SUMMARY
The individual kinesitherapeutic approach is increasingly required in rehabilitation practice due to the presence of concomitant diseases, social problems and psycho-emotional characteristics of the patients. Its effectiveness can be assessed by examining the level of satisfaction of patients with total hip arthroplasty with the work of the kinesitherapist.

Purpose: to study and evaluate the effectiveness of the individual kinesitherapeutic approach on patients with total hip arthroplasty.

Material and methods: Material: 60 patients who have undergone operative intervention for total hip replacement at the Orthopaedics and Traumatology Clinic at the University Hospital St. Marina, Varna for the period 2012–2019. The patients are divided into experimental (30 patients with a mean age of 56.17) and control groups (30 patients with a mean age of 55.53). Methods: Sociological method (questionnaire survey): questionnaire for satisfaction with the kinesitherapist’s work on the Likert scale (α-Cronbach 0.823); Statistical method: statistical data grouping, Cronbach’s test, descriptive method, testing of statistical hypotheses, correlation analysis. The data is processed with SPSS v.19.0 for Windows.

Results and discussion: 83.3% of patients with total hip replacement answered that they have received answers to their questions from the kinesitherapist treating them. The patients in the experimental and control groups were equally aware of the need for kinesitherapy in their postoperative recovery period. 100% of the respondents in the control group believed that the kinesitherapist was very interested in kinesitherapy, which takes into account the comorbidities, social environment and psycho-emotional characteristics of the patient.

Conclusion: the application of the individual kinesitherapeutic approach to patients with total hip arthroplasty leads to a faster and fuller functional recovery and to a higher level of satisfaction.

Keywords: satisfaction, kinesitherapy, total hip replacement,
erate a representative sample and provide validity to the results. We obtained a random sample through tests to detect differences in important exogenous indicators. In our study, these are “gender” and “age” - part of the demographic indicators included in the first part of the questionnaire. The patient’s satisfaction with the work of the kinesitherapist as well as the kinesitherapeutic procedures are surveyed by using the five-point Likert scale. The questionnaire includes 12 questions grouped into categories: awareness (questions No.1 and No.5), attitude/communication (questions No.2 and No.3), time (questions No.4 and No.7), physical activity (questions No.8 and No.10), professionalism (questions No.6 and No.11) and benefit/efficiency (questions No.9 and No.12). The questions are clearly stated, concise and comprehensible, which makes it easier for the patients to complete the questionnaire on their own. The fourth question is a control-question to check for accuracy. The five-point Likert scale is used to allow the individual to express how much they agree or disagree with a particular statement: 1) very little, 2) little, 3) undecided, 4) to a great extent, and 5) definitely. Each patient completes the questionnaire after getting clarifications in advance. The Cronbach’s α calculated in the survey is 0.823, with a questionnaire that has a high level of cognitive and selective abilities. The statistical product SPSS v.19.0 for Windows is used for processing the results.

RESULTS

When asked whether “The kinesitherapist answered all the questions about my recovery and expectations”, 83.3% of the participants in the experimental group answered in the affirmative. The respondents’ answers in the control group are similar, 60% of them point out the score of “5”, and the remaining 40% choose “4”. From these statistics, we can conclude that the kinesitherapists have the necessary knowledge and competence to participate professionally in the process of health restoration (fig.1)

Fig. 1. Patients from the experimental and control groups answering the question “The kinesitherapist answered all the questions about my recovery and expectations”

When asked whether “I understand the necessity of kinesitherapy during my postoperative recovery period (fig. 2):”

Fig. 2. Patients from the experimental and control groups answering the question “I understand the necessity of kinesitherapy as a major part of my recovery much better after visiting the specialist”

With the question “Applying an individual approach to their work, the kinesitherapist was also interested if I had any other pains and problems”; we wanted to test the patient’s trust in this specialist. We know that in kinesitherapy, there are also conditions and comorbidities that could impede the maximum use of various methods and means. There are no significant differences in the responses of the two groups. 100% of the respondents from the control group confirmed that the kinesitherapist has been interested and asked about any comorbidities or problems during the procedures. 73.3% of the experimental group answered “to a great extent”, and the rest of the people mark “definitely” (fig. 3):

Fig. 3. Patients from the experimental and control groups answered the question “Applying an individual approach to their work, the kinesitherapist was also interested if I had any other pains and problems”

When asked whether “It was the kinesitherapist who worked with me”, 70% of the experimental group defined the work of the kinesitherapist as essential in their recovery by giving the answer “to a great extent”, and only 3, 33% were “undecided”. “To a great extent”, answer slightly more than half of the respondents in the control group, 40% are “undecided” and 3, 33% say “little”, i.e. in this group, we once
again distinguish a variety of answers. When asked “After the kinesitherapeutic procedures, I have more freedom and confidence in my daily routines”, we noticed a significant difference in the two distributions – left-right asymmetry. 73.3% of the patients with a custom prosthesis report having more freedom “to a great extent”, and 26.7% choose the answer “definitely”. As for the patients in the control group, 53.3% cannot appraise whether they are more independent, and only 3.3% evaluate their physical activity after kinesitherapy with a score of 5 “definitely”. In our view, there are some other factors that elicit different responses from the two groups.

