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## The role of recreation in rehabilitation: a systematic review

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**Abstract.** Study of the role and impact of recreational practices during the period of physical rehabilitation through a systematic analysis of modern approaches, such as: recreational therapy and the method of therapeutic recreation. *Objective.* The study of theoretical approaches to the definition of the terms "leisure" and "recreation" became the basis of this study. *Methods.* Critical analysis of modern scientific literature and systematic review of previous empirical research. *Results.* The conducted complex theoretical research allowed to formulate the following definitions: "leisure" – free time from work and related responsibilities, which a person decides to spend based on their own preferences, emotional state and mood; "recreation" – physical activity of people aimed at improving health, well-being, positive emotions and pleasure, relief from stress, as well as social interactions. In addition, the role of recreation in the rehabilitation process was studied, namely through the use of recreational therapy, which has a positive effect on health, rehabilitation effectiveness and well-being, which is achieved by receiving positive emotions from leisure, entertainment and social interactions. The therapeutic and recreational approach demonstrates the positive impact of physical and emotional activities (leisure) on the effectiveness of rehabilitation, recovery and return of people with injuries, illnesses or disabilities to normal activity, and also promotes a more active lifestyle.

**Роль рекреації в реабілітації: системний огляд**

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**Резюме.** Вивчення ролі та впливу рекреаційних практик протягом періоду фізичної реабілітації шляхом системного аналізу сучасних підходів, таких як рекреаційна терапія та метод терапевтичної рекреації. *Мета.* Дослідження теоретичних підходів до визначення термінів «дозвілля» та «рекреація» стало основою даного дослідження. *Методи.* Критичний аналіз сучасної наукової літератури та систематичний огляд попередніх емпіричних досліджень. *Результати.* Проведене комплексне теоретичне дослідження дало змогу сформулювати такі визначення: «дозвілля» – вільний від роботи та пов'язаних з нею обов'язків час, який людина вирішує провести, виходячи з власних уподобань, емоційного стану та настрою; «рекреація» – фізична активність людей, спрямована на покращення стану здоров'я, рівня добробуту, отримання позитивних емоцій та задоволення, позбавлення від напруження, а також соціальні взаємодії. Крім того, було вивчено роль рекреації у процесі реабілітації, а саме шляхом використання рекреаційної терапії, яка позитивно впливає на стан здоров'я, ефективність реабілітації та

самопочуття, що досягається у разі отримання позитивних емоцій від дозвілля, розваг та соціальних взаємодій. Терапевтично-рекреаційний підхід демонструє позитивний вплив фізичної та емоційної діяльності (дозвілля) на ефективність реабілітації, відновлення та повернення осіб з травмами, хворобами чи вадами до звичного рівня активності, а також сприяє більш активному способу життя.

**Problem statement.** The World health organization (WHO) in their publications expands the area of focus in healthcare system from only medical treatment of illnesses and highlights the essential role of ensuring a patient's involvement in society and interactions within the community [27]. The WHO states that optimal rehabilitation process should include enjoyment that causes positive emotions. This approach is based on the findings that positive emotions help to speed up the recovery process from illness, delay and minimize the risk of disability emerging. Thus, the mentioned approach stimulates the patients' integration in the community, their communication and interaction, promotes continuous enjoyment and improvements in their health and wellbeing while receiving healthcare services [20]. The comprehensive method of treatment that combines emotional and physical components had led to the formation and further development of the recreational therapy (RT) and therapeutic recreation (TR) approach.

**The aim of the paper** is to investigate the variety of meanings of "leisure" and "recreation", to study the role and impact of recreation activities in rehabilitation through broad analysis of the modern approaches such as recreation therapy and therapeutic recreation method.

**Methods.** To reach the aim of the paper the critical analysis of existing literature and systematic review of previous studies were conducted.

**Results and discussion.** In order to understand deeply the meaning of the terms "recreation" and "leisure", the comprehensive analysis of the existing scientific literature was conducted to identify the key features of each concept.

Based on the mentioned definitions, the universal meaning of leisure can be provided as: a free from work and related responsibilities time that an individual decides to spend based on its own preferences, emotional state and mood. At the same time, recreation can be defined as physical activities of individuals that aim at improving health conditions, well-being, receiving positive emotions, relief from tension, enjoyment, usually include social interactions.

In this context in order to study the role of recreation in rehabilitation the recreational therapy (RT) should be studied. RT is known as an approach that provides structured recreational and

life skill activities in order to improve the quality of life, functioning and health conditions of people with disabilities, illnesses or limitations. Moreover, it should be mentioned that RT uses a wide range of activities to develop the physical, cognitive, emotional, social skills of people to ensure their adaptation and interaction within the community [20]. Moreover, the special attention paid to the RT is caused by the essential need of population with disabilities, illnesses or limitations to be able to deal with everyday social, emotional and physical activities and to be able to improve their living standards and their wellbeing [1].

