The Psychology of Ageing

5

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Contents

5.1 Learning Objectives

This chapter will provide you with knowledge about how to:

- Understand the normal age-related changes associated with cognition
- Examine the concept of personality highlighting how this may change because of normal ageing
- Explore issues related to coping and control, and how these may be effected by normal ageing processes

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5.2 Introduction

Health and social care professionals like nurses, social workers and care assistant working with older people need up-to-date information and empirical knowledge about normal ageing processes to provide best practice treatment and care to their older patients. In order to combat common myths and negative stereotypes about ageing such as exaggerated attitudes about decline and frailty, it is important to acquire a nuanced perspective that shows the complexity of ageing, and not the least, the diversity of ageing. We should also keep in mind that new cohorts of older people are healthier than previous cohorts and that increased longevity does not necessarily means increased disability [1].

5.2.1 A Lifespan Perspective on Ageing

Ageing is a lifelong and gradual process that starts at birth and lasts all life [2]. First and foremost, ageing means change, and the changes occur biologically, psychologically, socially and culturally, and these processes affect each other mutually. Decline and growth take place at the same time throughout the life cycle. One example is how the brain weakens and deteriorates when it is not sufficiently stimulated, while new experience such as physical and mental exercise helps to improve brain function in young as well as in old age [3].

Ageing and growing older have to be considered as part of a long life, where past events, living conditions and choices one has taken will shape old age [2]. An important characteristic of older people is the heterogeneity and the large individual diversity in how older people appear and function. People age in different ways and at a different pace, and various life burdens and living conditions influence the ageing process. The birth cohort one belongs to and the historical time in which one grows up will characterize who each of us become as elderly. Unfortunately, most people tend to regard older people as a homogeneous group that are similar to one another and have the same needs. However, the second half of life is characterized by a great diversity and large individual differences in terms of health, functioning, interests, habits and preferences.

5.2.2 The Psychology of Ageing: What Is It?

Normal psychological ageing involves changes in mental processes such as cognition, personality and emotional functioning and behaviour throughout the life cycle [1]. Psychological ageing is closely related to biological ageing, but also to the changes that occur in the environment's expectations of the individual as a result of increased chronological age. Thus, psychological ageing is also about adapting to biological ageing and social expectations [1].

This chapter will review and discuss normal age-related changes in cognition, personality, emotions, coping and control and how such changes may affect the

function of everyday life. A case vignette has been designed to illustrate such changes (see Box 5.1 below). The reader should bear in mind that the psychological changes are intertwined with biological and physical changes, which are covered in Chap. 2 (Physiology and ageing).

Box 5.1

It is Ann's birthday and she is 78 years old. Ann has invited her closest family and some friends to the celebration. The party takes place in her son's house, and the practical details are being taken care of by a catering company. Ann thinks it's a relief not to have to make dinner for so many guests. She has less energy for such tasks now. What has happened over the years that have passed? Ann feels pretty much like the one she's always been. At least on the inside. She has noticed some improvements though. She gets less annoyed and doesn't take things as seriously as she did when she was younger. These are signs of maturation, Ann thinks. Moreover, she feels much more confident about herself and who she is, compared to when she was younger.

Ann looks at herself in the mirror. She thinks she looks wiser and calmer than she did earlier in her life. The nice dress she wears fits her in a neatly way. She has always been slim thanks to regular physical activity and she is still in quite good shape. It is nice to feel that the body works well, it is good for her self-esteem. Ann replaces a hearing aid in her right ear. It's so tiny this new appliance and quite difficult to handle. However, it makes conversation easier. Ann's hearing has gradually deteriorated, and this is something that Ann really expected because her father had severely impaired hearing when he was an old man. Ann is happy that she has no particular memory problems yet. She notices that she needs more time to recall names, but she eventually remembers. Ann believes that reading books, solving crosswords and Sudoku are activities that will help to prevent memory problems. She thinks she is doing well in many ways, but she misses her husband George who passed away 5 years ago.

At the end of the chapter, a short review of the most common mental health problems in older adults as well as a description of intellectual disability and old age will be provided.

Reflective Questions

1. In the vignette, the maturation of the emotional life in old age is highlighted. Why is this aspect important and what are the consequences of emotional maturity in old age?
2. At the age of 78, Ann shows signs of both decline and growth. Reflect upon how health and social care professionals can motivate and support older persons to prevent premature functional decline.

