Value of culture

The health value of culture

Hanne Goemaere, Bram Spruyt & Jessy Siongers

Kenniscentrum Cultuuronderzoek

Vlaanderen
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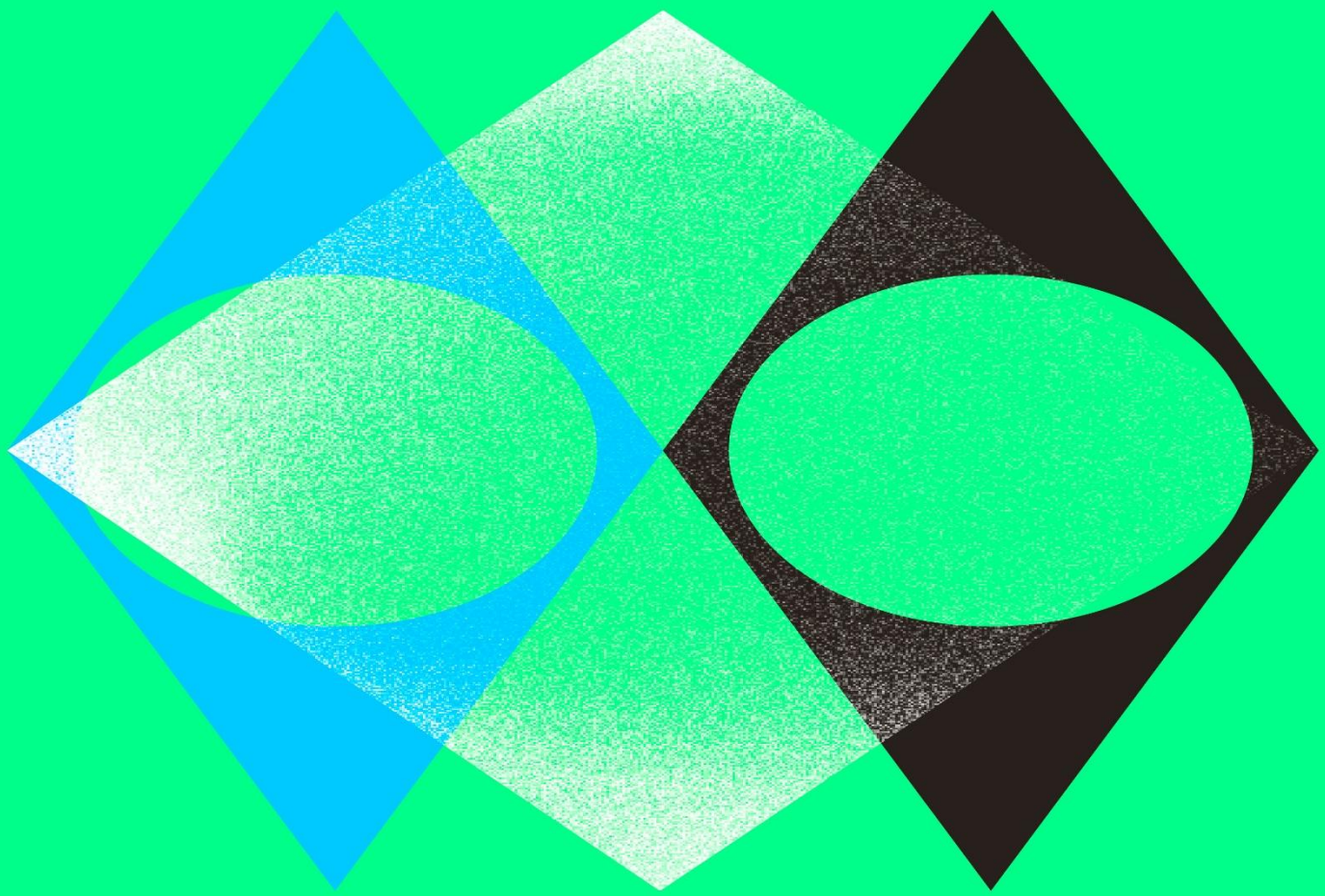

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Preliminary information regarding the methodology of this report

Based on a systematic literature review of scientific peer-reviewed articles published between 2014 and 2024, a series of reports by the Centre for Cultural Research examines what 'the value of culture' means according to the literature. The starting point was 18,013 articles that, according to a number of keywords in their abstracts, were potentially relevant to this research. Using the machine learning tool ASReview LAB – developed by Utrecht University – articles were screened in a second round based on their abstracts, leaving 153 relevant articles for this report on the health value of culture. In a final round, the articles were read in full, resulting in the 133 references on which this report is based. The introductory report provides a more in-depth view of this method (see https://www.cultuuronderzoek.be/wp-content/uploads/2025/11/Value-of-culture-Introduction.pdf).

This sub-report on the value of culture focuses on the health-related value of culture. Health consists of physical, mental and social well-being (World Health Organisation, 1948). The social component is discussed in the sub-report on the social value of culture (Goemaere et al., 2025). This report discusses how culture can be of value to the mental and physical well-being of individuals. Within the mental well-being component, a further distinction can be made between a hedonistic and a eudaimonic approach to mental well-being. Hedonistic well-being is about positive feelings and refers to how satisfied someone is with their life in general, how often that person experiences positive feelings and to what extent negative feelings are absent or reduced (Diener et al., 1999; Huppert et al., 2009). Eudaimonic well-being is about positive functioning and revolves around self-development, a sense of competence and the fulfilment of one's personal potential.

In his research, Falk (2022) argues that museum experiences offer various benefits to their audiences, including improved wellbeing. The use of museums creates this value, and exhibitions, objects, programmes, films and presentations provide the opportunity and context for this value creation. However, this report focuses on the value of different forms of culture in different contexts – and therefore not only within museums – for the health of individuals. This is done on the basis of preliminary considerations regarding the role that culture (or cultural participation) plays in prevention with regard to promoting healthy behaviour (1.1), stigma and awareness (1.2) and mental resilience (1.3). Next, the relationship between culture and the mental (2) and physical (3) health of individuals is discussed. After that, a group for which health is generally a strongly relevant topic is discussed separately, namely the elderly (4). Finally, the value of culture for health is examined in the context of care institutions and within the process of recovery from certain health problems (5). Here, we focus on how culture can be integrated into this context and contribute to or play a meaningful role in people's health.

First, a preliminary remark. The reader will notice that the studies discussed are overrepresented by studies on artistic activities in which people themselves were actively involved. This overrepresentation is a reflection of the literature. It does not, of course, mean that other forms of cultural participation cannot have health effects. It does mean, however, that relatively little research has been done on this. Another observation is that in some studies, the effect of cultural participation is indirect, for example by making people exercise more. In such cases, it is not so much the cultural element that generates a health effect, but culture does provide the impetus for (potential) health gains.

1. Prevention

1.1. Promotion of healthy behaviour

Before delving deeper into the possible effects of culture on both physical and mental health, we will first discuss how culture can play a role in the prevention of certain health problems and, more specifically, in promoting healthy behaviour. Research by Renton et al. (2012) shows that cultural participation is associated with healthy eating, physical activity and positive mental well-being. Cultural participation can be interpreted in a broad sense here and includes both participating in various creative activities (e.g. dance, theatre, painting, reading, crafts, creative writing, etc.) and attending cultural events (e.g. cinema, street performances, exhibitions, etc.).

Cultural participation can play an important role in addressing public health issues (Parkinson & White, 2013). In today's society, ageing, social isolation, addictive behaviour, substance abuse, obesity and mental health problems pose major challenges. Each of these health problems is also associated with forms of inequality. According to Parkinson and White (2013), the focus must therefore shift from the sick individual to healthy community and civic engagement. This requires collaboration between the public health and welfare sectors, in which art and culture are also integrated. De Quadros (2017) emphasises the need for a shift in focus from individual therapeutic interventions to public health with a focus on community development (Baum (2008) in de Quadros, 2017, p. 20; Tulchinsky & Varavikova, 2009). Community art can contribute to both primary and preventive care (Koen, 2008; 2009) and to the health of the community itself, among other things by using art to promote health messages (Capila & Bhalla, 2010; de Quadros & Dorstewitz, 2011; Haider (2005) in de Quadros, 2017, p. 16). The power of art to communicate in a unique, complex and subtle way offers significant opportunities for health that other forms of communication cannot provide (de Quadros, 2017).

Using participation in cultural activities to prevent obesity among children is a concrete example of how culture can be used to prevent physical health problems. For example, a folkloric dance programme was used in an intervention to prevent excessive weight gain in Mexican American girls (Azevedo et al., 2013). Children who frequently participate in physical activities have a lower risk of obesity (Cooke et al., 2013). The preventive use of cultural physical activities for health is not only relevant for children; older age groups also benefit from this, and other forms of culture can also have beneficial effects. For example, Planta et

al. (2023) showed in their randomised controlled study that participation in art activities in a museum improved the daily physical activity of participating older local residents. This group showed an increase in their daily number of steps compared to the control group that did not participate in the cultural activity. Walking is a central component of physical activity and the promotion of public health (Ekelund et al., 2019; Harris et al., 2019). Culture can therefore also be used in health promotion and prevention. Art is also an effective means of communicating health-related messages to the population (Mills et al., 2013). In their study, Mills et al. (2013) found that people who had been involved in art in the past twelve months (being a member of an art organisation, attending an art event or participating in an art activity themselves) were more exposed to health messages and, as a result, were also more aware of such messages than those who were not involved in art.

Finally, culture can also contribute to the prevention of mental health problems. For example, Bals et al. (2011) identified various factors of enculturation as potential protective factors against mental health problems among indigenous young people from the Sami community in Norway. One of the factors investigated is participation in the cultural activities of their group. Enculturation – the extent to which an individual is embedded in cultural traditions by learning about and identifying with traditional customs, language, spirituality and cultural identity – has a protective effect and contributes to the resilience of these young people.

Table 1: Summary of studies included on the promotion of healthy behaviour as a health value of culture

Author (year)	Research method used	Main findings
Renton et al. (2012)	• Cross-sectional survey research	Participation in arts and cultural activities is strongly associated with healthier eating habits, more physical activity and improved mental well-being, regardless of the social background of the participants. It should be noted, however, that access to these activities is socially unequal.

Parkinson & White (2013)	• Descriptive analysis
	  ○ Literature review
	  ○ Case studies
		Art can play an important role in reducing health inequalities. It should be noted, however, that there is social inequality in the access to these activities. Social inclusion must therefore be guaranteed and cultural participation made accessible. International dialogue and policy integration are important in order to better

		utilise the intrinsic and instrumental value of art within public health care.

de Quadros (2017)	• Descriptive analysis
	  ○ Literature review
	  ○ Case studies
		Music and other arts are crucial for community development and health education. They mobilise vulnerable communities, offer self-expression and promote social change. Art has the potential to improve both emotional and physical health outcomes and plays an important role in social justice and empowerment.

Azevedo et al. (2013)	• Case study • Interviews	Participation in the Stanford ECHALE programme, which included folk dancing and screen time reduction, led to improved self-esteem, school performance and family cohesion, which encouraged participation. Participants reported increased physical activity and healthier habits, contributing to obesity prevention.
Cooke et al. (2013)	• Cross-sectional survey research	Socioeconomic factors such as family structure and living environment play an important role in the risk of obesity among Métis[1] children. Regular physical activity is an important factor in avoiding or eliminating obesity.
Planta et al. (2023)	• Case study • Randomized controlled trial • Quantitative research (including survey)	Participants in museum-based art activities have a higher amount of daily steps than the control group. Such activities improve the physical activity of older adults and contribute to health gains and disease prevention.
Mills et al. (2013)	• Cross-sectional survey research	People involved in the arts remember significantly more health messages compared to people who are not involved in the arts. Art is an effective setting for promoting health messages to the general population.
Bals et al. (2011)	• Cross-sectional survey research	Enculturation factors, such as cultural activities, are associated with a reduction in symptoms among indigenous Sami youth in northern Norway. Self-efficacy plays an important role in this relationship and reinforces the protective effect of enculturation factors.

[1] The Métis are an indigenous population group in Canada and the northern United States.

1.2. Stigma and awareness

In addition to using culture to promote health messages, reducing stigma surrounding such health problems and raising awareness are also important. For example, sculptures were used in a project in Uganda to address the stigma and fear surrounding HIV and AIDS (Nabulime & McEwan, 2010). A series of soap sculptures – expressing the experiences of people living with the disease – broke the taboo and facilitated a certain dialogue between men and women about this disease. In this case, art functions as a social practice and plays a transformative role in creating awareness about the presence of HIV and AIDS in the community. It does this by making it possible to discuss what is a sensitive subject for many people. In this example, sculpture helps to reduce stigmatisation and discrimination surrounding HIV and AIDS in the community. Organising dance and music workshops to raise awareness about the risks to young people's sexual health (Crouch et al., 2011) is a second example of how culture can help eliminate stigma and raise awareness about physical health. These workshops were organised for young people from the Torres Strait community (Far North Queensland, Australia) who are somewhat disadvantaged in terms of knowledge about sexual health. There is a relatively high percentage of sexually transmitted diseases in this group (Miller (2008) in McEwan et al., 2013, p. 133) and these young people have a low level of knowledge and personal perception of sexual health risks (Fagan & McDonell, 2010; Larkins et al., 2007). Among other things, awareness among young people increased through the creation of various hip-hop songs that conveyed a message about this issue (Crouch et al., 2011; McEwan et al., 2013).

When it comes to mental health, there is often even more stigma in society than there is for physical health problems. Several studies show that various cultural forms – art exhibitions and public art projects, theatre performances and film festivals – reduce the stigma surrounding mental health among the individuals and/or community involved (Blignault et al., 2010; Koh & Shrimpton, 2014; Mohatt et al., 2013; Quinn et al., 2011). Such cultural activities also raise awareness of mental health issues, encourage individuals to adopt more positive attitudes towards this group and improve the mental health literacy of those present (Blignault et al., 2010; Koh & Shrimpton, 2014; Quinn et al., 2011). It is important that art is used to emphasise the humanity of people experiencing mental health problems (Quinn et al., 2011) and that the connection between the cultural form and mental health is made clear to the participant or spectator in some way (Koh & Shrimpton, 2014). This is because people with mental disorders are more often portrayed in the media as a threat to social norms and values and as unemployed or unproductive than people without mental disorders

(Diefenbach & West, 2007; Signorielli, 1989; Wilson et al., 1999). Furthermore, organising anti-stigma interventions based on culture is unique in that it engages the audience emotionally and constructs shared meanings and understanding between individuals (Quinn et al., 2011).

Table 2: Summary of studies included on stigma and awareness as a health value of culture

Author (year)	Research method used	Main findings

Nabulime & McEwan (2010)	• Case study
	• Qualitative research
	  ○ Focus groups
	  ○ Informal interviews
		Soap sculptures are effective in promoting dialogue about HIV/AIDS and reducing stigma in Uganda, especially in communities where a taboo around sexuality is present. Gender relations must be addressed in order to stimulate attitude and behaviour change in the fight against the disease.

Crouch et al. (2011)	• Case study
	• Qualitative research
	  ○ Observation
	  ○ Oral testimonials
		The successful implementation of performative workshops raised awareness of sexual health among young people and the community, strengthened partnerships with local schools, and increased the willingness of community organisations to support local reference groups.

McEwan et al. (2013)	• Case study
	• Qualitative research
	  ○ Interviews
	  ○ Project data analysis
		The Torres Indigenous Hip Hop Project was successful in mobilising the community and raising awareness about sexual health (issues) among young people in the region.

Blignault et al. (2010)	• Case study • Interviews	The use of theatre is effective in reducing stigma around mental health in the Australian Macedonian community.
Koh & Shrimpton (2014)	• Case study • Survey research (qualitative & quantitative analysis)	Art exhibitions featuring works by people with mental illness promote mental health awareness and reduce stigma.
Mohatt et al. (2013)	• Case study • Qualitative research ○ Personal testimonials	The "Finding the Light Within" project effectively reduced stigma about suicide and brought the community together through participatory public art.

Quinn et al. (2011)	• Case study • *Mixed-methods* research ○ Questionnaire	The art and film festival was able to promote a positive attitude towards recovery and mental health and reduced the stigma about it.

1.3. Mental resilience

A third preventive value of culture related to health is the use of culture to strengthen the mental resilience of individuals. Within this report, mental resilience is interpreted broadly as a concept. The following aspects and interpretations emerge from the literature included: resilience, self-esteem or self-worth, self-confidence, self-efficacy, dealing with pain and emotions, coping and problem-solving skills, emotional reactivity, self-awareness and self-control, identity formation, ego resilience, sense of belonging, secure relationships, aggression and anxiety. More information about the measurement of mental resilience in the various studies can be found in the appendix of this report (see section 7).