In this context, it should be stated that RT has its background in the philosophical concepts of leisure, health, inclusion and strengths-based practice [20]. Within the RT approach leisure is considered as a mean of promoting health, which includes physical, emotional, social and mental state of an individual [14].

The second important component of RT is inclusion, which is characterized as normalization and mainstreaming. The concept of normalization states that individuals with disabilities and limitations should be afforded and supported the same life conditions and experience within the community, social roles, ability to receive education and be employed as people without disabilities. At the same time, mainstreaming means that education will be provided to individuals with disabilities and limitations in the least restricted conditions, commonly they are placed together with students without disabilities [20]. Thus, the aim of RT is to provide necessary life skills which can ease the process of inclusion into life activities, recreation, communication and leisure.

Moreover, RT is associated with the strengths perspective, which includes leisure, health and inclusion and stands for solution oriented approach. According to this approach the possibilities of successful solving life challenges and self-determination are in focus rather than the limitations that people face with. At the same time, the strengths perspective highlights the importance of recreation-related skills, knowledge and choices while interacting and communicating within the community, reaching treatment and wellness goals [23]. In this context it should be mentioned that people are more motivated to maintain and improve their

health conditions when the rehabilitation process includes leisure activities and enjoyment [25]. Thus, enjoyment and leisure activities are complex experiences that stimulate physiological arousal, as the result leading to improvements in health, wellbeing, life satisfaction and self-determination.

Moreover, emotional state of people with disabilities, limitations and illnesses affects their life satisfactory, wellbeing, health and recovery process as negative emotions lead to depression and self-preoccupation. Extremely negative emotions cause compromised health conditions, emotional, social and physical functions and reduced physical activity level [18].

On the other hand, positive emotions and enjoyment push people to do things beyond their physical ability, lead to greater complexity and self-awareness of people with disabilities, limitations and illnesses. Accordingly, RT tries to encourage people to learn new skills and archive their goals in life and treatment through enjoyable context [20].

At the same time, social fun is included in RT and related to enjoyment, while social fun can be defined as the successful engagement with other people, which brings positive emotions [3].

Additionally, the self-determination theory is common for RT practice, according to the theory, the optimal physical and emotional functioning is determined by the level of satisfaction of basic psychological needs as: competence, autonomy and relatedness [6]. The self-determination theory aims at empowering people with disabilities and limitations to be able to satisfy their essential psychological needs that can be seen in people's interest, engagement and enjoyment.

In general, the application of recreational therapy proved that health and wellbeing are affected by positive emotions received through enjoyment and fun. Moreover, positive emotions promote better health conditions, greater life activities, greater motivation towards self-care and determination, increase social interactions, that can stimulate the stress resistance and strengthen coping capabilities.

Another theory that explains the crucial role of recreation in rehabilitation is therapeutic recreation (TR). Sportsmen and people that are involved in sports and other physical activities tend to change their lifestyle after got injured. Mostly, these changes can be described as a reduction in productive activities and work, an increase in the time spent on recreation, leisure activities and self-care. At the same time, the nature of leisure activities shifts from outdoor to indoor as the injured

individual faces same limitations in doing outdoor activities, which results in the worse quality of life [12].

It should be mentioned, that studies have proved that people's participation in leisure activities, sports and other active forms of leisure have a strong positive impact on life satisfactory, self-esteem, mood state and health [4; 22].

Thus, the main aim of TR is working with patients to picture them realistic leisure options following injury. In order to reach the aim, the pre-injury lifestyle of an individual should be analyzed to develop the appropriate treatment plan of TR, which helps an individual to return to the pre-injury lifestyle, activity modifications, to promote even more active lifestyle. While implementing TR patients can be exposed to their potential opportunities to participate in recreation activities that promote fitness.

Generally, TR includes the following specific types of leisure activities:

1. Leisure education and counseling, namely: discharge planning/resource/equipment funding, personal care, energy conversation, health and wellness, money management, accessibility, advocacy, problem-solving skills, schooling, self-image, stress management, time management, travel, value and benefits etc.

2. Leisure skill work in center, which covers sports, creative expressions, outdoor, aquatics etc.

3. Outing-leisure skills, such as: sports, creative expressions, hunting and camping, aquatics etc.

4. Outing-community, which includes: amusement part, community events, entertainment venues, museum/botanical garden, park, theater/movie, tours etc.

