

- A – opracowanie koncepcji i założeń (preparing concepts)
B – opracowanie metod (formulating methods)
C – przeprowadzenie badań (conducting research)
D – opracowanie wyników (processing results)
E – interpretacja i wnioski (interpretation and conclusions)
F – redakcja ostatecznej wersji (editing the final version)

The role of physiotherapy in terminal care

Rola fizjoterapii w opiece terminalnej

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Abstract

Introduction: Terminal patients require proper care standards and professional team of doctors, physiotherapists, social workers, educators, psychologists and clergy directly involved in mitigating the suffering of a dying person. A physiotherapist as a member of such a team should be focused on sustaining the patient's quality of life until the end at the level relevant to the patient's health state. This quality of life should be perceived integrally as a combination of procedures reducing pain and physical suffering as well as improving physical fitness and mental well-being.

Material and methods: The aim of the research was to define the role of physiotherapy in assessing mental and physical state of terminal patients; to determine the applicability of ADLs, GDS and BDI in diagnosing the validity and usefulness of tiresome physiotherapeutic procedures for terminal patients and to assess the applied tests in predicting terminal patients' survival time. The research was carried out on the turn of 2012 and 2013 in the group of 103 subjects (74 females - 71.8% and 29 males - 28.2%) For the research the following methods were used:

- Activity of Daily Living scale (ADL)-
- Beck Depression Inventory (BDI)
- Geriatric Depression Scale (GDS)
- Questionnaire regarding their willingness to participate in physiotherapeutic procedures.

Results: In the research the range of diagnostic possibilities of the applied scales and tests, correlations between these scales and tests as well as correlations between them and subjects' age and survival time were assessed. Additionally, a questionnaire survey was carried out which assessed the willingness to participate in physiotherapeutic procedures. Strong stress, terminal state of the patient and generalisation of symptoms brought about the fact that only 14.6% of patients declared their willingness to participate in physiotherapeutic procedures.

Conclusions:

1. Implementing physiotherapeutic and psychological diagnostic tests in everyday terminal care makes it easier to assess survival time of terminal patients and significantly improves their life and dying with dignity
2. Proper understanding of the symptoms of dying must serve as a basis for organising adequate activities compliant with the progress of a disease of a terminal patient without disturbing the process of dying.
3. Modern physiotherapy in terminal care should limit the range of physiotherapeutic procedures and physical therapy while increasing psychological care in this population.

Słowa kluczowe:

funcional assesment, paliatic care, physioterapy

Streszczenie

Wstęp: Terminalny stan chorego, zbliżanie się do śmierci wymaga wychowania służb społecznych: lekarzy, fizjoterapeutów, pracowników socjalnych, pedagogów i osoby duchowne do złagodzenia cierpienia starzejącego się bardzo szybko człowieka. Fizjoterapeuta jako członek tego zespołu winien kierować się w swych działaniach troską o utrzymanie odpowiedniej do wieku jakości życia pacjenta, aż po jego koniec. Tą jakość życia należy rozumieć integralnie, jako zabiegi redukujące ból i cierpienie fizyczne, poprawiające sprawność fizyczną i dobrostan psychiczny

Material i metody: Celem przeprowadzonych badań było określenie roli fizjoterapii w ocenie stanu mentalnego i fizycznego pacjentów terminalnych, oraz ocena użyteczności i wiarygodności skal funkcjonalnych ADL, GDS oraz BDI w diagnozowaniu uciążliwości procedur opieki fizjoterapeutycznej nad tą grupą pacjentów. Oceniano także w oparciu o wyniki przeprowadzonych testów czas przeżycia badanych.

Badania zostały przeprowadzone na przełomie roku 2012 i 2013 na grupie 103 pacjentów (74 kobiety – co stanowiło 71.8% badanych oraz 29 mężczyzn – 28.2% badanych). Średnia wieku badanych 85.3 + 6.4 lata. W badaniach wykorzystano następujące testy funkcjonalne:

- Skalę Aktywności Życia Codziennego (ADL)
- skalę depresji Becka (BDI)
- Geriatryczną skalę depresji (GDS)

oraz przeprowadzono wśród badanych ankietę na temat chęci ich uczestnictwa w zabiegach fizjoterapeutycznych

Wyniki: Analizę statystyczną przeprowadzono trójtorowo, ze względu na złożoność problemów badawczych. W badaniach oceniono wartość diagnostyczną zastosowanych skal i testów. Następnie poddano analizie korelację pomiędzy skalami i testami użytymi w badaniu, poddano także analizie korelację pomiędzy nimi a czasem przeżycia pacjentów zbadanych 3 grup. Przeprowadzono również badania kwestionariuszowe oceniające chęć uczestnictwa pacjentów w procedurach fizjoterapeutycznych. Nasilony stres, pogłębiający się stan terminalny chorego oraz uogólnienie objawów chorobowych spowodowały, że jedynie 14,6% pacjentów zadeklarowało chęć uczestnictwa w zabiegach fizjoterapeutycznych.