3. In the story about Ann, she seems to deal with her challenges independently and has a good life. What do you understand as Ann's main challenges in old age? As a professional, you might have met others with similar challenges and who struggle in their everyday life. Reflect upon how older people cope with and solve their challenges differently, and if and how professionals or others can be of assistance.

5.3 Changes in Cognition

Cognition includes phenomena such as sensory perception, attention, memory, thinking, problem-solving and intelligence [4]. Changes in brain structure and changes in cognitive abilities and function occur at the same time throughout life. Many of the cognitive changes occur slowly and gradually. One example is the reaction capability or the time it takes to respond to stimuli (speed of processing). The reaction time or capability is increasing from the age of 20, which means that it will gradually take longer to perceive, process and respond to information. In older adults, impaired responsiveness can affect skills such as operating machines in the workplace and driving motor vehicles. However, in most healthy older people, such changes will have minor impact on daily life [4]. There are also large individual variations in the course of ageing and functional decline, as mentioned above.

5.3.1 Sensory Perception and Attention

The way the individual perceives and interprets sensory information depends on how the sensory apparatus (sight, hearing, smell, taste and touch) work, but also the brain's ability to register and organize the sensory information. With increasing age, changes and decline take place in the sensory apparatus like reduced vision and hearing, and stronger stimulation is needed to perceive and interpret sensory information [5]. Everyday examples are that some people need to spice up their food more than before or have to compensate for sensory loss by using a hearing aid like Ann in the case presented in the vignette. Understanding and interpreting sensory information also depends on being alert and able to hold on to an activity without being distracted or disturbed. The ability to pay attention to multiple tasks at the same time (so-called divided attention) as required, for example, in complex actions such as driving, is declining as you grow older. However, the consequences of such age-related changes might be minimized by adapting and accommodating to such declines, for example, to avoid driving at night.

5.3.2 Memory

Memory is a very complex function, and in cognitive psychology various memory systems or subgroups of memory are described [4]. The distinction is made, among other things, between working memory or short-term memory and long-term

memory and between implicit and explicit memory. Working memory and short-term memory are often used synonymously. Working memory has a limited capacity of seconds, exactly the time needed to remember a telephone number. This form of memory is gradually declining, from a young adult age. With increasing age, it takes longer to understand and process information, and one must concentrate to a greater extent than before to remember or recall information.

There are various forms of long-term memory. Explicit memory (also called declarative memory) is information that the individual has conscious access to, and which demands attention and concentration. Semantic memory is about recalling factual knowledge such as European capitals. This form of memory remains stable or improves throughout life. Episodic memory is to remember special events and experiences, such as 9/11 (i.e. the 11th September 2001 when the Twin Towers in New York were hit by terrorists). This form of long-term memory is declining by age so that older adults have greater difficulty remembering time and place for certain events/episodes than younger adults. Implicit memory, also called procedural memory, involves unconscious access to information. This form of memory involves skills and routine activities that have been automatized, such as cycling, swimming, reading and dancing. Such skills do not require remembering the context in which the skills were acquired and are, therefore, only slightly affected by ageing [4].

With increasing age, it becomes more difficult to remember spontaneously, for example, to recall names, just like Ann experiences in the vignette. When it comes to recognizing, on the other hand, that is, remembering by means of cues in the surroundings, there are no differences between older and younger adults [4]. For example, to remember episodes and stories from your schooldays when you look at an old photo of your classmates. It is also important to be aware that factors other than age may also affect memory, such as health problems and stress, whether you are tired, hungry or use medications that affect memory like, for example, benzodiazepines [4]. In addition, memories that are stored when you are happy, scared or angry will be remembered better than more neutral events. Also, an individual's expectations that memory declines with age could affect the ability to recall. The common stereotype held by many people that ageing involves cognitive decline in memory and learning can become a self-fulfilling prophecy [6]. You may use less effort or energy to remember if you believe memory declines with age or that it is difficult or impossible to acquire new skills as you grow older. The consequences may be impaired cognitive function or at worst, serious cognitive decline [6]. In a recently published study, Levy and her co-workers found that negative stereotypes about ageing have an impact on brain structures and may contribute to pathological changes as in Alzheimer's disease [7]. Conversely, a more optimistic approach like Ann's, with the belief that it is possible to influence cognitive functioning by stimulation and exercise, can slow down the ageing process [6], which will be discussed in Sect. 5.3.5 below.

