

Conclusions

Normal manifestations of aggression and mild depression predominate in the group of respondents aged 60 to 80 years old.

In the age subgroup between 71 to 80 years old the level of aggression is higher and the level of depression is lower compared to the subgroup aged 60 to 70 years old.

The constructive type of adaptation to old age was predominant in the sample.

There is a statistically significant direct correlation between destructive types of adaptation to old age and emotional disturbances.

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