1.3.1. Counteracting psychological and psychosomatic complaints

The literature shows that culture can contribute to mental resilience by combating psychological and psychosomatic complaints. Art, for example, is a way of controlling emotions and can thus help to promote the resilience of individuals (Davidson, 2000; Vaquero et al., 2014). Creation helps to release emotions and to communicate and talk about experiences (Cyrulnik, (2009) in Vaquero et al., 2014, p. 151). Art offers various benefits that promote the process of developing resilience: development of the ability to symbolise, shared enjoyment and relaxation, introspection, self-awareness and individual reflection, growth in autonomy, acceptance and appreciation of others, cooperation and involvement in group activities, and social support and cohesion through sharing experiences with other people (Barragán, 2004; Brown & Sax, 2013). Attending an intervention or programme centred on art can therefore strengthen a person's resilience. For example, a community art program for children in a disadvantaged community in South Africa increased their self-confidence and self-efficacy (Mueller et al., 2011). Attending pottery sessions at a school in South Korea increased adolescents' ego resilience – their ability to inhibit or regulate their ego and impulses depending on the contextual demands of certain situations – and had a positive effect on their ability to regulate and express their emotions (Block & Kremen, 1996; Jang & Choi, 2012). The researchers attribute this finding to the successful experience of participants, who on the one hand feel the clay in its supple and plastic form, and on the other

hand observe its fascinating transformation into fully-fledged pottery after the firing process in the kiln.

A second illustration of this connection is that young people with mental health problems and/or learning difficulties experienced a stronger sense of belonging and a greater ability to deal with difficult feelings by participating in a visual arts intervention (Macpherson et al., 2016). Such interventions can therefore have an impact on their mental resilience, even in the short term. Possible explanations for this are that during the intervention, participants learn various artistic skills and share these with each other. Learning a specific skill and helping others helps to build resilience (Hart et al. (2007) in Macpherson et al., 2016, p. 553). In addition, art is empowering and important for learning to externalise and accept difficult feelings because of the autonomy that participants experience in this process (Macpherson et al., 2016). The specific material used in such art programmes and interventions leads to similar psychological effects on participants (Pesso-Aviv et al., 2014).

Furthermore, independent participation in various cultural forms can also strengthen individuals' mental resilience. For example, dance improvisation classes – in which dance pieces were created based on glass art – led to an increase in self-esteem or self-worth and self-confidence of more than half of the students (Morejón, 2020). More generally, various cultural activities, such as listening to or playing music, drawing, painting or making things, and reading for pleasure, improve children's self-esteem and self-worth (Mak & Fancourt, 2019). This correlation is not related to how good or bad the children are at these activities – you don't have to be able to draw 'beautifully' for example – but it is the participation itself that offers various benefits and improves their self-esteem or self-worth. In their systematic literature review, Zarobe and Bungay (2017) concluded that, despite the various limitations of existing research, participation in artistic activities has a positive effect on young people's self-confidence, self-esteem, relationship building and sense of belonging. All these elements are related to resilience and mental well-being.

Culture can also be valuable for individuals' mental resilience in difficult situations. During the COVID-19 lockdown, for example, artistic activities were used as an approach and avoidance strategy to help deal with emotions (Mak et al., 2021). The possible art forms at that time – digital art and writing, musical activities, crafts or handicrafts, and reading for pleasure – served as coping tools during stressful situations. Although this applies to everyone, research shows variation in the regulation of emotions through art depending on personal characteristics. For example, women are more likely to use art as a way to avoid negative emotions. Single people and people who have never been married are more likely to

use art to regulate their emotions than people who live with a partner. It is striking, however, that people who feel lonely or have a mental health diagnosis are less inclined to spontaneously use art as a means of emotional regulation. Another example is that art is a form of distraction for people living with chronic pain (Lynch et al., 2013). Despite their suffering, art offers them a certain satisfaction and enriches their lives, enabling them to carry on and better overcome adversity (Graham-Pole, 2000; Lynch et al., 2013). A similar example is the finding that the combination of art and cognitive behavioural interventions helps to reduce distress in participants dealing with pain, anxiety and depressive symptoms (Czamanski-Cohen et al., 2014). Among other things, art offers them the opportunity to practise their coping skills and thus deal with these issues.

Because of these positive associations, art and culture are often explicitly used as a tool and thus added to other approaches that aim to strengthen individuals' mental resilience. In Coholic's (2011) study, for example, art was used in a mindfulness approach to strengthen the mental resilience of young people in need who were involved in child protection and/or mental health systems. The use of art helps these young people, who may not have the capacities or skills for traditional mindfulness or talk therapies, to develop a basis of self-awareness, which strengthens their coping skills and feelings of self-esteem and self-worth. This approach makes young people more resilient, gives them a more positive self-image and reduces their emotional reactivity (Coholic et al., 2012). A similar example is the study by Kim et al. (2014) in which group art therapy was combined with breathing meditation. This improved the subjective well-being of anxious and depressed young people by promoting self-reflection and growth. The art therapy enabled them to recognise their negative emotions and observe behavioural change. A third example of how art can be used as a tool to strengthen mental resilience is the integration of rational emotional behaviour therapy and art therapy (Roghanchi et al., 2013).

Table 3: Summary of studies included on combating psychological and psychosomatic complaints as a health value of culture

Author (year)	Research method used	Main findings
Vaquero et al. (2014)	• Descriptive conceptual analysis • Literature review	Resilience can be promoted through the use of technology, art and a rights-based approach for children. These factors contribute to personal growth, empowerment and social cohesion among vulnerable young people and their families.

Mueller et al. (2011)	• Case study • Quasi-experimental survey research	The art therapy intervention increased the self-efficacy of children affected by HIV/AIDS, but had no effect on self-confidence, depression or behavioural problems.
Jang & Choi (2012)	• Case study • Quasi-experimental survey research	Clay-based group therapy increased the ego resilience of low SES adolescents. Participants developed a greater sense of control, emotional regulation and optimism through the process of pottery making and positive (group) interactions.

Macpherson et al. (2016)	• Literature review
	• Case study
	  ○ Observation
	  ○ Interviews
	  ○ Focus groups
	  ○ (Questionnaire)
		Participation in group events involving visual arts among young people with mental health problems and/or learning disabilities increases their resilience. The art activities contributed to a sense of connectedness, their self-awareness and self-confidence, and helped them process difficult feelings.

Pesso-Aviv et al. (2014)	• Case study • Quasi-experimental survey research	The observed decrease in aggression levels among participants after the intervention depended on the art materials used. There were no significant differences in self-esteem, anxiety, and self-control between the groups that used different materials.
Morejón (2020)	• Case study • Survey research (pre- and post-measurement)	Participating students experience an increased sense of self-confidence and self-esteem through dance improvisation inspired by glass art.
Mak & Fancourt (2019)	• Survey research ○ Propensity Score Matching (PSM)	Children who regularly participate in artistic activities have significantly higher levels of self-confidence. This effect is stronger when parents actively participate in these activities with their children. Skill in art or music does not play a role in this context.
Zarobe & Bungay (2017)	• Systematic literature review	Participation in artistic activities has a positive influence on self-confidence, self-esteem, relationship building and feelings of connectedness among young people. These

		factors are linked to resilience and mental well-being. There is a need for methodologically rigorous research.
Mak et al. (2021)	• Cross-sectional survey research	During the COVID-19 pandemic, various forms of art practice at home were used as strategies to regulate emotions. Art is a valuable tool for emotional resilience during stressful periods.

Lynch et al. (2013)	• Case study
	• Mixed-methods survey research
	  ○ Thematic analysis
	  ○ Descriptive analyses
		People with chronic pain who are able to create art make positive adjustments to their pain experience, resulting in psychological and spiritual transformation and growth. Among other things, the role of acceptance in coping with chronic pain is important here.

Czamanski-Cohen et al. (2014)	• Case study
	• Mixed-methods research
	  ○ Qualitative evaluation
	  ○ Survey
		The CB-ART protocol is effective in reducing emotional distress of women with chronic pain, anxiety and depressive symptoms. Creating art helped them to externalise painful experiences and improve their coping skills.

Coholic (2011)	• Case study • Interviews	Art-based mindfulness methods are feasible and useful for young people in need. This approach contributes to improving self-awareness, self-confidence and resilience and helps in learning emotional regulation, social and coping skills.
Coholic et al. (2012)	• Case study • Quasi-experimental survey research	Participation in the Holistic Arts-Based Programme (HAP) led to a significant reduction in emotional reactivity among children in need, which is an indicator of improved resilience.
Kim et al. (2014)	• Case study • Quasi-experimenteal survey research	Art-based group therapy, combined with breathing meditation, contributes significantly to improving the subjective well-being of depressed and anxious adolescents.
Roghanchi et al. (2013)	• Case study • Quasi-experimental survey research	The combination of rational emotional behaviour therapy (REBT) and art therapy resulted in significant improvements in self-confidence and resilience among university students in Iran after 10 sessions of intervention.

1.3.2. Stress - fear

When it comes to the mental resilience of individuals, the ability to cope with stress and anxiety are important related skills. In the study by Huss et al. (2010), for example, art was used to teach participants how to cope with stress in order to strengthen their resilience. They were able to more easily identify and name the factors that caused them stress through art – giving them a stronger sense of control over their anxiety – and also found alternative coping strategies that they could then express through art. Interventions or therapies based on or partly supported by art can not only help participants to cope better with stress, but can also cause a decrease in participants' stress levels. Examples of this within the studies included in this report are the positive effects of art therapy in nature for children (Kang et al., 2021), the potential of art-making to reduce stress among university students (Liu et al., 2024) and a reduced risk of burnout and a stress-reducing effect of a joint art assignment among healthcare providers (Salzano et al., 2013). Art has a positive impact on participants' mental health by promoting emotion regulation, among other things (Liu et al., 2024). The process of creating art is relaxing for participants, is experienced as enjoyable and therefore reduces their stress levels (Salzano et al., 2013). Moreover, such art experiences can increase individuals' resilience to diseases through mechanisms that relieve stress (Kang et al., 2021).

Furthermore, it is not only art – in itself or in the form of therapy and interventions – that can play a role in reducing stress, but there are also other types of culture that have a similar impact and reduce anxiety. In the experimental design of Toyoshima et al. (2011), after participating in various creative activities – playing the piano, sculpting clay and calligraphy – participants experienced a reduction in anxiety (inner turmoil that can lead to fear) and lower cortisol levels, indicating reduced stress levels. The effect of playing the piano was clearly stronger than the other cultural activities tested in this study. This study shows that cultural participation has both psychological and physiological stress-reducing effects. In addition, culture can also play a role in reducing anxiety in more medical contexts. For example, creative art therapy led to positive mental health outcomes among stroke patients such as improvements in the levels of depression, stress and anxiety (Awledat et al., 2023). However, patients should not have to follow such additional creative therapy for culture to contribute to their mental resilience. In the study by Nanda et al. (2011), patients in a mental health institution experienced less agitation and anxiety, measured by how much PRN (pro re nata) medication was administered, on days when a work of art depicting a natural landscape was displayed in their lounge. In this way, the presence of art provides a positive

distraction that helps reduce anxiety and agitation among mental health patients in the context of healthcare.

Table 4: Summary of studies included on stress and anxiety as health value of culture

Author (year)	Research method used	Main findings

Huss et al. (2010)	• Case study
	• Qualitative research
	  ○ Content analysis
	  ○ Group discussions
		Art interventions are an effective self-regulatory tool for social workers in war situations. By using art to identify and transform stressors, participants were able to strengthen their feelings of control and resilience.

Kang et al. (2021)	• Case study • Quasi-experimental survey research	The nature-based group art therapy programme has positive effects on stress reduction, self-esteem and brain wave activity among children. Participants experience a significant decrease in stress and an increase in social and general self-esteem. Brain activity also improved, indicating increased resistance to stress and better emotional regulation.

Liu et al. (2024)	• Quasi-experimental mixed-methods research
	  ○ Survey
	  ○ Interviews
		Students who participated in an art intervention had lower stress levels and experienced less perceived stress and tension compared to students who did not participate.

Salzano et al. (2013)	• Quasi-experimental survey research	Collaborating on making a quilt (collage of fabric scraps) as a team activity led to a significant decrease in burnout scores and cynicism among hospice caregivers, as well as a significant increase in the experience of social support after the art intervention.

Toyoshima et al. (2011)	• Quasi-experimental research
	  ○ Survey research
	  ○ Physical measurements
		All creative activities resulted in a significant decrease in anxiety. Playing the piano is significantly more effective in lowering cortisol levels and reducing stress than other creative activities such as clay modelling and calligraphy.

Awledat et al. (2023)	• Quasi-experimental survey research	Creative therapy has a significant positive effect on the psychological health of patients who have suffered a stroke.

Nanda et al. (2011)	• Quasi-experimental mixed-methods research
	  ○ Interviews
	  ○ Data analysis
		Realistic nature art in a psychiatric ward leads to a significant reduction in anxiety and agitation among patients.

2. Mental health

In addition to the preventive function of culture, culture (or cultural participation) is also directly associated with mental health. Cultural access is strongly linked to well-being (Grossi et al., 2010; 2011) and access to certain cultural experiences has a positive impact on mental health (Crociata et al., 2014). For example, hospital discharge rates for mental disorders are greatly reduced by, among others, the following forms of cultural consumption: books and newspapers, museums and art exhibitions. This positive link between culture (or cultural participation) and improved mental health or well-being constitutes the second value of culture related to health in this report. In what follows, this is discussed at the individual level – how culture can contribute to a person's mental health – and the studies included are divided based on where culture (or cultural participation) takes place. In their study, Martin et al. (2013) make a distinction between art participation at school, at home and in the community with regard to the role it plays in both academic (motivation, engagement) and non-academic (self-confidence, life satisfaction) outcomes. This study also found that cultural participation – in this case, art participation and within school art participation (school), parent-child art interaction and art resources (home) and participation in and attendance at art events (community) – makes a positive contribution to the mentioned mental outcomes mentioned. This report adopts this three-part classification – with the addition of work to the school category – and discusses below the effect of culture (1) at school or work, (2) at home or (3) in the community on the mental health of individuals. In addition, culture can also play a role in or contribute to the context of care and the institutions within this sector. This context is discussed in a separate section of this report (see '6 Recovery – care').

On the one hand, the first category consists of culture at school and how it can improve the mental health of pupils. Culture can be part of a school context in various ways: as part of the curriculum, in the form of art therapy or as an after-school programme. In each of these forms, culture contributes to the mental well-being and mental health of participating

pupils. Art classes, for example, are unique needs-promoting environments that facilitate pupils' well-being at school (Clarke & McLellan, 2021). They provide a sense of belonging, emotional autonomy, more positive feelings and self-competence among pupils and are a medium for the self-regulation of their emotions. Secondly, art therapy also often takes place within the school and has a positive influence on the (sense of) well-being (Hannigan et al., 2019; Moula, 2021) and the social-emotional and mental health (McDonald et al., 2019) of pupils. Art therapy can be introduced at school in a kind of emotional curriculum that focuses on awareness of mental health issues and promotes well-being and inclusivity among young people (Hannigan et al., 2019). For children, cultural activities such as storytelling, drawing, puppet shows and songwriting have a major impact on their health and well-being (Moula, 2021). By participating in art therapies, they can express their experiences and feelings in a way that would verbally probably not be possible. In addition, they experience positive emotions, engagement, relationships, meaning and fulfilment, which are stimulants of well-being and which art therapy can potentially activate. Finally, culture also contributes positively to the mental health of young people as an after-school programme. In Kenya (Sub-Saharan Africa), for example, a short art and reading group intervention with challenging school material reduced participants' depression and anxiety symptoms (Osborn et al., 2023). This reduction was greater for young people who already experienced elevated depression and anxiety symptoms prior to the intervention.

On the other hand, culture can also have a positive influence on the mental health of employees – both managers and subordinates – in a working environment (Theorell et al., 2013; Romanowska et al., 2011). There is a positive correlation between frequent cultural activity at work and good mental health among employees (Theorell et al., 2013). This association is stronger for emotional exhaustion than for depressive symptoms. The more frequent the participation in cultural activities at work – consisting of organised moments for films, theatre, concerts and exhibitions – the less emotionally exhausted employees are, which benefits their mental health. In addition, culture offers added value when organising programmes in a work environment. For example, following an art-based leadership programme has a stronger long-term promoting effect on the mental health (emotional exhaustion, sleep disorders and depressive symptoms) of participating subordinates and managers in comparison to when such a programme is organised in a conventional way (without a cultural element) (Romanowska et al., 2011).