Wnioski:

1. Wprowadzenie do codziennej praktyki w opiece terminalnej, fizjoterapeutycznych i psychologicznych testów diagnostycznych ułatwia ocenę przeżywalności terminalnie chorego pacjenta, w sposób istotny przyczynia się do poprawy jakości ich życia i godnego umierania.
2. Poprawne odczytywanie oznak umierania, musi stanowić podstawę do organizacji celowych i adekwatnych działań zgodnych z postępowaniem choroby terminalnie chorego bez zaburzania procesu jego umierania.
3. Nowoczesna fizjoterapia w opiece terminalnej powinna ograniczyć zakres zabiegów fizykalnych i kinezyterapię na rzecz opieki psychologicznej nad tą populacją.

Key words: ocena funkcjonalna, opieka paliatywna, fizjoterapia

Introduction

A physiotherapist must establish such a relation with a patient that it does not increase the suffering but brings relief. Therefore, terminal care requires a special type of empathy, not only as far as intuition and openness are concerned but also taking into account the knowledge of psychiatry and psychology directed at understanding the patient. A physiotherapist has to do it so that as much information about the patients as possible is collected in order

to understand them better. Implementing physiotherapeutic and psychological diagnostic tests in everyday terminal care makes it easier to assess survival time of terminal patients and significantly improves their life and dying with dignity.

The aim of the research:

- to define the role of physiotherapy in assessing mental and physical state of terminal patients;
- to determine the applicability of ADLs, GDS and BDI in diagnosing the validity and usefulness of tiresome physiotherapeutic procedures for terminal patients;

- to assess the applied tests in predicting terminal patients' survival time.

Material and methods

The research was carried out on the turn of 2012 and 2013 in the group of 103 subjects (74 females - 71.8% and 29 males - 28.2%) who were residents of Care Home "Kombatant" in Olsztyn, Care Home in Molza and Hospice at the County Hospital in Grudziądz. Average age was 83.5 ± 6.4 years. After 9 months a control study was carried out in order to define the survival period of the examined group. For particular analyses patients were divided into age groups, i.e. the first group - patients below 80 years of age (24 subjects - 23.3%), the second group - below 90 (64 subjects - 62.1%) and the third group - above 90 (15 subjects - 14.6%).

For the research the following methods were used:

- Activity of Daily Living scale (ADL)- [1,2, 4]
- Beck Depression Inventory (BDI) [3,5]
- Geriatric Depression Scale (GDS) [4,5,6]
- Questionnaire regarding their willingness to participate in physiotherapeutic procedures. Statistical analysis was carried out in three stages due to the complexity of research problems. At the first stage the results of scales and tests were compared to the subjects' age, then the correlation between the scales and tests used in the research was analysed while at the last stage the correlation between these tests and scales and survival period of the subjects from the examined group was studied. For the statistical analysis the Statistica 10.0 PL (Statsoft.Inc.2011) software and descriptive statistics of the examined distribution variables were applied.

During the research the following research theses were verified:

- the level of a terminal patient's depression influences the range of physiotherapeutic procedures to be applied;
- the applied scales and tests correlate with each other and may be helpful in defining the range and character of the physiotherapeutic procedures;
- the applied scales and tests correlate with the terminal patient's survival time.

1. Activity of Daily Living scale (ADLs)

In the research a simplified 6-point ADL scale was applied, which assessed the range of help in particular everyday activities such as: 1 - mobility, 2 - sphincter muscle control, 3 - personal hygiene, 4 - getting dressed, 5 - eating meals on one's own, 6 - communication.

Being able to perform the abovementioned activities was marked with 1 point, while not being able to perform them was marked with 0 points. According to this

criterion the patients were classified to the following categories:

- capable individuals collected 5 to 6 points,
- moderately incapable individuals - 3 to 4 points,
- deeply incapable individuals - 0 to 2 points.

2. Beck Depression Inventory (BDI)

Depression in terminal patients increases with their physical and mental suffering, sadness, feeling of guilt, loneliness, disagreement with the situation and fear from the disease and its results. BDI includes 21 activities. No depression, only low mood was recognised at 0-10 points, mild depression at 11-27 points, while severe depression at more than 28 points.

The scale is highly coherent and reliable and is most commonly used in assessing depression in elderly and terminal patients. To compare with the full version of the scale, its shortened version was applied.

3. Geriatric Depression Scale (GDS)

GDS assessed the mood of the subjects within the last 2 weeks. A full version of the scale assessing 30 features was applied (a positive reply to the question in the scale - 1 point). Patients without depression (0-10 points); mild depression (11-20 points); severe depression (> 21 points).