5. Social activity: games, movies, performance, social gathering, peer visit etc. [12].

In this context, the pioneer and comprehensive study should be mentioned. The study was conducted based on data on TR in rehabilitation process of approximately 1400 patients over 2,5 years. Their results show that social events such as holiday meals, parties, concerts, visits, social interactions among patients and families provide the opportunity to develop the problem solving skills, brainstorming, stimulate confidence building and self-esteem. All mentioned provide additional value and healing advantages to patients in recovery from injuries period [12].

As well it should be stated that the TR and participating in leisure activities can be limited by physical disabilities and decreased motor functions of injured patients, however these limitations can

be eliminated with the use of assistive devices, namely: mouth sticks, voice-activated software, touch screens, e-book readers etc.

Moreover, the various studies were made to evaluate the effect of recreation activities on the rehabilitation of patients with different illnesses. Thus, gaming technologies, video games-based tasks, video treatment improve the dynamic balance of patients with acquired brain injury [13]. At the same time, Saposnik et al. [24] and Yavuzer et al. [29] concluded in their studies that virtual reality gaming technologies provide safe and feasible conditions to help the rehabilitation process and motor recovery of patients after stroke.

It should be mention, that traditionally sedentary screen time was associated with such issues as obesity, some negative health outcomes (premature death) and low level of physical activities [17]. But, currently, “active video games” are becoming popular, such games require body movements, which encourage patients to physical activities.

Also, patients with chronic non-malignant pain and patients experiencing antepartum hospitalization have shown an increase in their feeling of power, a reduction in perception of pain, depression and disability after introducing the music they enjoy as a therapy in their rehabilitation routine [2; 26].

Additionally, some studies proved the positive impact of dancing on balance and locomotion of patients with Parkinson’s disease [16]. The easy rider wheelchair biking contributes to the treatment of depression in older adults through psychosocial interventions [11].

Besides, leisure educational activities have led to an increase in the level of participation in leisure activities, improving satisfaction with leisure and eliminating depression in patients with stroke [7].

Thus, having studied two main approaches on the role of recreation in the rehabilitation process, recovery and lifestyle.

### Conclusions

As the result of the comprehensive analysis of the existing definitions of “leisure” and “recreation”, the following approaches were suggested: “leisure” can be described as a free from work and related responsibilities time that an individual decides to spend based on its own preferences, emotional state and mood; “recreation” can be defined as physical activities of individuals that aim at improving health conditions, well-being, receiving positive emotions, relief from tension, enjoyment, usually include social interactions.

According to the recreational therapy, health conditions, effectiveness of rehabilitation and well-being are affected by positive emotions received through leisure activities, enjoyment and fun, that are the core principles of the therapy. Also, positive emotions stimulate greater life activities, greater motivation towards self-care and determination, increase social interactions, that can stimulate the stress resistance and strengthen coping capabilities.

The key principle of the therapeutic recreation is working with patients to show them realistic life activities and leisure options, expand their physical and emotional activities following their injury or other illnesses, disabilities. To benefit from this approach, the normal lifestyle of an individual should be analyzed to develop the appropriate treatment plan of therapeutic recreation, which helps an individual to return to its everyday lifestyle, activity modifications and to promote even more active lifestyle.

### References

1. Anderson LS, Heyne LA. Flourishing through leisure: An ecological extension of the leisure and well being model in therapeutic recreation strengths based practice. *Therapeutic Recreation Journal*. 2012; 56(2):129-152.
2. Bauer CL, Victorson D, Rosenbloom S, Barocas J, Silver RK. Alleviating distress during antepartum hospitalization: a randomized controlled trial of music and recreation therapy. *Journal of women’s health*. 2010; 19: 523-531.
3. Broach E, Dattilo J, McKenney A. Effects of Aquatic Therapy on Perceived Fun or Enjoyment Experiences of Participants with Multiple Sclerosis. *Therapeutic Recreation Journal*, 2007; 41: 179-191.
4. Buchholz A, Martin Ginis K, Bray S, Craven B, Hicks A, Hayes K et al. Greater daily leisure time physical activity is associated with lower chronic disease risk in adults with spinal cord injury. *Applied physiology, nutrition, and metabolism*. 2009; 34(4): 640-647.
5. Cushman G, Laidler A. *Recreation, Leisure and Social Policy*. N.Z.: Dept. of Parks, Recreation and Tourism, Lincoln University; Wellington: Dept. of Recreation and Leisure Studies, Victoria University of Wellington. 1990.
6. Deci E, Ryan R. (Eds.). *Handbook of self-determination research*. Rochester, NY: University of Rochester Press. 2002.
7. Desrosiers J, Noreau L, Rochette A, Carboneau H, Fontaine L, Viscogliosi C, Bravo G. Effect of a home leisure education program after stroke: a randomized controlled trial. *Archives of physical medicine and rehabilitation*. 2007; 88, 1095-1100.
8. Donnelly P, Coakley JJ, Laidlaw Foundation. *The role of recreation in promoting social inclusion*. Toronto: Laidlaw Foundation. 2002.
9. Edginton CR, DeGraaf DG, Dieser RB, Edginton SR. (2006). *Leisure and life satisfaction foundation perspectives*. New York, NY: McGraw-Hill. 2006.
10. Edginton CR, Dieser RB, Lankford SV, Kowalski CL. *Recreation and Leisure Programming: A 21st Century Perspective*. Sagamore Publishing. 2018.
11. Fitzsimmons S. Easy rider wheelchair biking. A nursingrecreation therapy clinical trial for the treatment of depression. *Journal of gerontological nursing*. 2001. 27: 14-23.
12. Gassaway J, Dijkers M, Riders C, Edens K, Cahow C, & Joyce, J. The SCIRehab project: treatment time spent in SCI rehabilitation. *Therapeutic recreation treatment time during inpatient rehabilitation. The journal of spinal cord medicine*. (2011); 34(2): 176–185. <https://doi.org/10.1179/107902611X12971826988138>