With regard to cultural consumption at home, the research by Armstrong and Ross (2022) is a case in point. They studied the effect of an art intervention – in the form of a box containing

resources and guided art activities to do together at home – on the well-being of and attachment between parents and their young children (aged 0 to 3 years). Through this form of cultural participation, parents experienced an improvement in their own wellbeing and also reported benefits for the attachment relationship with their child due to the moments of connected interaction that this cultural activity created.

The third and final place where culture can contribute to individuals' mental health is in the community itself. Participation in arts programmes and courses, for example, improves the mental health and wellbeing of the individuals involved (Kelaher et al., 2014; Rapp-Paglicci et al., 2011; Secker et al., 2017). Another example is the finding that children's involvement in cultural community activities is important for their mental health (Yamakoa et al., 2021). When they attend local festivals, this is associated with fewer behavioural difficulties and more pro-social behaviour. Larger events such as the European Capital of Culture also have a positive effect on mental well-being (West & Scott-Samuel, 2010). In addition, it is not only cultural participation that is relevant, but also how frequently it occurs. Research by Block et al. (2022) showed that active participation in the performing arts contributes to the positive mental health of individuals (even after controlling for other leisure activities and certain personality traits). However, more occasional cultural participation (less than once a week) is not associated with the benefits of participation. Those who actively participate in the performing arts on a daily basis score highest in terms of mental health.

Some of the studies included in this report transcend the mentioned categories and include both cultural participation at home and in the community in their research. Grossi et al. (2012) argue that cultural access has a decisive impact on individual psychological wellbeing. In this relationship between culture and well-being, clear gender differences are also found (Grossi et al., 2013). For example, participation in so-called highbrow cultural activities contributes to the subjective well-being of women, while no effect was found for men. Furthermore, highbrow cultural activities (e.g. attending jazz and classical music concerts or visiting museums) contribute more to women's subjective well-being than other leisure activities (e.g. going to the cinema or rock concerts and watching or practising sports). Another example is the research by Tymoszuk et al. (2021), in which different profiles in the population are distinguished based on active and receptive art participation. These profiles have different characteristics and also experience different effects of cultural participation on their mental and social well-being. In general, cultural participation is associated with higher levels of well-being (also with greater social connectedness and lower chances of intense social loneliness). However, among the most strongly engaged group of omnivores

– operationalised in this study as people who frequently participate in almost all art activities – there is a positive correlation between greater art participation and depression (and intense emotional loneliness). This negative correlation is not found among low engagers – a group whose main cultural participation consists of occasional reading (44%) – and receptive consumers – a group that often reads, listens to music and engages in popular receptive arts activities such as film, live music, theatre, exhibitions and museums.

Table 5: Summary of studies included on mental health as a health value of culture

Author (year)	Research method used	Main findings
Crociata et al. (2014)	• Quantitative research ○ Statistical analysis of secondary data	Discharge rates for mental disorders are significantly influenced by certain forms of cultural consumption. This cultural access contributes to reducing mental health problems and lowering public health expenditure.
Martin et al. (2013)	• Longitudinal survey research	Art participation at school, at home and in the community has a significant positive influence on students' (non-)academic mental health outcomes.
Clarke & McLellan (2021)	• Case study • Interviews	Arts curricula play a significant role in supporting pupils' (hedonic and eudaimonic) well-being. In addition, pupils experience a deep sense of connection and positive emotions during their arts participation.
Hannigan et al. (2019)	• Literature review • Descriptive analysis	Creative arts therapies contribute to promoting inclusive school cultures and improving pupils' well-being by integrating an emotional curriculum that promotes awareness of mental health issues and inclusivity.

Moula (2021)	• Mixed-methods research
	  ○ Randomised controlled study design
	  ○ Interviews
		Creative activities have a significant positive impact on children's wellbeing by helping them share emotional expressions, promote group bonding, and develop a sense of empowerment.

McDonald et al. (2019)	• Mixed-methods research
	  ○ Survey
	  ○ Interviews
	  ○ Focus group
		Art therapy promotes the mental health of primary school children. It helps them reduce stress, improve behaviour and process emotions, especially by creating art and reflecting on their feelings.

Osborn et al. (2023)	• Experimental survey research (randomised controlled trial)	The art literacy intervention 'Pre-Texts' reduced depression and anxiety symptoms in Kenyan adolescents, especially in young people with initially elevated symptoms.
Theorell et al. (2013)	• Longitudinal survey research	Cultural activities at work are associated with lower emotional exhaustion among employees, especially during periods of low unemployment.

Romanowska et al. (2011)	• Quasi-experimental quantitative research
	  ○ Survey
	  ○ Physical measurements
		Leaders and their subordinates in the arts-based leadership programme showed significant improvements in mental health, stress management and performance-related self-esteem compared to the conventional group.

Armstrong & Ross (2022)	• Case study • Action research • Interviews	The art intervention at home with art boxes contributes to improved parent-child bonding, more playful interactions and increased well-being among parents and babies.

Kelaher et al. (2014)	• Mixed-methods research
	  ○ Survey
	  ○ Individual conversations
		Community art programmes led to improvements in the psychological well-being of participants from disadvantaged populations.

Rapp-Paglicci et al. (2011)	• Quasi-experimental survey research	There are reductions in internal and external mental health problems – as well as an increase in academic self-confidence – among young people at risk of negative outcomes who participated in a programme combining culture (art) and self-regulation skills.
Secker et al. (2017)	• Qualtitative thematic analysis	Creative aspects of art participation – playful experimentation and inspiration – play an important role in promoting mental well-being.

Yamakoa et al. (2021)	• Cross-sectional survey research	Children who participated in local cultural activities, such as festivals, exhibited fewer behavioural problems and higher prosocial skills during the COVID-19 pandemic. This points to the importance of cultural participation for children's mental health.
West & Scott-Samuel (2010)	• Case study • Qualitative research ○ Participatory workshops	The Liverpool European Capital of Culture programme has both positive and negative influences on mental well-being. This research identified 14 themes, resulting in 33 recommendations for optimising the programme's impact.
Block et al. (2022)	• Longitudinal survey research	Frequent participation in performing arts (such as music, dance and theatre) is associated with higher levels of positive mental health in young adults.
Grossi et al. (2012)	• Cross-sectional survey research	Cultural participation is, after health status, the most important factor influencing psychological well-being. Various factors, such as access to culture and the presence of diseases, play a role in determining psychological well-being and stress.
Grossi et al. (2013)	• Cross-sectional survey research	Cultural participation has a significant influence on the psychological well-being of both men and women. Men report higher levels of well-being and cultural participation than women.
Tymoszuk et al. (2021)	• Cross-sectional survey research	More arts participation is associated with higher levels of well-being and social connectedness and a lower risk of intense social loneliness. The most intensive arts participants (‘omnivores’) also showed a positive association with the prevention of depression and intense emotional loneliness.

2.1. Possible explanations for the relationship between culture and mental health

When discussing the positive effect that culture has on individuals' mental health, the question about what the underlying mechanisms are, arises. Or rather: why does cultural participation lead to better mental health? Several of the studies included in this report that find such a positive association offer some suggestions for possible explanations. The mentioned explanatory factors are not mutually exclusive. Furthermore, none of the studies claim that the elements below fully explain the positive link between culture and mental health, and multiple factors may therefore play a role in causing this positive relationship between the two. The reader should also bear in mind that it is difficult to prove causality empirically, as people usually cannot be observed in a perfectly randomised experimental control setting. The latter does not detract from the explanation offered, but it does caution against interpreting it too definitively.

An often-cited explanatory factor for the positive mental health effects of culture is creativity. Promoting creativity is seen as a direct effect of cultural activities themselves in terms of the impact such activities have on the mental health of participants (Theorell et al., 2013). Creativity is put forward as an influential factor in improving mental health (Osborn et al., 2023). In art therapy, creativity is also one of the essential therapeutic elements that ensures, among other things, safe emotional expression (Lee, 2015), enjoyment of the activity (Csikszentmihalyi (2013) in Moula, 2021, p. 23) and a stronger sense of empowerment (Sassen, 2012). In the study by McDonald et al. (2019), the majority (± 70%) of children who participated in art therapy mentioned creating and/or thinking about art as the specific aspect of the therapy sessions that they found useful. This is consistent with previous research that suggests that creating art is central to the therapeutic process in art therapy (Czamanski-Cohen & Weihs, 2016; Malchiodi & Crenshaw (2015) in McDonald et al., 2019, p. 135; Springham & Huet, 2018). According to Secker et al. (2017) – who researched the specific contribution of creative processes to the positive impact on well-being – creativity offers opportunities for playful experimentation and inspiration. These elements, in turn, contribute to promoting the mental health of those involved. Experimentation, for example, enables individuals to discover colours, and increased colour awareness has a positive impact on mental wellbeing (Parkes & Volpe, 2013; Secker et al., 2017). Inspiration is also positively associated with certain aspects of well-being: positive affect, life satisfaction, vitality, self-actualisation, psychological health, happiness, confidence and optimism (Buheji et al., 2014; Thrash et al., 2010).

A second explanatory factor concerns the various social influences exerted by culture, which can have positive effects on individuals' mental health. The reviewed literature cites various social contributions of culture as possible explanations for these positive effects on mental well-being. These include: enhanced (group) cohesion – and consequently a better psychosocial environment – (Cuypers et al., 2011a; Theorell et al., 2013), social bonding and collective flow (Block et al., 2022), connected moments of interaction (Armstrong & Ross, 2022), social support (Grossi et al., 2013) – due to the feeling of belonging to a group, the expectations of making friends and social interactions, all characteristic of participation in social groups (Coleman, 1993) –, a supportive and collaborative environment (Kelaher et al., 2014), a sense of community and the building of stronger networks (Yamakoa et al., 2021). Such social consequences – read: values – of culture are discussed in detail in another sub-report in this series (Goemaere et al., 2025). It is possible that part of the positive association between culture and mental health can be explained by the social impact of culture, which in turn influences the mental health of individuals.

Other explanatory factors for the positive link between culture and mental health mentioned in the studies included are: beneficial psychological and biological effects (Grape et al., 2002; Sandgren & Borg (2009) in Theorell et al., 2013, p. 282; Kreutz et al., 2004), beneficial hormonal responses (Quiroga Murcia et al. 2009), getting the feeling that life is worth living, which leads people to adopt health-promoting lifestyle habits (Clift & Hancox, 2001; Cohen, 2009), a sense of competence, purpose and motivation (Wheeler & Feank, 1988), individual agency and connectedness with the environment (Coholic et al., 2020; Moula, 2020; Murphy, 2018), understanding values and culture (Yamakoa et al., 2021) and that cultural activities are part of a good (working) environment and that this environment in itself explains the positive effect (Theorell et al., 2013).

3. Physical (and mental) health

A second main component of health – in addition to the mental aspect already discussed – is the physical health of individuals. Culture can also be linked to this health component. However, social science research rarely looks at physical health alone. Often, combinations of physical and mental indicators are included in the analysis, or a general health indicator is examined. More details on measuring physical and mental health as a value of culture within the studies included in this report can be found in the appendix (see section 7). The following

section therefore discusses the relationship between culture and general health, i.e. both physical and mental health.

Population studies in Switzerland found no direct link between voluntary active participation in the arts (playing an instrument or singing, painting, sculpting) or passive cultural participation (going to the cinema, theatre, opera and exhibitions) on the one hand, and self-reported long-term physical health and life satisfaction on the other (Węziak-Białowolska, 2016). Population studies in Poland also did not found a confirmation of the expected benefit of passive cultural participation for individuals' physical health (Węziak-Białowolska & Bialowolski, 2016). The results did reveal an associative link between attending cultural events and self-reported general health. However, these results do not rule out the possibility that participation, both active and passive, in cultural and art-related activities can have a positive effect on health in the short term, when these activities are implemented under the guidance of expert therapists for the treatment of specific health problems (Węziak-Białowolska, 2016) or that participation in other types of activities – i.e. more active, cultural, creative and art-related activities – may not be beneficial to individuals' health (Węziak-Białowolska & Bialowolski, 2016).

Other research did find a clear link between 'spontaneous' culture or cultural participation and physical and mental health. Jones et al. (2013a), for example, observed positive changes in the general and mental health and the personal and social well-being of individuals who participated in activities at a community centre (including art, crafts and other leisure activities). More specifically for cultural participation, there is a link between the use of cultural services and participation in cultural activities on the one hand, and good self-reported health and quality of life on the other (Nenonen et al., 2014). Population research from Denmark confirms that receptive participation in arts and cultural activities (concerts/music events, choir/band/orchestra, theatre/performing arts, cinema, museum/exhibition, library) is beneficial to individuals' health (Jensen et al., 2023). People who participate more often in art and/or culture report better health than people who participate less. Cuypers et al. (2011b) also state in their research that participation in receptive and creative cultural activities is associated with good health, high life satisfaction and low anxiety and depression scores. For men, the link between receptive cultural activities and health outcomes appears to be stronger, while for women, active participation in creative cultural activities seems to be more decisive for their health.

The studies included in this report mention various possible explanations for the link between culture and health. For example, psycho-neuro-immunological theories may be

relevant (Grape et al., 2009; Johansson et al., 2001). One possible cause of the positive influence of participation in cultural activities is stress reduction, which reduces oxidative DNA damage and the formation of 8-hydroxydeoxyguanosine, of which elevated levels are associated with the development of disease (Konlaan et al., 200). Another possible explanation lies in the social aspects of culture. Self-reported health is influenced by, among other things, social participation (Lindström et al., 2004). Being involved in cultural activities is a social event that connects people, communities and cultures (Dissanayake, 1995). It promotes feelings of connectedness and togetherness, which in turn are essential elements for improving health and well-being (Jensen et al., 2020; Tomlinson et al., 2018). Promoting arts and culture to improve health and wellbeing can therefore also include goals related to increasing social participation and social connection (Jensen et al., 2023). This social explanation for the link between culture and health – also mentioned in the above section on mental health – is discussed in detail in the report on the social value of culture (Goemaere et al., 2025).

In addition to research into the impact of culture on individual health, this relationship can also be examined at the community level. McCrary et al. (2022) investigated the relationship between performing arts activities (both active and receptive participation) and health outcomes, both at the community level. In the 500 cities surveyed in the United States, they found no clear links between performing arts activity and health and disease outcomes, and therefore no evidence to support the idea that performing arts help to create healthy communities. According to them, these results should not be interpreted as conclusive insights into the influence of performing arts activity on health at the community level, but as an impetus to refine and harmonise the current dissimilar evaluation methods. Measuring this social phenomenon is complicated in the sense that the links between cultural participation and public health outcomes are more complex than any study design or set of variables can capture (Cuypers et al., 2011b).

The framework developed by Davies et al. (2014) – based on the results of a thematic analysis of various interviews – covers the different health outcomes of cultural participation (for pleasure, entertainment or as a hobby) at both the individual and community level. Active and receptive cultural participation – consisting of performing arts, visual arts, design and crafts, electronic/online/digital arts, literature, festivals and fairs – has consequences for mental, physical and social health. The social health outcomes – issues such as social isolation, networks and social capital – have already been discussed in the report on the social value of culture (Goemaere et al., 2025). The link between arts participation and mental

and physical health is a combination of positive and negative outcomes. For mental health at the individual level, the following are positive outcomes: happiness, (self-)confidence, enjoyment and pleasure, reduced stress and relaxation, self-expression and reflection, achievement and satisfaction, feeling respected and valued, compliments and recognition, energy and motivation. The negative mental health outcomes consist of: frustration, criticism, nervousness and anxiety, overwhelm, confrontation, disappointment and emotional exhaustion. Greater resilience to mental health problems and the creation of good memories are positive mental health outcomes at both the individual and community level. Being marginalised because one is artistic and unwanted responsibility are the negative variants of this. In terms of physical health, walking, standing, warming up and performance-related movement (including dance) are positive individual outcomes. The negative physical health outcomes at the individual level consist of physical pain and injury, alcohol, smoking and drugs, and fatigue. Another negative physical health outcome, but at both the individual and community level, is the fact that some art materials are toxic. Other themes that emerged from the results are the so-called 'health determinants' and consist of outcomes related to art itself, economy, knowledge, and identity. In general, this framework focuses on the general population and the art forms they practise in their daily lives, rather than looking at specific target groups or specific art programmes. This study confirms the idea that cultural participation can make a difference to the general health of the community.