4. Questionnaire regarding their willingness to participate in physiotherapeutic procedures.

During the research the respondents replied to a question regarding their willingness to participate in physiotherapeutic procedures.

Results

In the research the range of diagnostic possibilities of the applied scales and tests, correlations between these scales and tests as well as correlations between them and subjects' age and survival time were assessed. Additionally, a questionnaire survey was carried out which assessed the willingness to participate in physiotherapeutic procedures. Strong stress, terminal state of the patient and generalisation of symptoms brought about the fact that only 14.6% of patients declared their willingness to participate in physiotherapeutic procedures.

These were the subjects who got 3-4 points according to ADL Scale. The results for quality scales are presented in numerical tables with the structure indices (%). Normal distribution of quantity variables was assessed with Shapiro-Wilk W test. In order to describe the distribution of particular variables a measure of central tendency, measures of dispersion and measures of distribution symmetry were applied. Pearson's linear correlation coefficient with linear regression was used to assess correlations between quantity variables. For intergroup

comparisons non-parametric Mann-Whitney U test and Kruskal-Wallis ANOVA test were applied. The level of significance was accepted at $p=0.05$.

1. ADL variable assessment

The range of points of the examined patients in ADL scale.

1 point - 1.94% of patients; 2 points - 65.05%; 3 points 31.07%; 4 points - 1.94%; 5 and 6 points - 0% of patients. The activities which required most help in ADL scale included controlled micturating and defecating – 85% and standing up from bed and moving to an armchair – 76%. These numbers show that the majority of subjects (65%) are physically disabled individuals for whom every form of physical activity may reduce the effects of functional and systemic changes in a body. However, it does not influence the respondents' willingness to participate in active physiotherapy.

2. BDI variable assessment

The range of points in BDI Scale for particular age groups.

The level of depression according to BDI:

- no depression or low mood - 2 subjects (2%),
- mild depression - 43 subjects (41.7%),
- severe depression - 58 subjects (56.3%)

The variable of this scale was also measured in quantity scale. The mean was 28 and the median had one point more with standard deviation at the level of 8. The distribution is bimodal (values 31 and 35 are repeated 7 times in the data set). Minimal value was 7 and maximal value was 44. The distribution is slightly flat and skewed left. The result of Shapiro-Wilk W test contradicts the thesis about normal distribution of the examined variable with the level of significance at $p=0.0100$.

3. GDS variable assessment

The range of the points in GDS for particular age groups was as follows: subjects below 80 years of age - 19 points (SD-4.8); below 90 years of age - 22 points (SD-4.6), above 90 years of age - 23 points (SD-3.2). The level of depression of the subjects according to the scale interpretation proved that all the subjects suffered from depression at different intensity, i.e. 41 patients (38.8%) had mild depression while 62 subjects (68.2%) had severe depression. A growing level of depression which is a symptom of terminal state may lead to more severe disease symptoms and sooner death of a patient.

GSD variable is measured in a quantity scale and therefore, a broader spectrum of statistics characterising this variable is presented. A mean level of GSD was 21.1, a median was at the level of 21, while a mode, i.e. the value most frequently repeated in the described set, was at the level of 22 and appeared 13 times. The minimal number of points in the test was 11, while the

maximal value was 29 points. The dispersion analysis revealed that standard deviation was at the level of 4.6, and thus, the dispersion was low. The skewness was at the level of -0.3, which means that the distribution is slightly flat, while the negative skewness value at the level of -0.7 indicated that the distribution is skewed left. Shapiro-Wilk W test result at the level of $p=0.010$ contradicts the thesis about normal distribution of the examined variable.

4. Survival time variable assessment

The mean survival time in the examined group was 4.29 months with standard deviation at the level of 1.5. The shortest survival time was 1 month since the date of the research, while the longest – 8 months. Shapiro-Wilk W test made it possible to disprove the thesis about the normal distribution of the examined variable at the level of $p=0.0192$.

A mean survival time for the examined group (defined by the points in the scales): ADL - 2.3 points, BDI - 28.0 points, GDS- 21.1points.

5. Correlation between particular tests and scales and subjects' age

The correlation between the terminal patients' age and particular scales and tests applied in the research was assessed. The correlation between ADL scale and patients' age is presented at the dispersion graph (Figure 1). Every point of the graph has a number of subjects provided. Negative correlation was found at the level of $r = -0.1652$.