5.3.3 Learning and Intelligence

Intelligence is closely related to memory and learning, but also includes thinking and problem-solving. Put simply, intelligence in daily life is about the ability to learn and the ability to use what one has learned. With ageing, there is a certain

decline in intelligence as measured by intelligence tests. There is a distinction between what is called fluid intelligence and crystallized or fixed intelligence. Fluid intelligence is about the ability to quickly perceive and process information and to see new connections. This kind of intelligence reaches a peak in young adulthood. Crystallized intelligence, on the other hand, is the ability to use knowledge that is accumulated through experience and maturity. This form of intelligence shows a high degree of stability throughout life [4].

5.3.4 Brain Plasticity and Cognitive Reserve

Previously, it was believed that no new nerve cells and nerve cell connections were formed in the ageing brain. In recent decades, neuroscience and the development of advanced brain imaging techniques have given us new knowledge and insights about the brain and its function and capacity [8]. This knowledge has shown us that the brain is plastic, which means that it has a great potential for change, not least through exercise and new experience [8]. This occurs in both young and old brains. Moreover, during the life course, the individual accumulates a cognitive reserve that works protective against the development of impairment and disease [3]. An example of whether a person has high or low cognitive reserve is education level, and longer education can thus protect against the development of cognitive decline and diseases like dementia [3]. Education generally increases skills and the ability to take control of one's life. Highly educated people seek out to a greater extent information that is important in preventing health problems, such as making the right lifestyle choices. Furthermore, highly educated people usually have good finances and, therefore, can afford to pay for what is health promoting.

5.3.5 Cognitive Training and Stimulation

Like all functions in older years, there is great diversity and great individual variations in cognitive capacity and functioning. Cognitive functions are largely influenced by lifestyle factors such as intellectual and social stimulation, but also by physical activity [8]. In addition, it is important to have a balanced diet, moderate intake of alcohol and to avoid smoking and medications that affect cognitive function (e.g. regular use of benzodiazepines and opioids). Such lifestyle choices are crucial in reducing the consequences of normal age-related changes, but also in preventing pathological conditions in the brain and possibly some forms of dementia. Research has shown that systematic exercise and training of cognitive functions, such as memory, has a good effect in healthy older adults [3]. This can be done in various ways, such as learning memory techniques, but just as important are everyday activities such as physical activity, socializing, reading, solving crosswords or doing crafts. Health and social care workers should encourage their older patients to engage themselves in such activities to prevent premature cognitive decline.

5.4 Personality Throughout the Lifespan

Ageing and growing older is often associated with changes in personality, most often in a stereotype and negative way. Like becoming a grumpy and rigid old man or woman unwilling to change views and habits. Research on personality and personality development throughout life is characterized by great diversity, where different models and theories have used different definitions and operationalizations of the concept of personality. The following section will review two of these theories.

5.4.1 Erikson's Theory of Personality Development

One of the most well-known theories of personality is the Swiss psychoanalyst Erik Erikson's theory of human development throughout life [9]. The theory argues that the individual faces different challenges at different life stages, which must be addressed. The individual's way of dealing or coping with the challenges may have consequences for the next stage of development or life phase. Erikson believed that the greatest challenge in old age is accepting the course of life and the choices one has made throughout life and preparing for life to end. If the individual accepts his/her life for good and for bad, this will contribute to a wider perspective on life and to wisdom, which Erikson referred to as ego integrity. Conversely, failing to reconcile or regret the choices one has made can lead to despair and an experience of having failed in life. Which in turn can lead to impaired health and quality of life in older years. While Erikson's model gives us a more general understanding of personality throughout life, other models have been most concerned with personality as having different traits or characteristics.

5.4.2 Five-Factor Model of Personality

The personality theory that may have the most impact today is the so-called Five-Factor model, also called "The Big Five" [10]. The Five-Factor model focuses on personality as consisting of different traits that can be measured and described using personality tests [10]. The personality traits cannot predict what the individual will do in individual situations but are primarily indicators of what behaviour or action is likely/unlikely [11]. The Five-factor model is based on five basic personality dimensions (in the next section, these will be related to Ann in the vignette):

1. Neuroticism: covering various negative emotions such as being moody and worrying
2. Extroversion: which involves being social, outgoing and confident
3. Openness to Experience: which means that one is open to new experiences, is curious and has an active imagination
4. Agreeableness: a trait associated with being warm, generous and helpful
5. Conscientiousness: that one is concerned with being organized and having self-discipline