Finally, according to Clift (2012), in the context of this growing international acceptance of the idea that participation in culture is beneficial to well-being and health, it is also essential that these insights serve as a basis for introducing evidence-based practices into, among other things, healthcare. As described above, various studies have recorded the benefits of culture for health and provided evidence based on practice. However, the future challenge lies in creating evidence-based practice. It is very important to incorporate insights from scientific research into practice – through policy, for example – if the goal is to achieve real public health benefits.

Table 6: Summary of studies included on physical and mental health as a health value of culture

Author (year)	Research method used	Main findings
Węziak-Białowolska (2016)	• Longitudinal survey research	There is no significant causal influence of cultural participation on self-reported health and well-being outcomes within the Swiss population. Cultural

		activities, regardless of their nature or frequency, do not improve health or well-being in the long term.
Węziak-Białowolska & Bialowolski (2016)	• Longitudinal survey research	There is a positive correlation between cultural participation and self-reported health. No evidence was found for a causal relationship or a positive effect on physical health. Passive participation in cultural events offers little justification for health promotion.
Jones et al. (2013a)	• Longitudinal survey research	Participation in (including cultural) activities in a community centre is associated with improvements in general health, mental health, social well-being and healthy lifestyle habits.
Nenonen et al. (2014)	• Cross-sectional survey research	Both the use of cultural services and participation in cultural activities are positively associated with self-reported health and quality of life. The associations are stronger for the use of cultural services.
Jensen et al. (2023)	• Cross-sectional survey research	Participation in artistic and cultural activities is positively associated with a better self-reported health. Individuals who participated in cultural activities more frequently reported a good health more often.
Cuypers et al. (2011b)	• Cross-sectional survey research	Participation in cultural activities, both active and receptive, is significantly associated with a better perception of health, lower levels of anxiety and depression, and higher life satisfaction. There are gender dependent differences in these effects.
McCrary et al. (2022)	• Secundary data analysis	The study on the relationship between performing arts activity and health outcomes at the community level in 500 American cities found no significant associations, except for chronic kidney disease, coronary heart disease, and stroke, whose clinical relevance was questionable.
Davies et al. (2014)	• Interviews	The developed thematic framework shows that arts participation has a wide range of effects, including positive (and negative) mental, social and physical health benefits, as well as broader determinants such as economic and identity-related benefits.

Clift (2012)	• Literature review	Participation in creative arts is beneficial to health and well-being, but more robust evidence is needed to translate practice-based research into evidence-based practice.

4. Old age

4.1. The relationship between culture and the health of elderly

Older people are more often confronted with various health problems. Since only a minority of the older adult population (65+) ages 'optimally' (Aldwin & Igarashi, 2015; Whitley et al., 2016), research into the link between culture and health often focuses on this age group. This report first discusses research that examines the role of culture in the process of 'healthy (or healthier) ageing' and investigates whether (spontaneous) cultural participation has an impact on the (mental and physical) health of older people.

Attending theatre, for example – a receptive cultural activity – has a positive impact on the well-being of older people because it improves their mood and stimulates positive feelings (Meeks et al., 2020). Going to theatre performances is a social, cognitive and affective experience for older people that transcends pure entertainment. Attending the theatre improves the mood of older people because it creates opportunities to interact with others, experience a sense of connection with the community and become completely absorbed in the moment, a state known as 'flow'. These three aspects correspond to known dimensions of well-being (Whitley et al., 2016). Their experiences during and after theatre performances can therefore be considered active and variable processes that maintain and promote well-being outcomes (Meeks et al., 2020). Not only theatre, but also a wider range of receptive cultural activities – such as attending concerts or the opera and visiting the cinema, an art gallery, an exhibition or a museum – have a positive impact on the physical and mental health of older people. Receptive cultural participation reduces for example physical pain (Miki et al., 2024) and is a risk-reducing factor for the development of depression in older age (Fancourt & Tymoszuk, 2019). The pain-reducing effects of culture are thought to be particularly – or at least more strongly – present among socially isolated older people (people who are not married or cohabiting with a partner and have less frequent contact with close family members) (Miki et al., 2024). The risk of depression is also lower the more often

people participate in receptive cultural activities (Fancourt & Tymoszuk, 2019). Rena et al. (2023) also found evidence in their research that receptive cultural participation is positively related to healthy ageing. Frequent participation in culture – attending a film, art museum or gallery, art or craft fair, or live performance such as a concert, play or lecture at least once a month – is associated with a higher chance of healthy ageing compared to older adults who never attend such receptive cultural activities. In addition, this study also found evidence for the link between receptive cultural participation and higher chances of good physical functioning in this culturally active group four years later.

Rena et al. (2023) explain this positive influence of receptive cultural participation on the health of older adults based on the active aspects that such activities involve. Receptive cultural activities often require older adults to leave their homes and thus be physically active, whereas participatory cultural activities can more often be practised at home. Such light physical activity is associated with benefits for healthy ageing (Durstine et al., 2013; Potter et al., 2011; Sanders et al., 2019; Schuch et al., 2018). According to Meeks et al. (2020), it is particularly important that the receptive cultural activity creates a sense of community and social connection and stimulates interest and focused attention. This contributes to maintaining or regulating positive feelings among participants and, in turn, promotes their psychological and social well-being. Fancourt and Tymoszuk (2019) also argue that the association between receptive cultural participation and a lower risk of depression can be attributed to various components of this cultural participation, such as social interaction, mental creativity, cognitive stimulation and light physical activity. In addition, the impact that a particular receptive cultural activity has on health varies from person to person (Meeks et al., 2020). Personality traits can influence not only the type of activity in which an individual participates receptively, but also the affective benefits they derive from it (Kahlbaugh & Huffman, 2017).

Furthermore, changes in older adults' participation in cultural activities – such as painting and playing a musical instrument – go hand in hand with changes in their functional capacity and emotional well-being (Liddle et al., 2012). When people stop actively participating in cultural activities, older adults are more likely to experience some decline in their mental health. However, when they (re)start such cultural activities, this increases their chances of improved emotional well-being. In general, participation in valuable and meaningful activities has a protective effect against depression in older people (Fiske et al., 2009). The psychological benefits of artistic activities are thought to stem from a heightened sense of

self-esteem, purpose, competence and control that people experience through participation (Bedding & Sadlo, 2008; Fisher & Specht, 1999; Howie et al., 2004).

In addition, research that includes both forms of cultural participation, shows that receptive and active cultural participation have a beneficial effect on the health of older people. The results of Noguchi and Shang (2023) show that active participation in the arts – participating individually or in a group in a musical performance or practising singing, dancing, painting, crafts, photography or traditional (Japanese) cultural activities such as poetry (haiku/tanka/senryu), flower arranging (kado), tea ceremony (sado) and calligraphy – is associated with better psychological well-being in terms of relationships, performance, positive emotions, engagement and meaning. Receptive art participation among older people – visiting cinemas, museums or art galleries and attending a theatre performance, concert or opera – also improves their psychological well-being in terms of positive emotions, engagement and meaning. Involvement in art and cultural activities (active cultural participation) or exposure to them (receptive cultural participation) improves the psychological well-being of older people. In addition to the positive impact on their mental well-being, recreational art practice – voluntary art practice as part of daily life, for pleasure, entertainment or as a hobby – also has the potential to improve the general health of older people (Davies et al., 2023). Just as older people are often encouraged to get enough exercise to improve their physical health, arts-based recreational activities, programmes and events (e.g. creative writing, book clubs, painting, pottery, knitting, colouring, photography, playing a musical instrument, singing, dancing, art classes, attending concerts) should also be encouraged to improve their overall health and mental well-being.

Table 7: Summary of studies included on the physical and mental health of elderly as a health value of culture

Author (year)	Research method used	Main findings
Meeks et al. (2020)	• Longitudinal survey research	Participation in theatre performances leads to increased positive feelings and improved well-being among people aged 60 and older (and predicts changes in well-being two years later). Social engagement, a sense of belonging and 'flow' are predictors of this positive affectivity.
Miki et al. (2024)	• Longitudinal survey research	Cultural participation leads to a decrease in pain prevalence among socially isolated older adults, with the greatest reduction for those who are

		unmarried or have less contact with close family members.
Fancourt & Tymoszuk (2019)	• Longitudinal survey research	There is a dose-response relationship between the frequency of cultural participation and the risk of developing depression among older adults. This means that the more often people participate, the stronger the positive effect on their mental health will be. Participating in cultural activities once every few months or more leads to a lower risk of depression.
Rena et al. (2023)	• Longitudinal survey research	Receptive art activities are associated with a higher chance of healthy ageing four years later. Participatory art activities showed no correlation with healthy ageing. Receptive cultural participation may offer greater benefits for physical health than participatory or active participation.
Liddle et al. (2012)	• Longitudinal survey research (population)	Starting artistic activities such as painting or music making is related to improvements in the daily functionality and emotional well-being of older women (80+). Discontinuing these activities is associated with a significant decline in their mental health-related quality of life.
Noguchi & Shang (2023)	• Cross-sectional observational survey research	Active art participation leads to higher scores in all five domains of psychological well-being (PERMA model). Receptive art participation has a positive influence on positive emotions, engagement and meaning, but not on relationships and performance.
Davies et al. (2023)	• Cross-sectional survey research	Being involved in recreational art activities is associated among older adults with higher scores on the mental well-being and general health scales compared to those who are not involved in art.

4.2. Health-promoting cultural projects and interventions

In addition to the above more general research into the relationship between culture (or cultural participation) and health among older people, research is also often conducted into specific cultural projects or interventions that aim to stimulate the positive effects of cultural participation on their health. The (study and) development of such cultural projects and interventions is important, as the proportion of older people participating in culture is generally lower than in younger age groups (Statistics Flanders, 2025).

The two most common types of culture in the studies included in this report with regard to setting up projects and interventions to positively influence the health of older people are (1) music and (2) visual arts and museums. Firstly, music participation has many positive effects on older people, including their perceived health and mental well-being. In the study by Barbeau and Cosette (2019), older people who made music through participation in an intergenerational community band experienced physical and psychological benefits and improved their quality of life, among other things. Physically, they experienced improvements in their breathing and physical endurance. Psychological benefits included an increase in well-being, cognitive stimulation, a sense of enjoyment, purpose and identity. Not only making music themselves, but also attending musical performances has a positive impact on the physical and mental health of older people. For example, attending chamber music concerts led to an increase in mood and energy and a decrease in the pain experienced by older people (Clements-Cortés, 2017). Important for these positive health outcomes is that participation happens in an active manner (e.g., clapping, singing, and waving hands).

Secondly, museums can play an important role in offering museum-based programmes for older adults to improve their psychological well-being (Thomson et al., 2018). This is due to the improvement of their positive emotions through creative processes associated with learning new things and acquiring skills, and the formation of social capital through co-productivity, the exchange of ideas, a strengthened sense of community and belonging. This role of museums in improving the psychological well-being of older people can be achieved, on the one hand, by offering certain things. The research by Yi et al. (2024) suggests, for example, that showing virtual museum scenes or old objects can effectively increase the subjective well-being of older people suffering from various health problems. On the other hand, a museum can be used in art therapy, where viewing and discussing art in a group and shared reminiscence has therapeutic benefits for older people (Bennington et al., 2016). An art museum can be a powerful and inspiring environment for art therapy, where viewing art creates opportunities to discover and express emotions. The opportunity to safely explore

emotions, thoughts and memories within a group increases the well-being of participating older adults. Reminiscence therapy increases positive social interaction and psychological well-being (Bohlmeijer et al., 2007; Chao et al., 2006). The value of the group process and memory therapy – sharing, being listened to and group cohesion – are important for the well-being of older people (Chiang et al., 2010; Wadensten, 2005).

In addition to mental health benefits, museums can also play a role in projects that promote the physical health of older people. For example, the 'Thursday at the Museum' project in Montreal (Canada) – a session in which older community members met weekly for three months to create art in a special space at the Montreal Museum of Fine Arts – improved both the physical and mental health of participants (Beauchet et al., 2020; 2021). The well-being, quality of life and energy levels of participants increased after, during and at the end of the session, respectively (Beauchet et al., 2020). The process of vulnerability in older people was reversed in the sense that after the session there were more vital and less vulnerable participants (Beauchet et al., 2021). A similar example is the participation of older community residents in a weekly participatory art-based activity, also for a total of three months, conducted at both the Montreal Museum of Fine Arts (in Montreal, Canada) and the Fuji Museum in Tokyo (Japan) (Beauchet et al., 2022). Here too, this participatory art-based activity improved the mental and physical health of participating older community residents. Participation in these art-based activities led to positive experiences that promote well-being and the complementary benefit of improved quality of life. The research by Hayashi et al. (2023) studied this cultural project at the Fuji Museum in Tokyo (Japan) and confirmed (in part) the beneficial effects on the quality of life and vulnerability of participants.

Furthermore, (visual) art can also be used outside the context of museums for the health of older people. Older people can be empowered through participation in culturally appropriate art groups, as in the study by Liu et al. (2023a) for older people with an increased risk of depression who participated in a calligraphy programme. Another example is that even in the context of a prison, art can be used as a geriatric intervention as a recreational and therapeutic tool (de Guzman et al., 2010). In this case, creating art provided a source of income, enjoyment of leisure time, reminiscing, learning something new and a sense of fulfilment. In this way, traditional art creation was used as recreational therapy for the participating elderly people in penitentiary institutions to address their perceived low self-esteem. Self-esteem is an important factor in the development and maintenance of mental well-being (Macinnes, 2006) and is often low among older people (Twenge & Campbell, 2002).

Of course, music and visual arts (whether in museums or elsewhere) are not the only types of culture that can be used for health-promoting cultural projects and interventions aimed at older people. Various art forms (dance, singing and visual arts) support the psychosocial well-being of older people (Liu et al., 2023b). Cultural projects aimed at improving the mental health of older people can be prescribed or used as therapy. Arts on Prescription – professionally supervised courses in visual arts, photography, dance and movement, drama, singing or music prescribed by a healthcare provider – has a positive impact on the mental well-being of participating older people (Poulus et al., 2019). These prescribed programmes promote certain dimensions of psychological well-being, such as the empowerment of older people, their personal growth and achievement, and the feeling of having direction and purpose in life (Poulus et al., 2019; Ryff, 1989). Loneliness – present in more than a third of people over 75 (KU Leuven, 2024) and in an eighth of older people between 65 and 74 (Flemish Council for Older People, 2022) – can also be addressed by stimulating relationship development through such a programme. Cultural therapy, based on art and music programmes for example, reduces the level of depression in older age groups (Im & Lee, 2014). Groot et al. (2021) investigated 18 different projects that focus on active art participation among older people. Engaging in various art activities – rather than merely viewing or discussing art – such as dance, music, theatre, visual arts, video and spoken word promotes the experienced well-being and improves the quality of life of older people. Participants attributed the increase in positive feelings (having fun, laughing and feeling better), personal and artistic growth (learning, being challenged and overcoming barriers) and meaningful social interactions to their active participation in the arts. In addition, they experienced a subjective improvement in their physical health due to feeling fitter and more energetic. Phinney et al. (2014) also demonstrated the physical health benefits of active participation in the arts in their research. Participants of the Arts and Health Seniors programme, which included workshops with various activities such as puppetry, dance, writing (including digital media), digital storytelling, visual and textile media (silk painting, tile mosaics, quilting, etc.), experienced, among other things, an improvement in their perceived health and experience of pain.

Finally, it is not only important to stimulate the positive impact of cultural participation by organising cultural projects and interventions aimed at older people. The way in which such projects are organised is also essential to ensure that the intended positive health effects for this target group are effectively achieved. Some of the studies included in this report offer suggestions as to which aspects of the cultural projects and interventions studied ensure that participation improves their health. These possible explanations can therefore serve as

points of attention when organising future projects and interventions relating to culture and the health of older people.

The health benefits of culture stem from an interaction between well-being, quality of life and physical health (Beauchet et al., 2021). The positive experiences generated by cultural activities improve well-being, which in turn benefits the quality of life and ultimately the physical health of older people (Beauchet et al., 2020). A possible side effect of cultural participation among older people is that they will adopt a healthier lifestyle or use the programme in which they are involved as a coping strategy that distracts them from their current health problems (Phinney et al., 2014). The most common explanations from the studies included in this report regarding the health benefits of cultural projects for older people can be grouped into the following three categories: (1) the emotional, (2) social and (3) learning or creative components of the cultural projects studied.