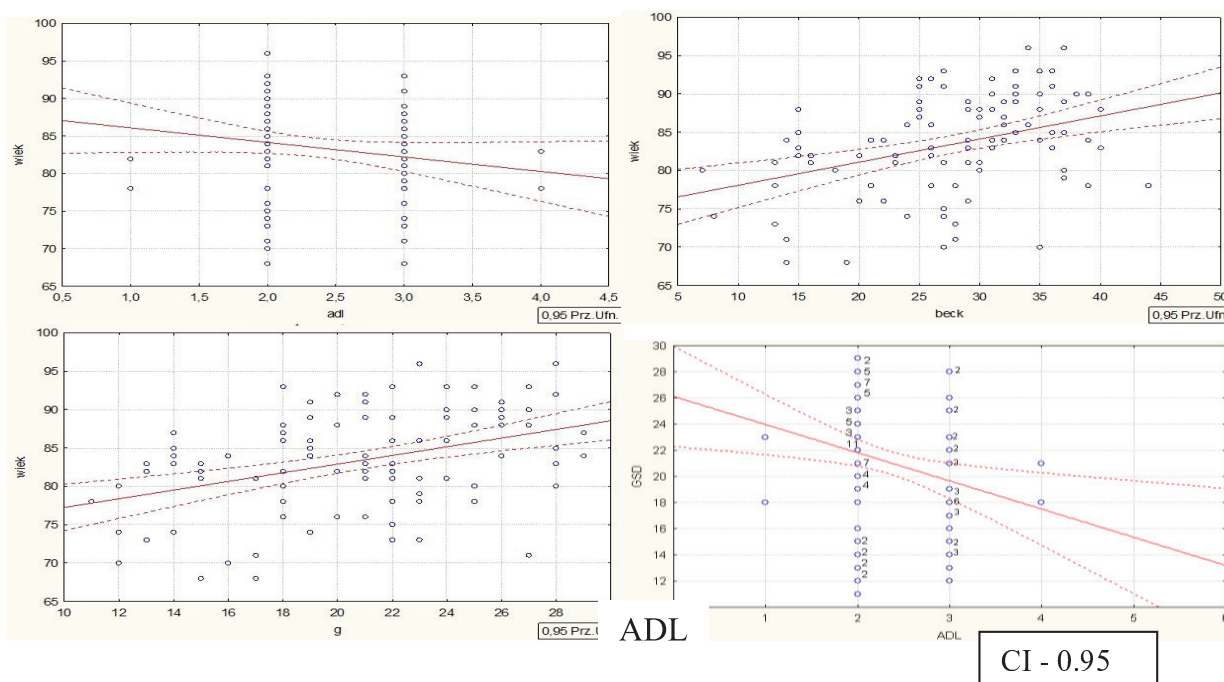
Difficulties with everyday activities occur independently from the patients' age and no significant correlation between the patients' age and everyday life activities was observed. Therefore, it may be assumed that after reaching a certain age biological abilities needed for independent existence disappear and functional disability increases.

Higher correlation between BDI and the patients' age may suggest its higher ability to diagnose mental state of terminal patients. It confirmed correlations described in numerous studies between age and mental depression as well as between age and the necessity to help this group of people in this matter. The correlation between BDI and age is presented at the dispersion graph 1. Positive correlation was found at the level of $r = 0.40506$.

A high level of terminal patients' depression increases with age and somatic changes connected with the developing disease. The results of the test confirmed, even to a higher degree than BDI test result, that the increase in depression with age makes it necessary to provide psychological care to this group of subjects. These tasks may also be performed by physiotherapists, due to the limited possibilities of clinical psychology in Poland.

Tab.1. Descriptive statistics for the BDI, GDS and survival time variables

	Mean	Median	Mode	Frequency of mode	Min	Max	SD	Skewness	Kurtosis
BDI	28.0	29	31 and 35	7	7	44	8.0	-0.5	-0.3
GDS-21.1	21	22	22	13	11	29	4.6	-0.3	-0.7
Survival time	4.2	4	3	19	1	8	1.5	0.2	-0.6



Dispersion graph: ADL vs. age; Age = 88.019 – 1.933 * ADL; Correlation: r = - 0.1652
 Dispersion graph: BDI vs. Age; Age = 75.060 + 0.30152 * BDI; Correlation: r = 0.37584
 The correlation between BDI and age is presented at the dispersion graph (Figure 1). Positive correlation was found at the level of r = 0.37584. CI - 0.95
 Dispersion graph: GDS vs. Age; Age = 71.601 + 0.56470 * GDS; Correlation: r = 0.40506
 Dispersion graph: ADL vs. GDS; GDS = 26.117 – 2.154 * ADL; Correlation: r = - 0.2566