Conclusions from the study:
1. The respondents from the experimental groups have a higher level of education, better financial security and live in a large or regional city, which determines the wider range of awareness and demand for a custom femoral stem as a better alternative for solving their health problem and changing their quality of life.
2. The choice of a conventional femoral stem is related to lower awareness and smaller financial opportunities of the respondents in the control groups.
3. The respondents from the experimental groups assess the importance of the individual kinesitherapeutic approach in the recovery period “to a great extent” (96.7%) and would seek the same kinesitherapist in the case of other health problems or for other patients.
4. The direct contact with the kinesitherapist during the rehabilitation procedures gives greater confidence to the patients from the experimental groups while performing the tasks set in the individual kinesitherapeutic program.

5. Hobbies that require high physical activity in patients from experimental groups are associated with higher expectations for the results of the kinesitherapist’s postoperative work.
6. Regardless of the financial and other resources invested in the treatment, the patients from the experimental groups are satisfied with the achieved results and participate in the therapeutic process with motivation.
7. We observed better results in the early period of control measurements (on the 21st day) in patients from experimental groups in comparison to somatoscopic observations.
8. The kinesitherapeutic approach applied in patients with custom femoral stem is effective and achieves satisfactory results in terms of functional recovery and return to work and hobby.

CONCLUSION
The role of kinesitherapy is fundamental for the complete recovery of patients after hip arthroplasty. Kinesitherapy, with its opportunities and active involvement in the recovery process, improves the physical activity impairment, restores patients’ capacity to perform activities of daily living, work capacity and even practicing physical activities such as sport and hobbies [4, 1]. A great challenge for a kinesitherapist is to achieve good functional results in demanding patients, especially those who do sport, whether active or simply as a hobby. That is why it is necessary to create and carry out an individual kinesitherapeutic program on the basis of accurate kinesiological diagnosis relevant to the particular patient [2].

REFERENCES:
1. Agarwala S, Shetty V, Taywade S, Vijayvargiya M, Bhiraj M. Dual mobility THR: Resolving instability and providing near normal range of movement. J Clin Orthop Trauma. 2020 Aug 28;13:40-45. [PubMed]
2. Erasmus LI, Fourie FF, Van der Merwe JF. Low Dislocation Rates Achieved When Using Dual Mobility Cup Hip Implants for Femur Neck Fractures. SA Orthop J. 2020 May-Jun;19(2):70-73. [Crossref]
3. Nenova G, Mancheva P. Physiotherapy and chronic diseases. LAP Lambert Academic Publishing. 01. 11. 2016. 52 p. [Internet]
4. Nenova G, Mihov K. [Satisfaction of patients with custom hip endoprosthesis from the kinesitherapy–orthopedics cooperation.] [in Bulgarian] General Medicine. 2020; 22(6):13-16. (Abstract) [Internet]
5. Nenova G. [Working capacity and return to the labor market of patients with endoprosthesis.] [in Bulgarian] Health Economics and Management - Steno. 2019; 3(73):22-26.
6. Ryu HG, Roh YJ, Oh KJ, Hwang JH, Kim Y, Cho HW, et al. Dual mobility articulation total hip arthroplasty for displaced neck fracture in elderly with neuromuscular disorder. Injury. 2021 Jun;52(6):1480-1486. [PubMed]
7. Seketto AR, Sikhauli N, van der Jagt DR, Mokete L, Pietrzak JRT. The management of displaced femoral neck fractures: a narrative review. EFort Open Rev. 2021 Feb 1;6(2):139-144. [PubMed]
8. Zagorov M, Mihov K, Dobrilov S, Nenova G. Elevation of the Center of Rotation with the Use of Jumbo Cups in Revision Total Hip Arthroplasty - A Radiographic Study. J of IMAB. 2021 Jan-Mar;27(1):3518-3522. [Crossref]

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Address for correspondence:
Gergana Boncheva Nenova,
Department of Kinesitherapy, Faculty of Public Health, Medical University of Varna, 1, Hristo Smirnenski Str., 9002 Varna, Bulgaria,
E-mail: geri_nenova@yahoo.com,