With regard to the emotional component, participation in art, for example, can trigger emotions and provide a mechanism for expressing and resolving them (Beauchet et al., 2020; Bygren et al., 1996; Camic et al., 2019; Clow & Fredhoi, 2006; Glass et al., 1999; Stuckey & Nobel, 2010; Wilkinson et al., 2007). Art therapy is an effective method for reducing depression because it enables participants to express their suppressed feelings (Lee & Kim, 2008; Yun (2000) in Im & Lee, 2014, p. 456). Music therapy also has depression-reducing effects in older adults because music brings out emotions, which leads to behavioural changes (Choi (1999) in Im & Lee, 2014, p. 457), releases suppressed feelings and offers opportunities to express them independently (Yang, 2006), making participants feel psychologically comfortable (Im & Lee, 2014).

The social component of cultural participation is a second possible explanation for the positive impact on the health of older people. When an organised cultural programme takes place in a group setting, for example, it helps to reduce social isolation among older people and offers them connection and social support (Bygren et al., 1996; Clow & Fredhoi, 2006; Glass et al., 1999; Stuckey & Nobel, 2010; Wilkinson et al., 2007). Creative group activities can provide a safe space for social interaction, collaboration and personal expression. Sharing stories and experiences helps to connect the past and the present, which can contribute to a greater sense of hope and well-being and reduce the risk of depressive feelings. A welcoming environment and participant engagement are important mechanisms in this social component. When older adults feel welcome in the environment, they can connect with others and feel supported in their psychosocial well-being (Liu et al., 2023b). Engagement facilitates, among other things, connection, transformation and a sense of humanity. Older

people need a warm and inclusive environment that facilitates social connectedness and personal growth, despite their challenges of shrinking social networks, increasing loneliness, vulnerability and a reduced sense of meaning (All-Party Parliamentary Group on Arts Health & Wellbeing, 2017; Van Campen, 2020).

Finally, the learning or creative component encompasses the idea that the sensory experience of making art unleashes a creative process that stimulates memory, among other things (Beauchet et al., 2020; Bygren et al., 1996; Camic et al., 2019; Clow & Fredhoi, 2006; Glass et al., 1999; Stuckey & Nobel, 2010; Wilkinson et al., 2007). Art, for example, enhances the mental health of older people by offering new learning experiences, creative expression and enjoyable activities (Liu et al., 2023a). Here too, a welcoming environment is important for older participants to grow both personally and artistically (Liu et al., 2023b). Furthermore, the way in which such cultural projects are supervised is important for facilitating gains in mental well-being (Poulus et al., 2019). Supervisors should challenge participants, collaborate with them and encourage them constructively. Prescriptive and directive supervision is best avoided. It is therefore important that the supervision provided focuses on empowering participants and maximising their opportunities for personal growth and (artistic) achievement.

Table 8: Summary of studies included on health-promoting projects and interventions for older people as a health value of culture

Author (year)	Research method used	Main findings

Barbeau & Cosette (2019)	• Quasi-experimental mixed-methods research
	  ○ Interviews
	  ○ Questionnaires
	  ○ Physical measurements
		Participation in a community harmony programme for older beginners resulted in self-reported improvements in physical health, mental health and social interactions.

Clements-Cortés (2017)	• Observation and survey research	Attending chamber music concerts leads to a reduction in pain and an increase in mood and energy among older adults. Active participation (such as clapping and singing) is crucial for the engagement and well-being of participants.

Thomson et al. (2018)	• Mixed-methods research
	  ○ Questionnaire
	  ○ Interviews
		Museum-based programmes, designed as social prescriptions for older adults, improve their psychological well-being.

	○ Diaries	
Yi et al. (2024)	• Mixed-methods research ○ Literature review ○ Survey and questionnaires ○ Interviews ○ Focus groups	Showing virtual museum scenes or old objects can effectively increase the subjective well-being of older people suffering from various health problems. This method can identify their needs and overcome the disadvantages of a traditional museum experience (e.g. limited interaction).
Bennington et al. (2016)	• Mixed-methods research ○ Content analysis and observation ○ Questionnaire	Participation in an art therapy group at a museum had therapeutic benefits for older adults, and their social connectedness and support improved through shared discussions and memories.
Beauchet et al. (2020)	• Quasi-experimental longitudinal survey research	Participatory, art-based activities improve the well-being, quality of life and health status of older adults. Museums can play a crucial role in public health initiatives targeting older populations.
Beauchet et al. (2021)	• Quasi-experimental survey research	Participation in art workshops led to an improvement in the well-being and vulnerability of older people over time.
Beauchet et al. (2022)	• Experimental survey research ○ Randomized Controlled Trial (RCT)	Participation in weekly participatory art activities for three months led to significant improvements in well-being and quality of life among older adults. The participant group showed more vitality and less vulnerability at the end of the sessions compared to non-participants.
Hayashi et al. (2023)	• Experimental survey research ○ Randomized Controlled Trial (RCT)	Productive art participation in a museum improves quality of life, has mixed effects on vulnerability and no significant effect on the well-being of older residents in Tokyo.
Liu et al. (2023a)	• Mixed-methods research ○ Questionnaires ○ Observation ○ Focus groups	Participatory cultural arts programme for older adults in Hong Kong at risk of depression promoted their empowerment through active participation and learning new artistic skills.

de Guzman et al. (2010)	• Descriptive phenomenological research	Creating Puni (traditional Filipino art) as a recreational intervention improved the self-image of elderly Filipino prisoners through income, recreation, memories, re-education and reward.
Liu et al. (2023b)	• Interviews	Participatory art projects contribute to the psychosocial well-being of older adults by promoting social connection, personal growth, relaxation, and a sense of flow. A welcoming environment—through engagement—is essential for promoting the well-being of older adults.

Poulus et al. (2019)	• Mixed-methods research
	  ○ Questionnaires
	  ○ Interviews
	  ○ Focus groups
		Arts on Prescription has a positive impact on mental well-being, creativity and the frequency of creative activities among older people. Participation leads to a sense of purpose and direction, personal growth, empowerment and the development of meaningful relationships.

Im & Lee (2014)	• Survey research (pre- and post-measurement)	Both art and music therapy reduce depression in older people. No such effect was found for cognitive skills.
Groot et al. (2021)	• Narrative analysis	Art participation leads to positive feelings, personal and artistic growth, and meaningful social interactions in older adults, which benefits their well-being.

Phinney et al. (2014)	• Mixed-methods research
	  ○ Questionnaires
	  ○ Group interviews
		Participation in a community-based art programme has positive effects on the physical, emotional, and social well-being of older adults. They experience improvements in their overall health, pain perception, and sense of community.

5. Care and recovery

5.1. Culture in “caring for”

Culture can not only be used for prevention (section 1), mental and physical health (sections 2 and 3) or the health of older people (section 4), but also plays a role in the context of care. Cultural participation improves the well-being of healthcare users (Jensen, 2013). It does not offer a solution for all mental and other health problems, but cultural participation can contribute to recovery and be used for people with specific health needs and/or problems. Moreover, culture is not only valuable for individuals with a particular health problem, but can also contribute to the health of the network surrounding the care recipient. An example of this is that participation in artistic activities (e.g. painting, music, modelling or dance) improves the psychological well-being and life satisfaction of mothers of children with physical, psychological and/or social problems (e.g. mental developmental disorder, autism spectrum disorder, specific learning disorder or Down syndrome) and reduces their levels of anxiety and depression (Çulhacik et al., 2021).

This value of culture in 'caring for' people can be realised in practice by incorporating a particular form of culture into the physical environment of a care institution. Bringing heritage objects from museums, for example, has a positive effect on the (psychological and subjective) well-being and happiness of people who are (temporarily) staying in hospitals or other care institutions (Ander et al., 2013b; Paddon et al., 2014). The pastime offered by this cultural activity provides stimulation and distraction and, in turn, improves their mood, anxiety and sense of trust (Ander et al., 2013b). Both handling, discussing and viewing the objects and the memories that these objects can evoke among participants contribute to the beneficial effect of such a programme and thus also to their well-being and happiness (Paddon et al., 2014). However, the physical occurrence of a particular cultural activity is not a prerequisite for culture to be of value in a care context. The presence of art in the corridors of a hospital, for example, has a positive effect on the patients who perceive it (Karnik et al., 2014). Interacting with or about art – by seeing it, reading didactic labels or talking about it – improves their mood and comfort and reduces their stress and pain levels. On the other hand, culture can also be valuable in the care of people with certain health problems, without cultural participation necessarily taking place within a care institution. Research by Stickley and Hui (2012a) shows that when (former) users of mental health services participated in community art groups, because this was prescribed to them and they were therefore referred by mental health professionals, it provided them with a therapeutic environment and

psychological benefits. They were in a better mood and experienced a stronger sense of belonging, more (self-)confidence, self-esteem and pride (Stickley & Hui, 2012a; 2012b). In addition, this cultural participation in the community offers them an opportunity for self-expression and personal development and provides a distraction from the problems in their lives (Stickley & Hui, 2012a). Moreover, such arts on prescription programmes also offer benefits for the care providers themselves, as they offer an alternative to 'regular' forms of therapy and thus give them more options for supporting people with complex problems (Stickley & Hui, 2012b).

Culture in 'care' is therefore not about curing individuals' existing health problems – some health problems cannot be cured (dementia, for example) or at least not through culture (cancer, for example) – but culture contributes in other ways to the care they receive. In what follows, the other studies included are divided according to the health problems of the care recipients. This report discusses the value of culture in elderly care and in caring for people with dementia, stroke patients, cancer patients and people with chronic conditions.

Table 9: Summary of studies included on 'caring for' as a health value of culture

Author (year)	Research method used	Main findings
Jensen (2013)	• 2 case studies • Interviews	Participation in art activities in both Great Britain and Denmark has a positive impact on participants' well-being and self-confidence, despite differences in approach and context between the two countries.
Çulhacik et al. (2021)	• Experimental survey research	Participation in activity groups involving artistic activities led to significant improvements in the psychological resilience and life satisfaction and a reduction in the perceived burden of care experienced by mothers of children with physical, psychological and/or social problems.

Ander et al. (2013b)	• Qualitative research
	  ○ Interviews
	  ○ Audio recordings of sessions
	  ○ Field notes
		Participation in heritage-related interventions in care institutions led to improvements in patient well-being, including increased positive emotions, reduced anxiety and a renewed sense of identity, with varying degrees of involvement depending on the individual circumstances of the participants.

Paddon et al. (2014)	• Mixed-methods research
	  ○ Interviews
	  ○ Survey
		There are improvements in the well-being and happiness of hospital patients after participating in heritage-in-health sessions involving interaction with museum objects. These interactions promote mood and social interaction.

Karnik et al. (2014)	• Cross-sectional survey research	The majority of patients notice works of art in a hospital, and these contribute to improved mood, reduced stress levels and greater satisfaction with their hospital visit. The use of a diverse art collection has positive effects on patients' well-being.
Stickley & Hui (2012a)	• Interviews	Participants in the Arts on Prescription programme experience a creative and therapeutic environment, leading to social, psychological and professional benefits.
Stickley & Hui (2012b)	• Interviews	Healthcare referrers consider Arts on Prescription to be a valuable service that offers personal and social benefits for clients with mental health problems.

5.1.1. Elderly care

Elderly care is an area where culture is often used. This refers to the context of a residential care centre, nursing home, assisted living facility or other types of care institutions where elderly people stay (temporarily). Cultural participation in elderly care has positive effects on the well-being and health of those involved. It gives them a stronger sense of self-esteem and improves depression (Yao et al., 2019). In addition, cultural participation has a positive effect on the cognitive level of elderly people (Çetinkaya et al., 2019), is beneficial to their well-being (Paolantonio et al., 2020; Roe et al., 2016) and promotes their mental health (Yao et al., 2019).

Culture cares for older people in care institutions through the mental stimulation and social interaction offered by activities such as art therapy (ceramic painting, for example) (Çetinkaya et al., 2019). Both mechanisms improve their cognitive function and life

satisfaction, respectively (Karatay & Akkuş, 2012; Subaşı (2006) in Çetinkaya et al., 2019, p. 111). According to Paolantonio et al. (2020), the positive effects of cultural participation in elderly care are related to three elements: (1) the interest of elderly residents in the cultural form itself (in the case of their study, this was music), (2) the active practice of this cultural form (in this case, making music) and thus the learning opportunity offered, and (3) the interpersonal relationships that such a cultural programme promotes. This last element is important as older people living in a care context such as a nursing home often feel isolated and lonely (Costa et al., 2018). Cultural participation in elderly care has thus positive health effects because it facilitates access to something important, offers learning opportunities and promotes interpersonal relationships in a context where novelty and engagement are not always a given. Yao et al. (2019) also cite improved interpersonal skills and meaningful interpersonal interactions as a possible explanation for the positive health effects of art therapy in elderly people in long-term care institutions. According to them, a second element is the self-discovery that is facilitated when they engage in cultural activities. Guiding such artistic activities encourages participants to recall certain memories or imagine certain things, giving them the opportunity to explore themselves and understand and express inner feelings. In addition to actively participating in organised cultural activities, providing access to public museums and galleries for older people in care institutions is a way to stimulate creative art, cultural appreciation and social engagement. This, in turn, promotes their well-being and quality of life, among other things (Roe et al., 2016).

In addition to using traditional cultural forms for elderly people in care institutions, innovative technology can also be used to introduce culture into residential care environments. For example, integrating a participatory theatre intervention with social robotics improved the psychological well-being (depression, loneliness and mood) of elderly people in residential care centres in North Texas (USA) (Fields et al., 2021). The use of robots can improve the lives of older people as therapeutic companions in organised art activities in care institutions (Fields et al., 2021; Moyle et al., 2019). It is therefore not only interpersonal interaction that stimulates the value of culture in caring for older people in care institutions. Participatory culture between people and robots can also influence health outcomes after cultural participation (Fields et al., 2021). Another example is the improvement in the well-being of individuals in long-term elderly care institutions after offering a virtual visual arts activity (Murphy et al., 2021). Technology can therefore be an effective platform for promoting accessibility to health-promoting art interventions for older people in care institutions, although developments in this area are rapid and the number of studies on this topic remains limited for the time being.

Table 10: Summary of studies included on 'caring for' in elderly care as a health value of culture

Author (year)	Research method used	Main findings
Yao et al. (2019)	• Quasi-experimental survey research	Art therapy programmes for older adults in residential care homes have positive effects: they reduce depression, increase participants' self-confidence and are therefore an effective intervention for improving their mental well-being.
Çetinkaya et al. (2019)	• Experimental survey research	Art therapy (in the form of ceramic painting) improves the cognitive functions of elderly people in a care facility. However, the improvement in life satisfaction was not statistically significant.
Paolantonio et al. (2020)	• Interviews	Group music activities improve the quality of life of residents in care institutions by promoting feelings of well-being, connectedness and self-confidence. They also stimulate curiosity and social interaction.

Roe et al. (2016)	• Qualitative research
	  ○ Observation
	  ○ Interviews
	  ○ Written feedback
		The art programme Coffee, Cake & Culture has positive effects on the well-being of older participants. They experience increased social engagement, creativity, meaning and enjoyment.

Fields et al. (2021)	• Survey research • Pre-post design	The participatory art intervention with a social robot (NAO) led to decreases in depression, improved mood and fewer feelings of loneliness among older adults in residential care facilities.
Murphy et al. (2021)	• Survey research • Pre-post design	The virtual art intervention was effective in promoting the well-being of residential care home residents. Most participants showed improvement on at least one measure of well-being and provided positive feedback on the ease of use, enjoyment and health value of the application.

5.1.2. People with a chronic condition

A second group that culture can take care for are people with a chronic condition. Gallagher et al. (2024) found in their study that participation in an eight-week art-based programme led to improved mood, health, resilience and wellbeing in people with chronic health problems. In addition, participants developed (re)new(ed) coping skills to help them deal with their chronic conditions (e.g. coping with pain or changes in physical abilities and coping with emotional distress). Chronic conditions (such as hypertension, overweight or obesity, rheumatism or arthritis, neck or back pain, (pre-)diabetes, depression, respiratory or lung problems, anxiety, chronic pain and heart disease) can affect both the physical and mental health of individuals.