Fig. 1. Graph presenting dispersion between all scales and subjects' age

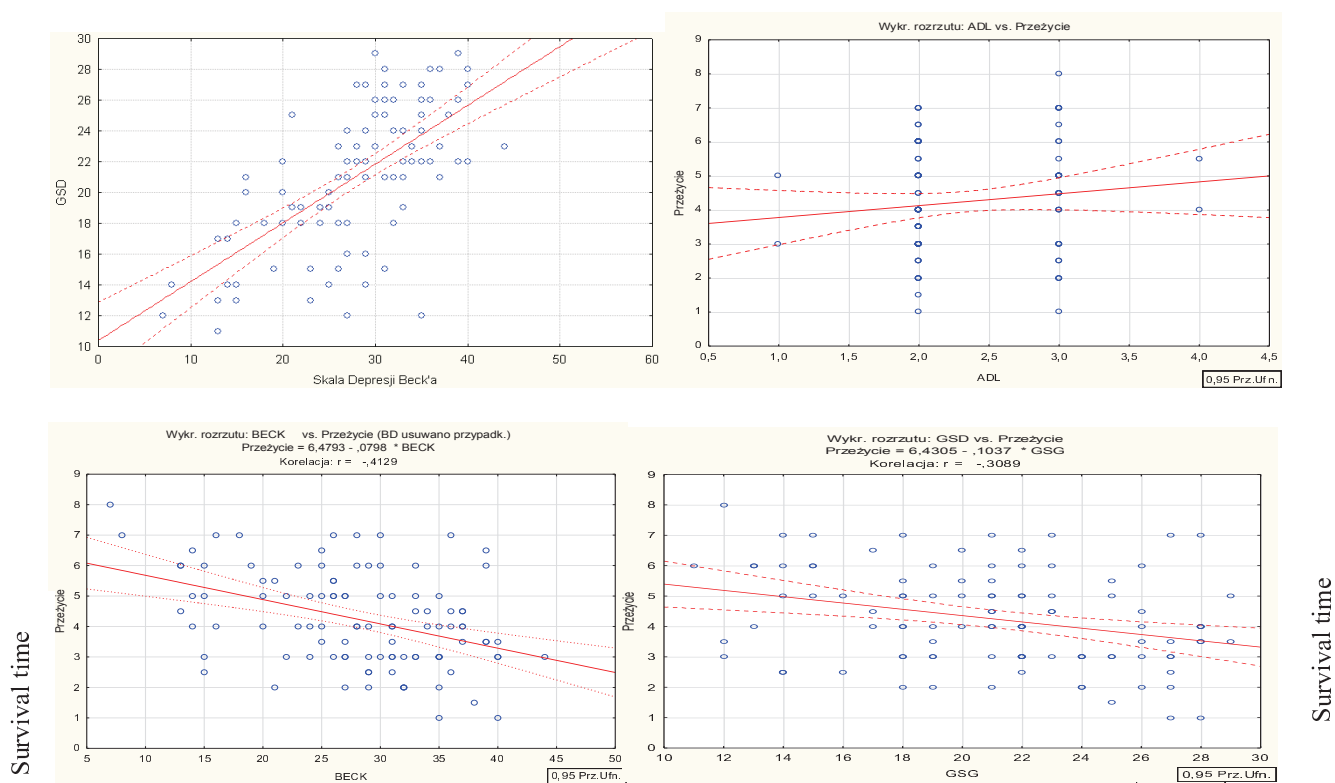
6. Correlations between selected tests and scales Correlation between GDS and ADL

In order to validate the application of the tests in assessing terminal patients, the analysis of the correlation between particular tests and scales was performed.

The correlation between ADL and GDS was assessed and presented in the dispersion graph (Figure 1). Every point of the graph has the number of subjects provided. Negative correlation was found at the level of r =

-0.2566. The more difficulties patients had with everyday activities, the lower the values of ADL and the higher the values of GDS. The correlation between the scales proves their comparability and possibility to be used for terminal patients.

A relatively high correlation was noted between GDS and BDI (correlation coefficient r = 0.6631). It suggests high comparability of both scales (pictured in Figure 2).



Dispersion graph: BDI vs. GDS ; $GDS = 10.397 + 0.38163 * BDI$; Correlation: $r = 0.66317$
 Dispersion graph: BDI vs. survival time; $Survival\ time = 6.4793 - 0.0798 * BDI$;
 Correlation: $r = 0.4129$

Fig. 2. Dispersion between survival time and all scales

Additionally, correlations between particular scales and tests and sometimes survival time of the examined group were assessed.

Due to the previously presented and described qualitative character of ADL variable, the correlation between these variables was not assessed with the use of Pearson's linear correlation coefficient. However, the test for the significance of differences was applied. Due to the fact that the variable measured in ADL scale has only four values (1, 2, 3 and 4 points) and the values 1 and 4 occur only twice in the set of results, comparative analysis includes only two groups: the subjects who had 2 points and those who had 3 points in ADL scale. Subjects with

1 or 4 points were omitted (4 cases). In order to assess the differences a non-parametric Mann-Whitney U test was applied.