5.4.3 Stability and Change in Personality and Emotions

According to the Five-factor model, personality and personality traits remain consistently stable throughout life [10]. Just like Ann in the case vignette who feels pretty much like the person she has always been. There are still some age-related changes, but these are considered to be relatively modest. Growing older seems to lead to emotional stability with less neuroticism, which results in fewer negative emotions, but also less extroversion, less openness to new experiences and more warmth and conscientiousness. Such stability and maturation of the emotional life in old age have been documented in several studies [12, 13], and it has been argued that older people are, therefore, more resilient than younger ones [14]. They are less overwhelmed by external stress, and such increase in emotional adjustment and regulation contributes in turn to a greater degree of emotional well-being [14]. Some explanations given are that a long life gives us greater knowledge about ourselves and strengthens our ability to deal with stressful situations as we age. Because the future perspective is limited by increasing age, older people will become more involved in thoughts and behaviours that promote emotional well-being. For many, this can serve as protection against the development of mental disorders in old age [15].

People are different from each other regarding the stability of their personality across the lifespan. In some people, larger changes occur than in others [11]. Various life events and life experiences such as health problems, loss of loved ones, divorce or becoming unemployed can effect personality and cause changes such as less extroversion and more neuroticism or emotional instability [11]. However, such changes are largely transient and reversible. Lasting changes in personality are primarily related to severe mental disorders or organic brain disorders such as dementia [11]. But, lasting personality changes can also occur because of self-development through, for example, psychotherapy. Using psychological methods and tools may help a person to change negative thought patterns and achieve greater emotional stability and less neuroticism [16].

5.4.4 Personality and Health

Negative stereotypes about ageing can, as mentioned above, affect cognitive function, but also health and mortality. A variety of studies on personality and mortality in old age have, in line with Levy's research [6, 7], documented that certain personality traits have negative effects on health and quality of life in older years, especially neuroticism and being low on extroversion and conscientiousness [16, 17]. Those who have negative expectations associated with ageing, as well as a tendency for introversion and carelessness, will be at greater risk of health problems and disability in old age [16]. This knowledge is important, not least regarding the prevention of age-related diseases and functional decline. Health and social care workers should be aware of negative self-stereotypes and beliefs in older patients and provide education about the negative

effects of such stereotypes and teach them alternative coping strategies. We will now turn to how older people adapt to and cope with the changes taking place in old age.

5.5 Coping and Sense of Control

A common belief is that with age one loses control over several aspects of life. Such a view is largely rooted in stereotypes and negative attitudes towards ageing, which may have negative consequences for health and behaviour, as outlined above. People are different when it comes to experiencing control over a situation. Some believe that there are things that can be done to influence the ageing process like Ann in the case vignette, while others feel that they have less influence, or that the opportunities for control are limited. In general, studies show that perceived control or sense of control declines with age [18, 19]. This is understandable since many of the changes that occur during ageing are not possible to control like loss of a loved one or health-related issues in old age.

However, there are large individual differences in sense of control within an age group and within the same person over time. On average, older adults seem to maintain a general sense of control perhaps in part because they adjust their goals and standards to the situation they are in.

5.5.1 Coping and Coping Strategies

Coping is defined as the way a person acts in a stressful or challenging situation [20]. In old age, coping is largely about adapting to the changes that occurs physically, mentally and socially. According to Lazarus and Folkman [20], there are two main ways to deal with stress and challenges: so-called problem-focused and emotion-focused coping. Problem-focused coping involves changing what causes problems, while emotion-focused coping means changing the perception of what is causing problems. Older people seem to use more emotion-focused coping by lowering their expectations, and they rely on daily routines to reduce the likelihood of problems and stress and to compensate for loss and decline. Ann, for example, compensates for hearing loss by using hearing aid so that she can participate in conversations with several people present.

5.5.2 Sense of Control

Studies show that a strong sense of control is associated with better cognitive functioning, good health and emotional well-being [19, 21]. A strong sense of control can act as a protection in the face of impaired health and other losses in older years. People who initially have a low sense of control, on the other hand, are more

vulnerable to the changes that old age can entail. It can lead to less involvement in more appropriate coping strategies such as physical activity and mental training. Women seem to have a lower sense of control than men, but such gender differences are less pronounced in highly educated [19]. Those with low education and low income report less sense of control over their lives than those with good finances and education [18]. Since new generations of older people have a higher level of education compared to previous generations, we can assume that this will have an impact on coping and sense of control. Still, there can be a difficult balance between experiencing control and taking control of various aspects (e.g. making lifestyle changes) on the one hand, and on the other hand also having to recognize that some aspects of ageing cannot be controlled [22]. One such aspect is the increased vulnerability to loss and illness as one gets older. The next section will briefly review the most common mental health problems/disorders in older years and outline some possible interventions and strategies.