On the physical level, culture has the potential to improve the lives of people with MS (Multiple Sclerosis), for example, and to help them function with this condition by positively influencing their self-esteem, hope, social support and self-efficacy (Fraser & Keating, 2014). Another example of a physical chronic condition where culture can be of value to those who suffer from it is subfertility in women (Hughes & da Silva, 2011). For them, art therapy is an intervention that reduces hopelessness and depressive moods, thereby improving their mental health. A third example is the use of art in cognitive behavioural therapy for people with HIV (Sahassanon et al., 2019). The behavioural action (BA) technique and cognitive restructuring using art reduced the depression symptoms of this group and strengthened their medication adherence. Art reinforces the concreteness of the thoughts of participants in this therapy and clarifies abstract concepts related to the advantages and disadvantages of medication use. With regard to chronic mental disorders, schizophrenia and dementia – studied in elderly people in residential care homes in the research by Boersma et al. (2021) – are two examples. Participation in art activities (such as dance, visual arts, music and movement) can improve the mood of people experiencing one of these chronic mental health problems and give them a stronger sense of self-esteem. Artistic activities have a positive effect on, among other things, the physical functions, mental well-being and quality of life of people with chronic psychiatric disorders and dementia (Huber et al., 2011). In this case, cultural participation acts as a kind of social medicine that can be used to supplement traditional treatments for such mental health problems. The involvement of participants is essential for such projects to be successful (Boersma et al., 2021). When cultural activities are developed in co-creation with people with dementia and chronic psychiatric disorders, they are better aligned with their needs and wishes and activate them more effectively (Van

Campen et al., 2017). The chronic mental disorder dementia is addressed in several of the included studies and is therefore discussed separately and in more depth below.

Table 10: Summary of studies included on 'caring for' people with chronic conditions as a health value of culture

Author (year)	Research method used	Main findings
Gallagher et al. (2024)	• Longitudinal survey research	Participation in an arts-based programme led to improvements in the mood, health, resilience and the overall well-being of participants with chronic health problems. These positive effects were largely maintained or further improved after eight weeks (follow-up).
Fraser & Keating (2014)	• Longitudinal survey research	Participation in a creative arts programme led to improvements in self-confidence, hope, perceived social support and self-efficacy among individuals with multiple sclerosis. Creative arts have the potential to improve the quality of life of people with MS.
Hughes & da Silva (2011)	• Longitudinal survey research	Participation in an art therapy course led to a decrease in feelings of hopelessness and depressive symptoms among subfertile women. Art therapy is an effective non-pharmacological intervention for their emotional support.
Sahassanon et al. (2019)	• Quasi-experimental survey research	Cognitive behavioural therapy in a group setting is effective in reducing depressive symptoms and increasing medication adherence among men with HIV infection in Thailand.

Boersma et al. (2021)	• Mixed-methods research
	  ○ Survey
	  ○ Group interviews (discussions)
		Participation in art activities leads to an improvement in the mood of elderly people with dementia or chronic psychiatric disorders. These activities also contribute to more positive feelings, social relationships and a more positive self-image.

5.1.2.1. People with dementia

Since there is no cure for dementia, efforts to maintain the quality of life and well-being of this group are also crucial. Culture can also care for them. For example, there is a lot of interest in the role of art (dance, music, theatre, creative writing, visual arts and singing) in dementia care. Research in this area shows various benefits for people with dementia who participate in art in terms of their well-being, quality of life, cognitive functioning and communication (Beard, 2012; Castora-Binkley et al., 2010; De Medeiros & Basting, 2014; Mental Health Foundation, 2011; Salisbury et al., 2011; Young et al., 2016).

In order for this value of culture to be realised in the care of people with dementia, it is obviously essential that culture reaches them. Many people with dementia have little or no access to high-quality intellectual or sensory activities, and the activities that are available often do not match their abilities and function at too low a level (MacPherson et al., 2009). Bazooband et al. (2023) identified three elements in their research which, if addressed appropriately, can strengthen the involvement of people – in their case, older people – with dementia: (1) awareness of existing opportunities, (2) access to the activity or activities, and (3) the experience of the activity itself. Firstly, both access to information and the quality of that information, consisting of accuracy, usability and comprehensibility (Lu & Yuan, 2011; Zimmer et al., 2007), are important (Bazooband et al., 2023). People with dementia often experience a lack of access to information about existing (clinical, health or community) services (Bakker, 2013; Sansoni et al., 2016). Secondly, access, i.e. the physical accessibility and location of the activity, is an important factor to consider (Bazooband et al., 2023). Specifically, walking distance must be taken into account, as this leads to greater use of facilities and services (Carstens (1993) in Bazooband et al., 2023, p. 7), sufficient seating, lighting, shelter and well-maintained paths (Mitchell et al., 2003), navigation triggers (Teipel et al., 2016) and appropriate signage and markings (Sheehan et al., 2006). Finally, once participants have arrived, there are a few things to consider regarding the experience of the activity itself in order to optimise the engagement of those present and thus the positive effects of the activity (Bazooband et al., 2023). Appropriate cultural forms for this group must strike a balance between creativity and novelty on the one hand and familiarity on the other. Artistic activities offer people with dementia a valuable way to express themselves creatively, access their emotions and experience them, even when their cognitive functions are declining (Mental Health Foundation, 2011; Zeilig et al., 2014).

When people with dementia are involved in culture, this can be valuable in the care they receive, whether they are in the early or moderate stages (Camic et al., 2019) or more

advanced stages (Newman et al., 2019) of dementia. In the study by Camic et al. (2019), people with early and moderate dementia showed a positive increase in their well-being after participating in sessions involving handling museum objects. Among people with advanced dementia, an activity involving visual arts strengthened their resilience (Newman et al., 2019). This was achieved through creative expression, improved communication, enhanced self-esteem and changed relationships with their caretakers and family members.

Moreover, culture is not only valuable for the person with dementia themselves, but also for those around them. Participation in an art-creating activity (e.g. hat decoration, collage, relief printing, painting, photography and printmaking) can improve the self-esteem of the person with dementia while reducing the care burden on their carer (Richards et al., 2019). Possible explanations for the increase in self-esteem among people with dementia are: successfully taking up the various challenges within these activities; taking a work of art home, allowing participants to see their work at home and possibly hear positive comments from others; the acquisition of skills and abilities during the activity (or activities), which can help them to tackle problems in daily life; a sense of empowerment that stems from their achievements and carries over into their daily lives; and the possibility that participants continued to create works of art independently after the sessions ended. The reduction in the care burden for carers may be related to the fact that the interaction between the carer and the person with dementia changed after the activity (or activities). The increased self-esteem among people with ADRD (Alzheimer's Disease and Related Dementias) was accompanied by a more positive attitude towards life, which not only led to less stress and anxiety among their caretakers, but also to a revaluation of their abilities, as they perceived them to be more confident and better able to cope with challenges —which in turn alleviated the burden of care. Another example of how to achieve this is to involve the carer of the person with dementia in co-creation during the cultural activity in which they participate (Zeilig et al., 2019). Co-creativity — exploring and creating art together — is a flexible and receptive way to involve people with dementia in culture, but also to positively influence the well-being of both them and their caregivers.

Table 11: Summary of studies included on 'caring for' people with dementia as a health value of culture

Author (year)	Research method used	Main findings
Bazooband et al. (2023)	• Interviews	Participatory art activities improve the dignity and social engagement of people with dementia. It is essential to provide adequate information,

		accessibility and support to encourage their participation. An inclusive and supportive environment is also important for the engagement of this group.
Camic et al. (2019)	• Quasi-experimental survey research	Participation in an intervention involving handling museum objects leads to an improvement in well-being among people with both mild and moderate dementia. People with mild dementia show slightly greater positive improvements in well-being.

Newman et al. (2019)	• Qualitative research
	  ○ Interviews
	  ○ Participation notes
	  ○ Video data
	  ○ ...
		Visual arts activities in residential care homes strengthen the resilience of people with (advanced) dementia through creative expression, improved communication, increased self-confidence and improved relationships with carers and family.

Richards et al. (2019)	• Experimental survey research	Visual arts education increases the self-image of people with dementia and reduces the burden of care on their informal carers. These effects persist up to six months after the end of the programme, indicating a long-term impact of the intervention..

Zeilig et al. (2019)	• Case study
	• Mixed-methods research
	  ○ Interviews
	  ○ Video data analysis
	  ○ Survey
		Co-creative art practices with people with dementia strengthen their sense of (social) connectedness, autonomy (self-confidence) and well-being.

5.1.3. Stroke patients

Culture can also be valuable in the care received by people recovering from a stroke. When stroke survivors participate in an arts-based health programme, this has a substantial impact on their well-being and quality of life (Beesley et al., 2011). Art (such as painting on canvas, charcoal, wash technique and drawing) helps them take their minds off their illness and also improves their self-confidence and social contacts (Reynolds & Prior, 2004;

Reynolds et al., 2008). The personal and rehabilitative benefits of participating in cultural activities include improved self-reliance, which in turn is associated with higher life satisfaction and fewer depressive symptoms (Beesley et al., 2011; Robinson-Smith, 2002). Furthermore, art interventions offer a positive and valuable experience for stroke patients who are hospitalised for long periods (Baumann et al., 2012). Positive experiences of participants include enjoyment and pleasure, a sense of connection with the artists present, mental stimulation, learning and creativity, involvement in purposeful activities, relief from boredom, and reconnection with valued aspects of themselves. This contrasts sharply with the acute and chronic distress associated with stroke and long hospital stays. Participation in such cultural programmes thus contributes in various ways to the mental well-being of this group.

Table 12: Summary of studies included on 'caring for' stroke patients as a health value of culture

Author (year)	Research method used	Main findings
Beesley et al. (2011)	• Interviews • Focus groups	Participation in an arts-based health programme for people who have suffered a stroke leads to improvements in their self-confidence, self-efficacy, quality of life and community participation. The group setting contributes to social interaction and support.

Baumann et al. (2012)	• Qualitative research with triangular data
	  ○ Interviews
	  ○ Clinical data
	  ○ Session material
		Participation in a person-centred art programme improves the mental well-being of long-stay stroke patients. Art interventions are valuable in their emotional and mental care (despite some negative experiences).

5.1.4. Cancer patients

A final group covered in the studies included in the review on the health value of culture in caring for people are cancer patients. Obviously, cultural participation will not cure their disease, but art therapy can improve their emotional distress, depression, anxiety and pain (Elimimian et al., 2020). Simple, effective therapeutic interventions to alleviate the suffering of cancer patients undergoing chemotherapy are important to ensure the clinical effectiveness of their treatment and improved quality of life. The research by Xu et al. (2020), which confirmed the beneficial effect of art therapy on depressive symptoms – namely

reduced interest, cognitive dysfunction and sleep disturbance (Braun Janzen et al., 2019) – in breast cancer patients, further suggests that there is a critical age period during which culture in the form of therapy has value in caring for these people. Their analyses found no significant reduction in anxiety among women with breast cancer after undergoing art therapy, but did find a reduction in those aged 55 or older.

Table 13: Summary of studies included on 'caring for' cancer patients as a health value of culture

Author (year)	Research method used	Main findings
Elimimian et al. (2020)	• Longitudinal survey research	Art therapy improves emotional distress, depression, anxiety and pain in cancer patients.
Xu et al. (2020)	• Quantitative meta-analysis	Art therapy has positive effects on alleviating depression, but not anxiety, among breast cancer patients. Age is an important moderating factor for the effectiveness of art therapy.

5.2. Using culture for recovery

Culture can also be valuable in patient recovery. Coming into contact with culture or actively participating in it improves the health problems experienced by those involved or can contribute to their recovery in other ways. The studies included in this report mainly concern the recovery process in relation to mental health problems. An exception is the study by Morris et al. (2016), which found that participation in participatory visual arts programmes during clinical rehabilitation had a positive effect on the mood and self-esteem of stroke survivors, as well as on some aspects of their communicative and physical recovery. The social environment, the tailoring of the assignment and the process of creating art itself, as well as the ultimate recognition and appreciation, ensure these positive outcomes by creating hope, control and self-efficacy. The careful tailoring of the programme by the accompanying artists and their broad approach to setting goals, for example, strengthens patients' control over their recovery. The feeling of being in control of one's situation is, in turn, associated with physical progress after a stroke (Johnston et al., 1999; Jones et al., 2013b). Figure 1 shows the complete model with all relevant mechanisms and outcomes of this study.

Figure 1: The 'creative engagement intervention model' (taken from Morris et al., 2016, p. 6)

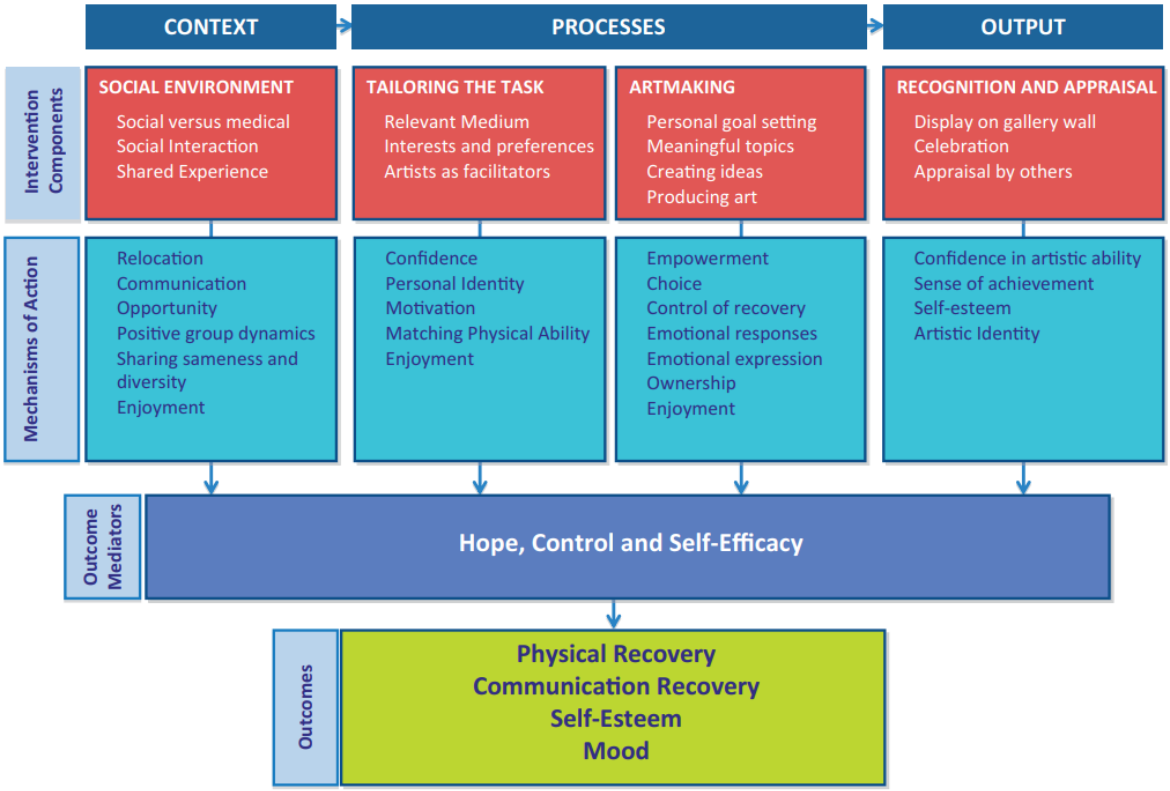

Table 14: Summary of included studies on 'caring for' stroke patients as a health value of culture

Author (year)	Research method used	Main findings
Morris et al. (2016)	• Interviews	Participation in an art programme during rehabilitation after a stroke improves mood, self-confidence, self-image and feelings of hope and control over recovery. Social interactions, artistic processes and appreciation of creative work are crucial to these benefits.

5.2.1. Using culture for mental health recovery

5.2.1.1. Clinical context

Cultural participation aimed at promoting recovery from mental health problems can take place in a clinical setting such as a psychiatric institution, hospital or during a therapy session. For example, patients in acute mental health wards in healthcare institutions in London, Oxford and Reading (United Kingdom) experienced well-being benefit from

participating in a session involving handling museum artefacts (Ander et al., 2013a). By participating, patients were distracted from the clinical environment in which they found themselves and experienced, among other things, more vitality and self-confidence and fewer negative emotions. Possible explanations for these well-being outcomes are (1) the tactile stimulation of touching and handling the museum objects, (2) increased conversation and improved social skills through talking about the museum objects, (3) finding connections between the museum objects and their own experiences, allowing participants to reveal more of their identity, and (4) new ways of thinking about the present and the past through encountering new objects, which provides insight and new perspectives on the participants' lives, enabling them to take a more active role in their recovery.