The result of the test does not contradict the thesis about no differences between groups ($p=0.2847$). Although the group which received 3 points in ADL scale experienced longer survival time, the differences are slight and statistically insignificant. The number of points in ADL test does not influence survival time of the examined patients. It is confirmed by the list of means. Therefore, better functional activity achieved by e.g. physiotherapeutic procedures does not affect survival time.

Tab. 2. Mann-Whitney U test results

Mean range		Z	p	N significant	
Group with 2 pts	Group with 3 pts			Group with 2 pts	Group with 3 pts
47.9	54.5	-1.1	67	32	

Tab. 3. Statistical analysis of means in particular groups of subjects

Mean - group 2 pts	Mean - group 3 pts	SD - 2 pts	SD - 3 pts
4.1	4.5	1.5	1.8

The result shows that there exists statistically significant negative correlation at the level of $r = -0.4129$. It means that high values for one variable are accompanied by low values for the other one, i.e. higher values for BDI are accompanied by lower values for survival time. Both scales are of quantitative character and therefore, in order to assess the correlation, Pearson's linear correlation coefficient was used.

Tab. 4. Results of correlation test between BDI, GDS and survival time

Variable	r (x,y)	r ²
BDI	-0.41	0.17
GDS	-0.31	0.10

Statistically significant variables ($p=0.0015$) correlate with each other. Similarly to the abovementioned correlations, the correlation is average and negative ($r = -0.3089$).

The comparison of the patients' state with the use of ADLs taking into account their age group.

Due to the fact that there are three age groups, Kruskal-Wallis ANOVA test was applied. It is a non-parametric counterpart of one-factor variance analysis. With the use of this test it was checked whether the number of independent samples come from the same population and whether they differ significantly.

The test provided a statistically insignificant result ($p=0.5808$). Therefore, there are no differences concerning physical fitness between patients from the three compared age groups. The list of means shows that the differences are slight.

The comparison of the patients' state with the use of BDI taking into account their age group.

The obtained result is on the verge of statistical significance ($p=0.0568$). Therefore, the thesis about no differences between the groups concerning depression levels cannot be disproved. However, it is worth noting differences existing between the groups. It is clearly visible that the values obtained in the test increase with the subjects' age, which is confirmed by the list of means.

The comparison of the patients' state with the use of GDS taking into account their age group.

As far as GDS is concerned, the level of $p=0.0239$ contradicts the thesis about no differences between age groups. There occurred statistically significant differences concerning the level of depression of the subjects. On the basis of mean ranges, it is clearly visible that the level of the variable increases with age, similarly to BDI, which is confirmed by the list of means.

In order to determine statistically significant difference between the groups

Multiple Comparison was carried out.

This procedure shows that a statistically significant difference occurred only between the groups "above 90 yrs" and "below 80 yrs", i.e. between the youngest and the oldest patients examined.

Multiple Comparison Test made it possible to accept the thesis about differences between the youngest group (below 80 yrs) and the middle group (80-90 yrs). For this comparison the significance was at the level of $p=0.0117$. The result of the comparison of the youngest and the oldest group was on the verge of statistical significance.

Tab. 5. Comparison of mean results of tests and survival time according to the subjects sex

Variable	Mean – female	Mean – male	SD – female	SD - male
ADL	2.4	2.2	0.6	0.5
BDI	28.0	28.2	8.2	7.5
GDS	21.6	19.9	4.6	4.6
SURVIVAL	4.3	4.2	1.6	1.5

Tab. 6. Results of Kruskal-Wallis test for ADL, BDI, GDS variables

Age group ADL;BDI;GDS	Mean – range	N -significant	H	p
below 80 yrs	53.8; 41.8; 39.1	24; 24; 24	1.1; 8.5; 7.1	ADL- 0.5808
80-90 yrs	52.7; 52.8; 54.2	64; 64; 64		BDI- 0.0568
above 90 yrs	45.9; 65.1; 63.4	15; 15; 15		GDS- 0.0239

Tab. 7. Means and standard deviations for ADL; BDI; GDS variables in age groups

Age group	ADL- mean	SD	BDI-mean	SD	GDS-mean	SD
below 80 yrs	2.4	0.6	24.5	9.2	11.9	4.5
80-90 yrs	2.3	0.5	28.2	7.9	21.5	4.7
above 90 yrs	2.2	0.4	31.7	4.4	23.0	3.2

Tab. 8. Multiple Comparison results

	below 80 yrs R:39.083	80 - 90 yrs R:54.164	above 90 yrs R:63.433
below 80 yrs	---	0.10489	0.039845
80-90 yrs	0.10489	---	0.838436
above 90 yrs	0.039845	0.838436	---

