

REVIEW / PRACA POGLĄDOWA

Anna Polak-Szabela¹, Katarzyna Porzych¹, Martyna Porzych², Kajetan Hadzik², Kornelia Kędziora-Kornatowska¹

**DYNAMICS OF CHANGES IN THE MENTAL SPHERE
OF MAN IN LATE ADULTHOOD**

**DYNAMIKA ZMIAN ZACHODZĄCYCH W SFERZE PSYCHICZNEJ CZŁOWIEKA
W OKRESIE PÓŹNEJ DOROSŁOŚCI**

¹Department and Clinic of Geriatrics of the Nicolaus Copernicus University in Toruń
Collegium Medicum in Bydgoszcz

²students Collegium Medicum in Bydgoszcz

S u m m a r y

Life-span psychology assumes that development is multidimensional and multidirectional process that lasts throughout life, from birth until death. The cycle of this process includes both progression and regressive changes. Changes in cognitive functioning appearing in the elderly are the result of transformations occurring in the nervous system. This leads to a reduction in psychomotor skills, memory processes, learning as well as changes in thinking, emotions

and motivation. Older people, however, do not lose the ability to participate in the intellectual life. The decrease in efficiency does not occur simultaneously in all directions nor equally. Due to the body's compensatory abilities, new intellectual capabilities may occur in older people. Mental training, especially cultivated throughout life, including old age, is of great importance for maintaining cognitive performance in the elderly.

S t r e s z c z e n i e

Psychologia life-span zakłada, że rozwój jest procesem wielowymiarowym i wielokierunkowym, który trwa przez całe życie, od momentu narodzin, aż do śmierci. W trakcie tego procesu zachodzi zarówno progresja, jak i zmiany wsteczne. Pojawiające się w wieku podeszłym zmiany w funkcjonowaniu poznawczym, są konsekwencją przeobrażeń zachodzących w układzie nerwowym. Dochodzi do obniżenia zdolności psychomotorycznych, procesów zapamiętywania, uczenia się, a także zmian w zakresie myślenia,

emocji oraz motywacji. Osoby starsze nie tracą jednak zdolności do uczestniczenia w życiu intelektualnym. Spadek sprawności nie następuje jednocześnie we wszystkich kierunkach i w jednakowym stopniu. Dzięki kompensacyjnym zdolnościom organizmu, mogą pojawiać się u starszych osób nowe możliwości intelektualne. Duże znaczenie dla podtrzymania sprawności poznawczych osób w starszym wieku ma trening umysłowy, zwłaszcza uprawiany przez całe życie ze starością włącznie.

Key words: old adulthood, life-span, psychological changes
Słowa kluczowe: późna dorosłość, life-span, zmiany psychologiczne

Already in ancient times the importance of a holistic approach to human therapy was stressed. This is confirmed by the words of one of the most prominent precursors of modern medicine Hippocrates of Kos "You need to treat not only the body but also the soul of the patient" [1].

In recent decades, the number of the elderly increases rapidly. Development of gerontology and its medical branch - geriatrics, known as the "medicine of old age", contributes to it. One of the basic assumptions of geriatrics is a holistic approach to the patient. In practice, this translates into actions of an

interdisciplinary therapeutic team. A growing number of older people, entails a number of practical problems faced by various social organizations. This also results in an increased interest in the psychology of the elderly [2].

Including research on aging into human developmental psychology had its beginning in the late 60s and 70s of the twentieth century. Until then, development was perceived as a process of permanent, one-way and irreversible changes of progressive nature, which run according to calendar age.

The turning point was the first Conference of Psychologists *Life-Span*, which took place in Mont Chateau Lodge in West Virginia in 1969. The newly created life-span orientation has revised the definition of development and processed the subject of scientific research. The focus of psychologists' interest was turned into issues of human development from conception until death as well as changes taking place in the psychological sphere of an adult with regard to old age. To distinguish the new trend from the earlier view on development, a new paradigm of psychology was described as "the psychology of development throughout life". The last stage of life, which is incorporated into the psychology of human development, is the period of old age, also known as the period of late adulthood [3, 4, 5].

Signs of aging noticeable in the mental sphere are determined by phenomena forming human personality. In the elderly, changes in the psychomotor skills, memory, learning, thinking and problem solving, emotion and motivation can be noted [6].

Because the psychological manifestations of aging superimposed on the shaped personality of an adult, general, clear features and characteristics should not be assigned to the old age but to the old age of a particular person. Changes in the functioning occur in a specific and unique to each individual.

Looking at individual cognitive skills of older people it can be seen that they have specific features and regularity. The studies show that majority of mental functions deteriorate in old age. One of the most noticeable changes is much worse short-term memory functioning. Long-term memory is sometimes regarded as inviolable, and even better than during the person's youth. As a rule, however, both types of memory are weakening. Older people have difficulty remembering things as well as finding new, effective ways of processing information. Possibility of direct memory retrieval is also reduced due to the greater

susceptibility to distracting stimuli. It is difficult to recall, i.e. to search and retrieve information from memory storage as well as blocking inhibition of irrelevant material. Older people achieve better results in the recognition of the contents previously known than remembering. There were no apparent differences between young and old people about the content of autobiographical memory. It should be emphasized that quality of memory in old age largely depends on its practice in earlier periods of life.