A second example is that participation in creative activities (such as participation in an expressive activity based on art and crafts) is beneficial for people with mental health problems in a psychiatric setting (Caddy et al., 2012). It improves their mental health and reduces the symptoms of the mental problems they experience.

Additionally, as a third and final example, art therapy in clinical settings can also improve the psychological well-being and cognitive functions (language, delayed recall and visual spatial insight) of patients with mental disorders (Sharmila et al., 2021). Art therapists are often active in healthcare institutions and regularly treat people struggling with depression (Zubala et al., 2013). Creative expression and communication through art media are a valuable dimension that contributes to the recovery process they go through with their clients (Zubala et al., 2014). It helps people with depression reconnect with other individuals and feelings, express their emotions and generate new hope and meaning. Art therapy can offer useful tools for breaking through a pattern of lack of motivation, which is common in depression. Creativity contributes to an open attitude, encourages sharing and supports the acceptance of others' involvement in the recovery process.

When introducing culture into the recovery process of people with mental health issues, it is important to take the patient's own preferences into account. Patients may have a strong preference for or against a particular art form. Creative participation, for example, is not beneficial for all people with mental health needs (Spandler et al., 2007). Assigning certain groups to participate in activities is best based on the individual needs and preferences of the patient. According to art therapists, it is best to use an 'eclectic mix' of approaches and techniques to meet the complex needs of people with depression (Zubala et al., 2014).

Table 15: Summary of studies included on recovery from mental health problems in clinical contexts as a health value of culture

Author (year)	Research method used	Main findings

Ander et al. (2013a)	• Qualitative research
	  ○ Observation
	  ○ Interviews
		Handling museum objects improves the well-being of patients in mental health care and neurological rehabilitation by stimulating positive emotions and promoting social interaction.

Caddy et al. (2012)	• Retrospective quantitative data analysis	Participation in creative activities is associated with better mental health in patients in a psychiatric hospital.
Sharmila et al. (2021)	• Pre-experimental survey research	Art therapy interventions are effective in improving the level of cognitive functions and psychological well-being in patients with mental disorders.
Zubala et al. (2013)	• Survey research	More than 90% of art therapists treat people with depression. They often work with drama and art, are more likely to be older and experienced, work with groups, in care institutions and more often with adults than with children or young people.
Zubala et al. (2014)	• Survey research	Art therapy can bring about change in people with depression: they gain a better understanding of themselves and regain control over their lives.

5.2.1.2. Other contexts

Culture can also contribute to the recovery of people experiencing mental health challenges in non-clinical contexts. Creating art, for example, provides greater insight and deeper self-knowledge for people with persistent and serious mental health problems (such as depression, anxiety, borderline personality disorder, schizophrenia, post-traumatic stress disorder, gender identity disorder, bipolar disorder, anorexia nervosa and drug and alcohol abuse) (Van Lith, 2014). Creating art plays a dynamic role in the recovery process, comparable to a stream of water that initiates movement and change. It helps to let go of baggage and

create space for a renewed relationship with oneself. For participants, creating art can be a special and profound experience that opens up new perspectives.

The value of culture lies not only in purely contributing to the recovery of the mental health problems of those involved, but also in restoring other related issues. On the one hand, art offers individuals continuity and an opportunity to (re)create their personal story and, on the other hand, it is a powerful means to communicate about mental illness, counteracting stigma and dominant conceptualisations in this regard, and developing a community identity for this group (Gallant et al., 2017). Art and performances during the recovery process are not only about (re)shaping individual stories, but also about redefining the collective, socially determined understanding of what recovery means and how people participate in it.

Culture therefore also plays a role in the community for people living with mental health problems, and not just through a specific programme in the clinical context of a hospital for example. Participation in a community art project is beneficial for people with long-term mental health problems (Lawson et al., 2014). They experience an improved self-esteem, a feeling of being freed from illness labels and a sense of belonging. The development of creative skills improves their self-management in terms of mental health. Moreover, they use these skills, the ability to look at the bigger picture learned through creative activity, to address their mental health problems. In addition, culture can also be beneficial for individuals with less long-term mental health problems. Shik (2013) found that using creative arts in a social programme on mental health offered various benefits to young people from ethnic and cultural minorities in transition (age). It offered them the opportunity to explore their identity and express emotions, which promotes their mental well-being and possibly the further use of mental health care. Culture can also be valuable for those who already use mental health care in further promoting their mental health (Hui et al., 2019; Stacey & Stickley, 2010). Active cultural participation helps them to feel good and keep feeling good (Hui et al., 2019). The creative process offers various therapeutic benefits that occur outside of therapy sessions (Stacey & Stickley, 2010). It offers the opportunity to express oneself and convey one's own experienced reality to others through art.

Two specific examples of using culture in non-clinical contexts to promote recovery from certain mental health issues are offering a CB-ART programme, a combination of cognitive behavioural and art therapy, to women in residential early parenting support facilities (Brown et al., 2023) and a playback theatre class within the recovery education programme at the Centre for Psychiatric Rehabilitation at Boston University (Moran & Alon, 2011). The latter example appears to be a clinical setting, but this programme emphasised that

participants, people with mental illness who receive grants to attend these classes as part of the university, participate as students and therefore not as patients. In summary, culture can thus be used in different ways, in different forms and in very diverse contexts to recover from mental health issues.

Table 16: Summary of studies included on recovery from mental health problems in other contexts as a health value of culture

Author (year)	Research method used	Main findings

Van Lith (2014)	• Cooperative research
	  ○ Interviews
	  ○ Survey
	  ○ Open conversation
	  ○ Reflective analysis
		People with mental health problems develop a deeper understanding and knowledge of themselves through regular art practice. Art played a role in their recovery process.

Gallant et al. (2017)	• Qualitative research
	  ○ Interviews
	  ○ Narrative analysis
		Participation in artistic activities plays a crucial role in developing community identities and providing a sense of stability for people with mental health issues. It helps them to better understand their communities and creates awareness of their need for support and their contributions, which promotes social inclusion.

Lawson et al. (2014)	• Interviews	Participation in a community art project boosts self-esteem, breaks through illness labels, promotes connectedness, offers meaningful routines and can support self-management through the development of creative skills.

Shik (2013)	• Case study
	• Qualitative research
	  ○ Observation
	  ○ Informal interviews
	  ○ Content analysis
		The use of creative arts transcends cultural and language barriers and gives Asian-American youth in transition age (16-25 years) the opportunity to explore their identity and express their emotions, ultimately promoting their mental well-being.

Hui et al. (2019)	• Interviews	Artistic activities help people grow personally by developing human and local connections. They experience greater self-confidence and develop positive identities that go beyond narratives of illness, which benefits their mental well-being.

Stacey & Stickley (2010)	• Interviews	Creativity is an integral aspect of the self-perception of people with mental health problems. For many, it is an essential part of their lifestyle and they experience various benefits from it. This supports the need for creative resources within mental health care, as a complement to medically based interventions.

Brown et al. (2023)	• Mixed-methods research
	  ○ Survey
	  ○ Field notes
	  ○ Interviews
		The CB-ART programme (combination of cognitive behavioural and art therapy) is a feasible, acceptable and safe addition to residential programmes for early parenting support and has therapeutic benefits (fewer postnatal depression symptoms and greater emotional insight).

Moran & Alon (2011)	• Mixed-methods research
	  ○ Qualitative self-report
	  ○ Survey
		A playback theatre course offers benefits that promote recovery in people with severe mental illness, particularly in the areas of enjoyment, relaxation, creativity, self-expression, self-confidence and self-knowledge.

5.2.1.3. Recovery after a trauma or other significant event

In addition to using culture for more general mental health issues, it can also be incorporated into the recovery process of people who have experienced trauma. More than a third of people suffering from Post-Traumatic Stress Disorder (PTSD) do not benefit from traditionally prescribed therapies such as cognitive behavioural therapy, narrative exposure therapy and EMDR (Eye Movement Desensitisation and Reprocessing) (Bradley et al., 2005). Art therapy is an alternative that can be used to process psychological trauma.

The research by Schouten et al. (2019) illustrates the value of culture – in the form of using art in therapy – for recovering from trauma-related mental health problems. Participation in trauma-focused art therapy by adults with PTSD as a result of multiple and prolonged traumatisation – patients with early childhood trauma and refugees from different cultures in this study – reduces PTSD symptoms (avoidance, arousal and re-experiencing) in the majority of those involved. The reduction in the severity of PTSD symptoms in this group of long-term traumatised individuals may be due to: (1) the provision of concrete forms of representation (visual and tactile) in visual artworks, which reduces avoidance (Foa et al.,

2000), (2) the feeling of control and autonomy through the active making of art (Wertheim-Cahen, 2007) and (3) the possibility of expressing experiences non-verbally without the need to discuss them in detail (Wertheim-Cahen, 2007), which is better tolerated and more accepted by this type of patient. Other positive outcomes of participation and adherence to therapy include greater relaxation, externalisation of memories and emotions in artworks, less intrusive thoughts about their traumatic experiences, and greater confidence in the future. A second illustrative example is the study by Carter et al. (2024), in which a combined group therapy model of Cognitive Behavioural Therapy and Art Psychotherapy is a valuable addition to the clinical interventions provided for women who have experienced sexual abuse during their childhood. It reduces their overall distress and depression symptoms and has a positive impact on their mood, self-esteem and psychological well-being.

In addition, cultural participation in itself, without being a form of or in combination with therapy, can also help people recover from trauma. An example of this is the research by Birkett et al. (2023), which describes the therapeutic benefits of participating in a community art project for women who are victims of human trafficking. For these women, participation felt like a form of authentic support and, because of the sense of security in this setting, enabled them to rebuild their confidence. Through the art project, participants also work on their social network, which is important in recovering from the negative consequences of experiences in human trafficking (Angelis, 2014; Zimmerman et al. (2006) in Birkett et al., 2023, p. 254).

It is not only psychologically identified traumas that are important to process; other traumatic events, such as the loss of a family member, can also have adverse effects on the mental health of those who experience them (Shear et al., 2013). For this group too, art therapy, even online, can contribute to their recovery process by alleviating the psychological stress they experience – namely depressive symptoms and grief – and improving their quality of life (Park & Cha, 2023). Online group therapy offers participants a safe space to express emotions such as depression, sadness and grief through group interaction and visual arts. This process not only helps them to accept the loss of their loved ones, but also to rebuild their world of meaning and express their inner experiences through creative expression.

Table 17: Summary of studies included on recovery from trauma or traumatic events as a health value of culture

Author (year)	Research method used	Main findings
Schouten et al. (2019)	• Longitudinal mixed-methods research	Patients with PTSD who undergo art therapy show good compliance and treatment

	○ Survey ○ Content analysis	satisfaction. The severity of PTSD symptoms decreased in the majority of patients, but increased in others.
Carter et al. (2024)	• Longitudinal survey research	Overall psychological distress, depression and self-image improve in women who have experienced childhood sexual abuse after participating in an art intervention. However, a small proportion of participants showed a decline.
Birkett et al. (2023)	• Case study • Interviews	Participation in the community art project contributes to building trust and self-confidence among female victims of human trafficking. Group interaction and creative activities helped to reduce feelings of depression and isolation.
Park & Cha (2023)	• Experimental survey research	Online group-based art therapy reduces depression and improves quality of life in adults who have lost a family member.

In general, the value of culture for the recovery process of people with certain health problems is examined in the majority of studies from the perspective and experience of those involved who experience this (Ander et al., 2013a; Brown et al., 2023; Caddy et al., 2012; Gallant et al., 2017; Hui et al., 2019; Lawson et al., 2014; Moran & Alon, 2011; Morris et al., 2016; Schouten et al., 2019; Shik, 2013; Stacey & Stickley, 2010; Van Lith, 2014). Some studies also use, either exclusively or in addition, an external or clinical assessment of the recovery process (and progress) of the individuals concerned (Brown et al., 2023; Caddy et al., 2012; Carter et al., 2024; Moran & Alon, 2011; Park & Cha, 2023; Schouten et al., 2019; Sharmila et al., 2012; Zubala et al., 2013; 2014). These include standardised scales, aggregated data or perceptions/assessments by clinical actors (such as therapists) that indicate the contribution of culture to the recovery process. Thus, both those involved and external or clinical observers confirm that culture can be valuable in the recovery process for various health issues.

6. Conclusion

This report is the result of an extensive systematic literature review on the health value of culture. The results show that culture can make an undeniable contribution to health in terms of prevention, the mental and physical health of individuals, and within the context of care and recovery from certain health problems. Culture can be used preventively to promote healthy behaviour, combat stigma, raise awareness about health and strengthen the mental resilience of individuals, which means that psychological and psychosomatic complaints are counteracted by cultural participation and individuals learn to cope (better) with stress and anxiety. Cultural participation is not only valuable in preventing health problems, but can also actively contribute to improving the mental and physical health of the individuals involved, such as the elderly, for example. Finally, culture can also be used in healthcare in various contexts for people with specific health needs and/or problems, such as in elderly care, in caring for people with chronic conditions (e.g. dementia) and cancer or stroke patients. In addition, cultural participation contributes to the recovery from various mental health issues, such as coping with trauma or other traumatic events.

As has been highlighted in other publications, establishing a beneficial influence of culture on individual health presents several challenges. The health value of culture is not equally evident for every group in society. Cultural capital has a positive effect on the health of individuals (Kamin et al., 2013). This also means that people with more cultural capital generally enjoy better health than those with less cultural capital. Knowledge, skills, cultural objects and personal competencies can be regarded as forms of cultural capital. These elements function as useful resources that can contribute to or be converted into other types of capital, such as health-related capital. Because this capital is strongly intertwined with social structures and mechanisms, it also plays a role in maintaining or reinforcing social inequalities, which has consequences for the unequal distribution of health in society. Cultural capital is therefore, on the one hand, an important resource for achieving and maintaining good health, but on the other hand, it can be seen as a source of (in)equality in health.

Renton et al. (2012) state in their research that when cultural participation is recommended to promote health, it is important to address social inequalities in access to art and other cultural activities so that existing inequalities do not increase further. This is because cultural participation is unequal. People who are more socially 'disadvantaged' – who live in social housing, are less educated and/or have a low disposable income – are much less likely to

participate in culture. Cultural institutions such as museums have the potential to increase the value of cultural participation – in this case, museum experiences – by changing who has access to museum experiences, specifically including individuals from minority and low-income communities (Falk, 2022). It is important to focus on finding ways to extend the benefits of cultural participation to ever larger sections of the population, particularly those with fewer social and economic advantages. In addition, there are close links between health related lifestyle behaviours, such as a poor diet and lack of physical activity (Jones et al., 2013a). This supports a holistic service model and indicates that change in one particular health aspect can yield broader benefits. This is all the more true for participants whose unhealthy lifestyle is accompanied by low income, social isolation and other forms of social exclusion (Buck & Frosini, 2012).

Another observation relevant to this report on the health value of culture is that the studies included focus on people's health and often on how it can be positively promoted through cultural participation. In the section on 'caring for' as a health value of culture, it has already become clear how culture can not only address or prevent health problems, but can also be used to care for people. Within this framework also fits the idea of caring for people in the final stages of life, an important aspect that is not covered in this study. However, it would be valuable to explore the significance of culture in this phase of life as well. The end of life, including dying and palliative care, is often highly medicalised, while only a very small part of care and support around dying takes place in a clinical context. There is therefore a growing movement advocating a revaluation of the social aspect of dying and saying goodbye. Culture can play an important role in this context. At present, however, the value of culture in this phase of life has been little researched and is therefore not represented in this study or the underlying studies and results.

Finally, when reviewing studies on the impact of various types of cultural participation on aspects of health, it becomes clear that culture is often a kind of 'last resort'. Very often, types of cultural participation are used for people whose problems either cannot be solved or will never be solved. In that sense, it is a kind of alternative treatment because regular treatments do not work or are insufficient. This is important for interpreting the results of the studies correctly. Unlike clinical trials, where an experimental and control group are very precisely distinguished and it is possible to measure exactly which treatment – often an 'active substance' – is administered to which patients in what quantities. Such an approach is not possible for alternative treatments – for example, cultural participation, but also sport – and what is particularly typical of this treatment is that it is often used after other treatments

have been tried. Even if a study uses a longitudinal design, this raises the question of what constitutes an appropriate comparison group. Of course, we are not suggesting that one should simply believe in the effects of cultural participation on health or that not much more research is needed to demonstrate these effects empirically. On the contrary, we do think it is important to keep in mind for which patients and in which phase of their disease trajectory certain treatments or activities are used. After all, the alternative is often that the patient would simply do nothing.