Tab. 9. Multiple Comparison results

	below 80 yrs R: 68.1	80-90 yrs R: 47.4	above 90 yrs R: 45.6
below 80 yrs	---	0.011	0.066
80-90 yrs	0.011	---	1
above 90 yrs	0.066	1	---

Discussion

The studies on the quality of life of terminal patients take into account various aspects concerning health and disease and are aimed at increasing the participation of patients and their families in assessing their life situation. In their research Guse and Masesare [7] revealed that “patients in long-term care chose the need to help others as the most significant component of their life quality despite their own health limitations

In the presented research the level of life activity (ADL) of patients had a crucial meaning for their life and the quality of dying. They revealed a high level of disability (65.5% of all the subjects – 1 and 2 points in ADL scale). A deeper disability correlating with deeper changes in their health brings about the need for more intensive care over terminal patients. Problems with functioning in everyday activities unequivocally influence the level of depression, behaviours and feelings of patients.[1,2,8].

Depression scales, i.e. GDS (assessing the patient’s state within the last two weeks) and BDI (assessing the patient’s state within the last six months), revealed an increase in depressive processes connected with age in the examined group. An average GDS value was 21 points and an average value for BDI was 28 points. Deep depression (21 points and more, according to GDS) was noted in 45% of the respondents, i.e. 46 subjects, while severe depression (28 points and more, according to BDI) was noted in 42% of the respondents (43 subjects).

It may indicate the fact that there was no proper diagnosis and therefore, there was no diagnostic treatment.

Depressive disorders occur at many stages of patients’ life and include numerous factors. The majority of patients experience mainly lower mood, circadian rhythm disturbances, fear and psychomotor retardation. In a clinical image “it may be manifested by poor mimics, sad or strained facial expression, monotonous voice, slowdown or motor anxiety”. These symptoms are of a somatic character and may mean mood disorders. Diagnosing depression must be based on patient examination, contact with patients and a detailed assessment of their mental and psychological state. Due to the fact that depression symptoms may be similar to other diseases, they must be analysed taking into account “*depressive style of thinking*” [8-11]

Diagnosing depression in terminal patients is difficult and therefore, “*the majority of depression cases in suffering patients are not recognised at all*”

Depression is frequently a reaction to disease and disability. Limited activity may often serve as a driving force. Terminal diseases increase anxiety about how a patient will manage in this situation. Negative attitude and attention directed “inside” distance patients from the possibility to use clinical support and their passive attitude weakens reactions useful in dealing with difficult situations. Concentrating on a problem brings a risk of destructive symptoms [9,12-14]

In many researches, Pużyński, Gadecka, Regin [15-17] proves that in 20% of the population of elderly people

depressive states are connected with somatic diseases and changes in social roles. A positive correlation between higher intensity of a somatic disease and vulnerability to depression and its 30% level is slightly lower than this research revealed (45% according to GDS and 42% according to BDI [18]. In this case depression is a stage of accepting terminal state and inevitability of death. Long-lasting depressive states especially in people with serious, incurable diseases may be life-threatening due to the negative attitude to treatment and resignation thoughts. Speck believes that “palliative care should be provided by a multidisciplinary team, since separate people are not able to cope with such duties mentally” [19] Team members support not only a patient but also one another in their work.

Ellershow and Wilkinson [20] believe that ethical problems and communication with patients dominate in palliative care. These authors prepared a guide to dying “Liverpool Integrated Care Pathway for the Dying Patient” compliant with the assumptions of EBM. Kinzbrunner and Policzer and De Walden and Fisher [21-23] also prepared a guide to terminal care making it easier to recognise symptoms of dying, methods of diagnosing a patient’s state properly and therapies applicable in this state.

Apart from somatic, mental and psychological changes, terminal state is characterised by rapid and non-controlled short survival time. It is confirmed by the results of the authors’ own research (survival time - 4.29 months). Problems with performing everyday activities and developing disability do not have to be symptoms of terminal patient’s old age but a quick gradation of somatic symptoms of the body.

Negative correlation between the scales (ADL vs. age $r = -0.1652$) may prove the rightness of the rule “quality over quantity” in terminal care. Dignity in dying means, inter alia, avoiding situations which may unnecessarily prolong the suffering and agony of terminal patients.

However, the correlation between depression scales and patients’ age looks different. High correlations between them ($r = 0.37584$; $r = 0.40506$) confirm the fact that depression increases in terminal states which are inseparably connected with patients’ age. Not treated and not diagnosed depression may develop and lead to a sooner death of a patient.[24,25]

The correlation between GDS and ADL scale was negative ($r = -0.2566$). It confirms the fact that patients with a lower number of points in ADL scale have more intensive depression. Problems with performing everyday activities increase the feeling of fear and threat, which, in turn, leads to increased stress and depression.