In the learning process of older people factors such as aptitude, motivation, training throughout life and health play a significant role. The material prepared for storing should be administered slowly and repeated several times. Ideally, if it is compact and simple. The elderly, in contrast to the young, find it more difficult to acquire learning material divided into parts, with interruptions during exercises, because their learning process can easily be disrupted. The elderly usually encode information in a poorer and less complex way than young people - hence they find it more difficult to remember. However, they are able to use mnemonics (techniques to facilitate remembering) offered to them during the exercises. Multimodal presentation of the material is a very helpful strategy as it presents the material in various ways so that it can be received by as many sensory channels.

It should be taken into account that the aging of the organism to a certain extent interferes with the processes of attention. Studies have shown deteriorating of elderly's selectivity (the ability to record a specific range of available incentives) and the ability to concentrate attention (time maintaining to keep the same object in the attention's centre). It manifests itself in rapid fatigue and making mistakes. The reaction time in older people is extended. For example, in an octogenarian the speed of an impulse along the nerve is about 15% slower than thirty year old people. Apparently, this can be seen when solving new tasks. Consequently, the so-called 'reflexes' (the starting point of a given activity) in older people will be delayed. In contrast, lengthening the response time does not occur in the case of very well-learned tasks such as typing or driving, and in the daily activities performed automatically [7, 8, 9].

In the elderly age intellectual functioning can be significantly impaired. In the process of aging innate intelligence (fluid), responsible for information processing and forming the basis to acquire new skills, is reduced. On the other hand, intelligence acquired in

the course of education and the accumulation of experience (crystallized) tends to increase or maintain at a constant level throughout the period adult life.

Studies show that exercises in the range of intellectual effectiveness and emotional sphere prevent negative changes in the operation of fluid intelligence. For example, P. Baltes and S. Willis (1984) [XIV] demonstrated in their research that intellectual abilities training has a positive effect on the improvement of test results. Even people above 70 years of age, after training, achieved results similar to or higher than the results of younger people. These studies are evidence of considerable intellectual capacity in the elderly, hidden in a latent form. Changes in the sphere of intellectual processes do not occur equally in all people. Persons mentally active throughout life show only a slight decrease in intellectual capacity. There are many factors that can modify the image of changes deficit in the sphere of human intellectual processes. They are: level of education, nature of activity, type of addressed problems, type of personality, level of aspiration and type of life goals [7, 10, 11].

It should be also noted a very valuable, yet characteristic, feature of an older person's intelligence is wisdom that generally speaking, is reflected by life experience and understanding of the world through these experiences. Its influence can be seen in the spheres of intellectual activity, which are an expression of individualization of development. It requires long-term training. In a narrower sense wisdom is the ability to formulate equitable, practical judgments in important, though uncertain, difficult-to-resolve issues of life. Wisdom of the elderly can be attributed to the following characteristics: knowledge, connoisseurship, paying attention to context, accurate judgment on important human moments. Knowledge, in which wisdom of seniors is expressed is of factual-procedural nature (refers to the important issues and life tasks and procedures to solve them) as well as of evaluative nature (by the help of which one can accurately recognize and assess the significance of the various dilemmas of life) [8, 12].

The results of the research conducted since the 1970's suggest that adults use different problem-solving strategies than the youth. First and foremost, they approach ambiguous social situations or situations interpretation of which depends on life experience in a different way. When considering this type of problem situations, the elderly present so-called 'post-formal thinking', which is characterized by the admission of

more than one correct solution, acceptance of contradictions and ambiguities, and taking into account the barriers and realities of life. According Labouvie-Vief (1985) [13], post-formal thinking combines logic and emotions which enables older people to cope in everyday life more effectively [13, 14].

Various changes in the sphere of emotional functioning can be also noted in the elderly. They may relate to the range of moods and feelings. General emotionality and emotional reactivity are weakened. An elderly person does not show his feelings so clearly, as younger people do i.e. he neither blushes nor gets pale – this is called "vegetative stiffness". However, a piece of bad news, although accepted in such a 'stiff' way, is far more dangerous for an older person than for a young man. In addition, older people tend to have anger attacks far less frequently, reveals less aggression and more seldom commit crime of passion [15, 16].

Human motivation in old age takes on a different character. Common observations suggest that older people need stronger stimuli, encouragement and support to take action and are less prone to enthusiasm. The weakening of the motivation appears to be associated with a decrease in energy and poorer action mechanisms of arousal. Along with age hierarchy of motives is also transformed. Sexual motivation and motivation related to the need of achievements are also weaker. Some say that over the years older people motivation changes gradually from personal achievements towards providing gratification to other people [17].