5.6 Mental Health Problems in Old Age

Although many older people nowadays are in better health than previous generations, there is nevertheless an increased vulnerability to being affected by illness with increasing age. This applies both to physical and mental illness. In addition to neurocognitive disorders like Alzheimer's disease and other dementias, symptoms of depression and anxiety are the most common mental health problems in older adults [23]. Sleep problems and chronic pain are often accompanying depression and anxiety, and these symptoms mutually exacerbate one another. Furthermore, anxiety and depressive symptoms are often concomitant with severe somatic illness and neurocognitive disorders, and may exacerbate these. The consequences of anxiety and depression in older adults are often devastating and associated with decreased physical, cognitive and social functioning, which in turn leads to impaired quality of life and at worst increased mortality [23].

International studies show that an increasing number of older adults misuse alcohol and medications at a higher rate than previous generations [24, 25]. For many people, alcohol and psychoactive medications like benzodiazepines and sedatives are ways of coping with depressive thoughts and emotions. Due to age-related changes, older adults are more vulnerable to the physiological effects of alcohol and medications. Alcohol misuse and combining alcohol with psychoactive medication can lead to negative health effects, increasing risk of injuries and falls, as well as exacerbating existing mental health problems [24].

5.6.1 Risk Factors

Risk factors for mental health problems and substance misuse in older adults comprise complex interactions among genetic vulnerabilities and age-related neurobiological changes, physical illness and disability, as well as stressful events like loss

and bereavement, loneliness and lack of social support [23]. As mentioned above, negative expectations associated with ageing may also contribute to the development of health problems and functional decline in older adults [6].

5.6.2 Preventive Strategies

Health and social care professionals can employ a number of strategies and interventions preventing the development of mental health problems and substance misuse in older people. For example, nurses, social workers and domiciliary care workers can help to encourage and motivate their older patients to make lifestyle changes that will have a positive impact on their mental health and physical well-being, for example, advising about changing their drinking habits and increasing their activity level. First and foremost, negative self-stereotypes like "I am too old to make changes" or "I am too old to exercise" should be challenged. Furthermore, based on common everyday activities, health and social care workers should inform their older patients of the benefits of physical activities and cognitive training and stimulation. See Sect. 5.3.5 above for examples of everyday activities.

5.6.3 Treatment

For older adults being diagnosed with anxiety, depression and/or substance use disorders, there are evidence-based treatments available [23, 24]. Both forms of psychotherapy and psychological interventions like cognitive behavioural therapy and life review therapy have proven effective in older adults. However, studies show that there are still under-detection and under-treatment of mental disorders in the older population [23, 24].

5.6.4 Intellectual Disability and Ageing

As in the general population, life expectancy has increased among people with intellectual disabilities (ID) and many will reach old age. People with ID constitute a heterogeneous population, where Down syndrome is the most common cause of disability [26]. A common feature of people with ID is that ageing starts at a younger age than in the general population. Age-related conditions such as vision and hearing impairments occur in early adulthood, and mental health problems such as anxiety and depression are more frequent in people with ID than in the general population. Furthermore, persons with ID have a higher risk to develop early onset dementia [26]. Some of the health conditions that could have been prevented or treated in persons with ID remain undetected by healthcare services [26]. This is largely due to a lack of knowledge about ageing in people with ID. Health and social care professionals working with people with ID need basic knowledge about ageing and ID. They should be able to support and motivate their patients to take part in

activities that may prevent or slow down functional decline, as well as prevent various health conditions related to old age. People with ID need stimulation and training much the same way as the general population. However, they are dependent on being closely followed up by their surroundings to a much larger extent than people in general.

5.7 Summary of Main Points

The objective of this chapter was to provide the reader with insight into normal age-related changes in cognition, personality and coping and control. Furthermore, the heterogeneity and great diversity in old age is emphasized, and that development and decline are parallel processes throughout the lifespan. I have illustrated that negative self-stereotypes about frailty and decay in old age can serve as self-fulfilling prophecies leading to impaired health and functioning. I also offer some strategies for preventing premature decay and illness such as encouraging mental and physical exercise and training and being engaged in regular everyday activities.

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