A high correlation ($r = 0.66317$) was reached between GDS and BDI. Everyday (existential) depression caused by stress induced by the disease transfers into long-term depression, i.e. a long-term, incurable trauma. Physi-

otherapy in terminal care was accepted only by 14.6% of patients, which indicates that they do not expect such care, but high levels of their depression require detailed diagnosis and broader psychological care which may be provided by physiotherapists.

Conclusions:

1. Implementing physiotherapeutic and psychological diagnostic tests in everyday terminal care makes it easier to assess survival time of terminal patients and significantly improves their life and dying with dignity
2. Proper understanding of the symptoms of dying must serve as a basis for organising adequate activities compliant with the progress of a disease of a terminal patient without disturbing the process of dying.
3. Modern physiotherapy in terminal care should limit the range of physiotherapeutic procedures and physical therapy while increasing psychological care in this population.

References

1. Hindmarch J, Lehfeld H, de Jongh P, Erzigkeit H. The Bayer Activities of Daily Living Scale (B-ADL) Dementia and Geriatric Cognitive Disorders. 1998;9 Suppl. 2:17-24.
2. Katz S, Ford A, Moskowitz R, Jackson B, Jaffe M. Studies of illness in the aged. The Index of ADL: A standardized Measure of Biological and Psychosocial Function. JAMA. 1963;185 (12):914-919.
3. Beck A. Depression: Causes and Treatment. University of Pennsylvania Press. Philadelphia 2006: 123-138.
4. Jongenelis K, Pot A, Eisses A, Gerritsen D, Derknes M, Beekman A, Kluiters H, Ribbe M. Diagnostic accuracy of the original 30-item and shortened versions of the Geriatric Depression Scale in nursing home patients. Inter. Jou Geriatric Psychiatry. 2005; 20:1067-1074.
5. McDowell C, Newell B. Przewodnik po skalach i kwestionariuszach. Oxford University Press. NY 1996: 37-56.
6. Yesavage J, Brink T, Rose T, Lum O, Huang I, Adey M, Leirer V. Opracowanie i validacja Geriatrycznej Skali Depresji. Jou. of Psychiatric. 1983;5:17-25.
7. Guse L, Masasar M. Quality of life and successful aging in long-term care. Health. Nurs 2009;527-539.
8. Dudek D. Zaburzenia depresyjne i jakość życia pacjentów (in polish). Wyd. Uniwersytet Jagielloński. Kraków 2006.
9. Cassel E. The nature of suffering and the goals of medicine. Oxford University Press. NY 1991.
10. Salmon J, Polivka L; “Consumer views of Quality of Life in long term care “Gerontology Center, 1998; London: 34-47.
11. Elias N. „The loneliness of the Dying” Inter. Publishing Group Inc. London 1985.
12. Segal D, Qualls S, Smyer M. Aging and Mental Health Wyd. Wiley 2010.
13. Collana M. Final Journeys: A Practical Guide for Bringing care and comfort at their end of life Batman Books. NY 2008.

14. Sonn U. Longitudinal studies of dependence in daily life activities among elderly persons . *Scand. Jou. of Rehabilitation Medicine. Suppl.* 1996;34:1-35.
15. Pużyński S. Depresja i zaburzenia afektywne.(in polish) Wyd. PZWL Warszawa 2005: 79-96.
16. Gadecka W., Piskorz-Ogórek K., Regin K.J., Kowalski I.M.. Social competence of mental health nurses. *Pol. Ann. Med.* 2015;22(2): 47-51.
17. Regin K.J., Gadecka W, Kowalski P.M., Kowalski I.M., Galkowski T. Generational transfer of psychological resilience. *Pol Ann Med.* doi:10.1016/j.poamed.2016.02.001
18. Katon C, Livingston G. Depression in elderly age. *Wyd. Via Medica Gdańsk* 2003:34-4.
19. Speck P. Teamwork in Palliative Care . Fulfilling or Frustrating. Oxford University Press London 2006.
20. Ellershaw J, Wilkinson S. Care of the dying; Apathway to excellence. Oxford University Press London 2010: 57-78.
21. Kinzbrunner B, Policzer J. End of life Care. A Practical Guide. Mc Graw. Hill. 2011.
22. De Walden D, Gałuszko K. Podstawy opieki paliatywnej. Wyd. PZWL. Warszawa 2006.
23. Fisher B, Specht D. Successful Aging and creativity in later life. *Jou. of Aging Studies.* 1999;(13)4.
24. Gilley J. Intymacy and terminal care. Sage Publications. London. New Delhi 2000:24-37.
25. Salmon P. Psychologia w medycynie. Wyd. GWP Gdańsk 2003.