13. Gil-Gómez JA, Lloréns R, Alcañiz M, Colomer C. Effectiveness of a Wii balance board-based system (eBaViR) for balance rehabilitation: a pilot randomized clinical trial in patients with acquired brain injury. *Journal of neuroengineering and rehabilitation*. 2011;8:30.
14. Godbey GC, Caldwell LL, Floyd M & Payne L. Contributions of leisure studies and recreation and park management research to the active living agenda. *American Journal of Preventive Medicine*. 2005; 28: 150-158.
15. Gulam A. Recreation- Need and importance in modern society. *International Journal of Physiology, Nutrition and Physical Education*. 2016; 1(2): 157-160.
16. Hackney M E, Earhart G M. Effects of dance on movement control in Parkinson's disease: a comparison of Argentine tango and American ballroom. *Journal of rehabilitation medicine*. 2009; 41(6): 475-481. DOI: <https://doi.org/10.2340/16501977-0362>
17. Kamioka H, Tsutani K, Yamada M, Park H, Okuizumi H, Honda T, Okada S, Park SJ, Kitayuguchi J, Handa S, Mutoh Y. Effectiveness of rehabilitation based on recreational activities: A systematic review. *World Journal of Meta-Analysis*. 2013; 1(1); 27-46. DOI: <https://dx.doi.org/10.13105/wjma.v1.i1.27>
18. Lyubomirsky S, Sheldon KM, & Schkade D. Pursuing happiness: The Architecture of sustainable change. *Review of General Psychology*. 2005; 9: 111-131.
19. Macquarie Dictionary. Retrieved from: <https://www.macquarie-dictionary.com.au/>
20. McKenney A, Ashton C, Broach E. Recreational therapy: a model for a human service profession that transcends language, culture, and geography. *Humanities and Social Sciences Review*. 2012. 01(02): 455-464.
21. McLean DD, Hurd AR. *Kraus' recreation and leisure in modern society*. Sudbury, MA: Jones & Bartlett Learning. 2012.
22. McVeigh S, Hitzig S, Craven B. Influence of sport participation on community integration and quality of life: a comparison between sport participants and non-sport participants with spinal cord injury. *The journal of spinal cord medicine*. 2009; 32(2): 115-124.
23. Saleebey D. (Ed.) *The strengths perspective in social work practice* (5th ed.). Boston: Allyn & Bacon. 2009.
24. Saposnik G, Mamdani M, Bayley M, Thorpe K E, Hall J, Cohen L G, Teasell R, EVREST Steering Committee, & EVREST Study Group for the Stroke Outcome Research Canada Working Group. Effectiveness of Virtual Reality Exercises in Stroke Rehabilitation (EVREST): rationale, design, and protocol of a pilot randomized clinical trial assessing the Wii gaming system. *International journal of stroke: official journal of the International Stroke Society*. 2010; 5(1), 47-51. <https://doi.org/10.1111/j.1747-4949.2009.00404.x>
25. Seligman M E P. *Authentic happiness*. New York: Simon & Schuster 2002.
26. Siedliecki SL, Good M. Effect of music on power, pain, depression and disability. *Journal of advanced nursing*. 2006; 54: 553-562.
27. The World health organization. Retrieved from: [https://www.who.int/health-topics/rehabilitation#tab=tab\\_1](https://www.who.int/health-topics/rehabilitation#tab=tab_1)
28. Tribe J. (2011). *The economics of recreation, leisure, and tourism*. Oxford, England: Elsevier.
29. Yavuzer G, Senel A, Atay MB, Stam HJ. "Playstation eyetoy games" improve upper extremity-related motor functioning in subacute stroke: a randomized controlled clinical trial. *European journal of physical and rehabilitation medicine*. 2008; 44, 237-244.

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