Moreover, older people are characterized by reduction in capacity to adapt to the changes. Adapting to a change is always connected, at least at the beginning, with strength and some loss of energy, which for a biologically weaker elderly man, is difficult and can influence body balance. Therefore, aversion to all sorts of news and introducing changes in their personal life is a feature of the elderly [16].

CONCLUSION

Manifestations of aging occurring in mental sphere are related to forming of human personality. In elderly smaller or greater reduction in motor skills, process memory, learning, thinking, emotions and motivation usually appears. This does not mean that elderly patients are unable to lead rich intellectual life, supporting the environment with their wisdom,

knowledge and spiritual riches. Increasingly, it is emphasized that in addition to unfavourable changes inevitable with age, at the same time in late adulthood needs and opportunities for the development in both the physical and mental sphere occur. Scientific research and practical experience have shown that quality of life in late adulthood depends on the attitude and the personal initiative of a man. The final phase of life can be lived actively, remaining optimistic and cheerful disposition.

REFERENCES

1. Biegański W.: Myśli i aforyzmy o etyce lekarskiej. PZWL, Warszawa 1957.
2. Sękowski T.: Adaptacja Psychiczna osób w podeszłym wieku do warunków życia. Wydawnictwo UMC – S, Lublin 1993.
3. Trempała J.: Dwa przełomy w badaniach nad rozwojem psychicznym człowieka, Przegląd Psychologiczny, 2001, nr 44, 85-92.
4. Straś-Romanowska M.: Późna dorosłość. Wiek starzenia się. W: Harwas-Napierała B., Trempała J. (red.) Psychologia rozwoju człowieka, PWN, Warszawa 2000, t.2, s. 263-292.
5. Baltes P.B.: Theoretical propositions of life-span development al psychology: On the Dynamics between growth and decline. *Developmental Psychology*, 1987, nr 23, 611-626.
6. Porzych K., Kędziora-Kornatowska K., Polak A., Porzych M.: Psychologiczne aspekty starzenia się i starości. *Gerontologia Polska* 2004: 12 (4) s. 165-168.
7. Kielar-Turska M.: Rozwój człowieka w pełnym cyklu życia. W: Strelau J. (red.) Psychologia. Podręcznik akademicki (t.I) GWP, Gdańsk 2000.
8. Moritz M.: Trening umysłu jako forma utrzymania aktywności ludzi starych. W: Starość i osobowość (red.) Obuchowski K. Wydawnictwo Akademii Bydgoskiej, Bydgoszcz 2002: 113-153.
9. Sapia-Drewniak E. Kreatywna rola uczenia się w procesie rozwoju człowieka starszego. W: Wybrane problemy procesu starzenia się człowieka: materiały z konferencji naukowej – Opole 2007 s. 116-122.
10. Marcinek.P. Funkcjonowanie intelektualne w okresie starości. *Gerontologia Polska* 2007:15 (3) s. 69-75.
11. Marcinek. P. Funkcjonowanie intelektualne i subiektywna jakość życia u osób w wieku emerytalnym. *Gerontologia Polska*, 2007: 15 (3) s. 76-81.
12. Smith J., Baltes P.B.: Wisdom-related knowledge: Age/cohort differences in responses to life-planning problems. *Development psychology*. 1990, 26: 494-505.
13. Cavanaugh J. C. Starzenie się. W: Psychologia rozwojowa. (red.) Bryant P. E., Colman A. M.: Wydawnictwo Zys i S-ka, Poznań 1997.
14. Labouvie-Vief G. Intelligence and cognition. W: Handbook of the psychology of aging. wyd. 2. (red.) Birren J.E., Schaie K.W. Van Nostrand Reinhold, New York 1985.
15. Rembowski J. Psychologiczne problemy starzenia się człowieka. PWN, Warszawa– Poznań 1984.
16. Wiśniewska-Roszkowska K. Starość jako zadanie. Instytut Wydawniczy PAX, Warszawa 1989.
17. Zając L.: Wiek sprzeczności. *Charaktery*, 2000, 10, s. 17-18.

Address for correspondence:

Anna Polak-Szabela
 Department and Clinic of Geriatrics
 of the Nicolaus Copernicus University in Toruń
 Collegium Medicum in Bydgoszcz
 85-094 Bydgoszcz
 M. Curie-Skłodowskiej 9 Street
 tel. (52) 585-49-00
 fax (52) 585-49-21
 e-mail: annapolak1979@wp.pl

Katarzyna Porzych (e-mail: kikgeriat@cm.umk.pl)
 Martyna Porzych (e-mail: martyna_porzych@wp.pl)
 Kajetan Hadzik (e-mail: kajetanhadzik@gmail.com)
 Kornelia Kędziora-Kornatowska
 (e-mail: kikgeriat@cm.umk.pl)

Received: 17.03.2015

Accepted for publication: 8.06.2015