7. Appendix: measuring health

The meta-analysis by Tesch and Hansen (2013) shows that different approaches, models and designs are used to evaluate arts and health programmes or projects in primary health care. According to their results, questionnaires and interviews are the most commonly used tools for data collection. Within their research, the majority of studies use qualitative or mixed methods. Typically, such research measures the following three factors: (1) programme objectives, (2) specific health status or health factors, and (3) the experience. This appendix focuses on the second aspect and describes how health was measured in all studies included in this sub-report on the health value of culture. Below is a list of all the specific health measurement instruments used in one or more of the studies included in this report (see Table 18). Highly descriptive qualitative or medical approaches to health were not included in this list.

Table 18: Overview of health measurement instruments

Measuring instrument	Study	What was measured?
Short Form 36 Health Survey	Tymoszuk et al. (2021)	General health
Question about self-reported health E.g.: "*How is your health at the moment?*"	Węziak-Białowolska (2016) Węziak-Białowolska & Bialowolski (2016) Jones et al. (2013a) Nenonen et al. (2014) Cuypers et al. (2011) Jensen et al. (2023)	Self-reported general health
SF12	Davies et al. (2023)	General health
PROMIS Scale v1.2 – Global Health	Gallagher et al. (2024)	Health

Measurement of • Free from chronic diseases • No cognitive impairment • Good physical functioning • Good mental health	Rena et al. (2023)	Overall healthy ageing
CESAM questionnaire	Beauchet et al. (2020) Beauchet et al. (2021) Hayashi et al. (2023) Beauchet et al. (2022)	Vulnerability/weakness (including nutritional status; number of medicines used daily; vision, hearing and memory complaints; mood; (instrumental) activities of daily living; physical activity and previous falls) Health and functional status
Self-reporting of pain, energy and mood (scores from 1 to 5)	Clements-Cortés (2017)	Pain, energy and mood
Question regarding self-reported pain: "Are you often troubled with pain?", and, if so, "How bad is the pain most of the time?"	Miki et al. (2024)	Pain
Questions about fruit and vegetable intake (servings per day), enjoyment and importance of healthy eating	Jones et al. (2013a)	Healthy eating
GP Physical Activity Questionnaire (GPPAQ) & questions about enjoyment and importance of physical activity	Jones et al. (2013a)	Physical activity
Patient Health Questionnaire 15	Węziak-Białowolska & Bialowolski (2016)	The prevalence and severity of common somatic symptoms

Patient Health Questionnaire 4 Questions about back pain, weakness and fatigue, sleep problems and headaches during the past four weeks	Węziak-Białowolska (2016)	Presence and severity of common somatic symptoms in the previous month
Physical activity scale from the *Whitehall II Study*	Tymoszuk et al. (2021)	Physical activity
Food frequency questionnaire	Renton et al. (2012)	Binary indicator for achieving the recommended minimum of five portions of fruit or vegetables per day
International Physical Activity Questionnaire	Renton et al. (2012)	Binary indicator for meeting the recommended five sessions of at least 30 minutes of moderate physical activity per week
Height and weight →*Body Mass Index (BMI)*	Cooke et al. (2013)	Obesity (based on *International Obesity Task Force's (IOTF) sex-* and *age-specific Body Mass Index cut-offs*)
Average number of steps during (in)active hours and per day	Planta et al. (2023)	Physical activity
Change in instrumental activities of daily living (IADL)	Liddle et al. (2012)	Changes in physical functioning
OARS-(I)ADL	Phinney et al. (2014)	Physical well-being: daily functioning
Single item perceived overall health	Phinney et al. (2014)	Physical well-being: perceived health status
Single item verbal descriptor scale	Phinney et al. (2014)	Physical well-being: chronic pain
Barthel index	Yao et al. (2019)	Level of daily living functions (basic daily living activities and skills)
Karnofsky Scale	Yao et al. (2019)	Physical activity capacity

Godin-Shephard Leisure Time Physical Activity Questionnaire (GSLTPAQ)	Gallagher et al. (2024)	Physical activity
Functional Assessment Questionnaire (FAQ)	Richards et al. (2019)	Functional capacity
Quality of Life Enjoyment and Satisfaction Questionnaire (Q-LES-Q)	Caddy et al. (2012)	Experienced level of enjoyment and satisfaction with daily functioning
Medical Outcomes Short Form Questionnaire (SF-14)	Caddy et al. (2012)	Subjective experience of illness
Discharge rate for mental disorders	Crociata et al. (2014)	Mental illness (community level)
Snyder Hope Scale	Renton et al. (2012)	Positive mental well-being
EuroQol 5D	Renton et al. (2012)	Self-reported feelings of anxiety or depression
Questions about general practitioner consultations	Renton et al. (2012)	Anxiety, depression or a psychological/nervous/emotional problem in the past 12 months
Subjective well-being index	Kim et al. (2014)	Subjective well-being
Strengths & Difficulties Questionnaire (SDQ)	McDonald et al. (2019) Yamaoka et al. (2021)	Social, emotional and mental health
Basic Psychological Needs Scale (BPNS) 3 subscales • Relatedness • Autonomy • Competence	Kelaher et al. (2014)	Psychological well-being
Child Behavior Checklist (CBCL) (for parents) *Youth Self-Report (YSR)* (for children/adolescents)	Rapp-Paglicci et al. (2011)	Mental health symptoms

Mental Health Continuum-Short Form (MHC-SF) 3 subscales • Emotional well-being • Social well-being • Psychological well-being	Block et al. (2022)	(Positive) mental health
Psychological General Well Being Index (PGWBI)	Grossi et al. (2012) Grossi et al. (2013) Sharmila et al. (2021)	Level of subjective psychological well-being Psychological and general well-being
Mental Health Continuum Short Form scale	Tymoszuk et al. (2021)	Well-being during the previous month
Warwick Edinburgh Mental Well-being Scale (WEMWBS) *Short Warwick-Edinburgh Mental Well-Being Scale (SWEMWBS)*	Jones et al. (2013a) Davies et al. (2023) Beauchet et al. (2020) Beauchet et al. (2021) Beauchet et al. (2022) Hayashi et al. (2023) Poulus et al. (2019) Murphy et al. (2021) Gallagher et al. (2024)	(Subjective) Personal/mental/emotional well-being
Ryff Scales of Psychological Well-Being	Meeks et al. (2020)	Well-being
PERMA-Profiler	Noguchi & Shang (2023)	Psychological well-being
Museum wellbeing Measure for Older Adults (MwM-OA)	Thomson et al. (2018)	Psychological well-being in older adults

Control, Autonomy, Self-Realization and Pleasure (CASP-19) quality-of-life measure	Bennington et al. (2016)	Psychological well-being
Visual Analogue Scale (VAS)	Paddon et al. (2014) Camic et al. (2019) Murphy et al. (2021) Sahassanon et al. (2019) Elimimian et al. (2020)	Well-being Current general health status Medication adherence Pain, emotional distress, depression and anxiety
Digit span test of attention capacity	Murphy et al. (2021)	Well-being
Canterbury Wellbeing Scale (CWS)	Camic et al. (2019) Zeilig et al. (2019)	Subjective well-being
Positive Affect Negative Affect Scale (PANAS)	Paddon et al. (2014)	Well-being
Rosenberg Self-Esteem Scale	Mueller et al. (2011) Mak & Fancourt (2019) Phinney et al. (2014) Yao et al. (2019) Fraser & Keating (2014) Richards et al. (2019) Moran & Alon (2011) Carter et al. (2024)	Self-esteem/self-worth
Self-Perception Profile for Children (SPPC)	Pesso-Aviv et al. (2014)	Psychological variable: self-esteem/self-worth

Piers-Harris Children's Self-Concept Scale (2de edition)	Coholic et al. (2012)	Self-concept (= measurement of psychological health in children and teenagers)
Coppersmith's Self-esteem Inventory (SEI)	Roghanchi et al. (2013)	Self-esteem/self-worth
Self-esteem scale	Kang et al. (2021)	Self-esteem/self-worth
General Self-Esteem Scale of the Self-Description Questionnaire II	Martin et al. (2013)	Self-esteem/self-worth
Performance-based self-esteem index	Romanowska et al. (2011)	Performance-based self-image
Resiliency Scales for Children and Adolescents (RSCA) 3 subscales • Sense of control • Sense of connectedness • Emotional reactivity	Coholic et al. (2012)	Resilience
Connor–Davidson Resilience Scale (CD-RISC)	Roghanchi et al. (2013)	Resilience
Resilience Scale for Adults (RSA)	Çulhacik et al. (2021)	Psychological resilience
Shin's ego-resilience scale	Jang & Choi (2012)	Ego resilience
Self-empowerment subscale (SES) of the *Mental Health Recovery Measure (MHRM)*	Liu et al. (2023a)	Empowerment
Measuring • Unintentional weight loss • Exhaustion • Low physical activity • Slow walking speed • Weakness	Poulus et al. (2019)	Vulnerability/weakness

Satisfaction With Life Scale	Martin et al. (2013) Phinney et al. (2014) Çulhacik et al. (2021)	Life satisfaction
EUROHIS-QOL-8	Nenonen et al. (2014)	Quality of life
Question regarding self-reported life satisfaction: "Thinking about your life at this moment, would you say that you by and large are satisfied with life, or are you mostly dissatisfied?"	Cuypers et al. (2011)	Life satisfaction
Short Form 36 (SF-36) Quality of Life questionnaire	Liddle et al. (2012)	Health-related quality of life
World Health Organization Quality of Life Questionnaire-Bref (WHOQOL-Bref)	Barbeau & Cosette (2019) Park & Cha (2023)	Quality of life
EuroQol-5D (EQ-5D) *EQ-5D-5L*	Beauchet et al. (2020) Beauchet et al. (2021) Beauchet et al. (2022) Hayashi et al. (2023) Murphy et al. (2021)	Quality of life Subjectively perceived health-related quality of life
Life Satisfaction Scale	Çetinkaya et al. (2019)	Life satisfaction
QOL-AD test instrument	Richards et al. (2019)	Quality of life
Question about life satisfaction: "In general, how satisfied are you with your life (as a whole nowadays)?"	Węziak-Białowolska (2016) Jones et al. (2013a)	(Personal) well-being
World Health Organization Quality of Life instrument	Martin et al. (2013)	Sense of meaning and purpose in life

Positive items from the *Positive and Negative Affect Schedule (PANAS) & Bradburn Affect Scale*	Meeks et al. (2020)	Positive affect
Hopkins Symptom Check List 10 (HSCL-10)	Bals et al. (2011)	Internalising symptoms, symptoms of anxiety and depression
Depression Anxiety Stress Scale (DASS)	Awledat et al. (2023) Caddy et al. (2012)	Psychological state of the individual (depression, anxiety and stress)
Hospital Anxiety and Depression scale (HADS)	Cuypers et al. (2011)	Anxiety and depression
General Health Questionnaire	Çulhacik et al. (2021)	Symptoms of anxiety and depression
Child Depression Inventory (CDI)	Mueller et al. (2011)	Psychosocial health: depression
Patient Health Questionnaire 8 (PHQ-8)	Osborn et al. (2023)	Depression (adults)
Subscale on core symptoms of depression from the *Hopkins Symptom Checklist (SCL-90)*	Theorell et al. (2013) Romanowska et al. (2011)	Depressive symptoms
Centre for Epidemiologic Study Depression scale (CES-D)	Tymoszuk et al. (2021) Sahassanon et al. (2019) Jones et al. (2013a) Fancourt & Tymoszuk (2019)	Depression (symptoms)
Beck Depression Inventory (BDI-II)	Barbeau & Cosette (2019) Hughes & da Silva (2011) Carter et al. (2024) Park & Cha (2023)	(Existence and severity of symptoms of) depression
PHQ-9	Liu et al. (2023a)	Depression
Short-form of Korean Geriatric Depression Scale (S-KGDS)	Im & Lee (2014)	Depression
Geriatric Depression Scale	Phinney et al. (2014)	Emotional well-being: depression symptoms

	Fields et al. (2021) Murphy et al. (2021)	Depression Mood status
Clinical Dementia Rating Scale	Newman et al. (2019)	Severity of dementia symptoms
Edinburgh Postnatal Depression Scale	Brown et al. (2023)	Symptoms of depression
Question about low mood: "Do you often have negative feelings such as the blues, being desperate, anxiety or depression?"	Węziak-Białowolska (2016)	Low mood
Face Scale	Fields et al. (2021)	Mood
Short Depression Happiness Scale (SDHS)	Gallagher et al. (2024)	Mood
Beck Hopelessness Scale	Hughes & da Silva (2011)	Hopelessness
Face expression scale	Boersma et al. (2021)	Mood
State-Trait Anxiety Inventory (STAI)	Pesso-Aviv et al. (2014) Toyoshima et al. (2011)	Anxiety
Generalized Anxiety Disorder Screener 7 (GAD-7)	Osborn et al. (2023)	Anxiety (adults)
State-Trait Anxiety Inventory Form Y (STAI)	Barbeau & Cosette (2019)	Anxiety
Beck Anxiety Inventory	Hughes & da Silva (2011)	Anxiety
Han's stress scale	Kang et al. (2021)	Stress
Perceived Stress Scale (PSS)	Liu et al. (2024)	Stress
Zarit Burden Interview	Çulhacik et al. (2021) Richards et al. (2019)	Stress, care burden
Clinical outcomes in routine evaluation (CORE)	Carter et al. (2024)	Client's overall distress
Subjective Units of Distress Scale (SUDS)	Czamanski-Cohen et al. (2014)	Subjective intensity of experienced distress

Part 4 of the *Harvard Trauma Questionnaire (HTQ)*	Schouten et al. (2019)	Severity of PTSD symptoms
Maslach Burnout Inventory-General Survey (MBI-GS)	Salzano et al. (2013)	Burnout
Hyperactivity and behavioural problems subscale of the *Strengths and Difficulties Questionnaire (SDQ)*	Bals et al. (2011)	Externalising symptoms
Strengths and Difficulties Questionnaire (SDQ)	Mueller et al. (2011)	Psychosocial health: emotional behavioural problems
Aggression questionnaire	Pesso-Aviv et al. (2014)	Agression
Sleep subscale from the *Hopkins Symptom Checklist (SCL-90)*	Romanowska et al. (2011)	Sleep disturbance/disorder
Maslach Burnout Inventory, General Survey (MBI-GS)	Theorell et al. (2013) Romanowska et al. (2011)	Emotional exhaustion
UCLA Loneliness Scale Short Form	Tymoszuk et al. (2021) Fields et al. (2021)	Loneliness
De Jong *Gierveld Loneliness Short Form scale*	Tymoszuk et al. (2021)	Loneliness
Social Connectedness Revised scale	Tymoszuk et al. (2021)	Social connectedness
Social Well-Being scale (SWB-6)	Jones et al. (2013a)	Social well-being
Self-Efficacy Questionnaire for Children	Mueller et al. (2011)	Psychosocial health: self-efficacy
Self-Perception Profile for Children (SPPC)	Pesso-Aviv et al. (2014)	Self-control
Emotion Regulation Strategies for Artistic Creative Activities Scale (ERS-ACA) 3 subscales • Approach strategy	Mak et al. (2021)	Use of artistic activities for regulating emotions

• Avoidance strategy • Self-development strategy		
Covert coping index	Romanowska et al. (2011)	Avoidance patterns in the work environment (associated with poor employee health)
Brief Resilient Coping Scale (BRCS)	Gallagher et al. (2024)	Coping
MS Self-Efficacy Scale	Fraser & Keating (2014)	Self-efficacy
Short Profile of Emotional Competence	Brown et al. (2023)	Emotional Insight
PGC Morale Scale	Phinney et al. (2014)	Emotional well-being: morale
Life Engagement Test	Phinney et al. (2014)	Emotional well-being: purposefulness/awareness
Geriatric Depression Scale (Short Form)	Yao et al. (2019)	Evaluation of self-perceived emotions
Montreal Cognitive Assessment (MoCA)	Murphy et al. (2021) Sharmila et al. (2021)	Cognitive status/functions
Mini-Mental State Examination (MMSE) *Arabic Mini-Mental State Examination (AMMSE)* *Mini-Mental State Examination for Korea (MMSE-K)*	Çetinkaya et al. (2019) Awledat et al. (2023) Im & Lee (2014)	Cognitive functioning
Short Portable Mental Status Questionnaire (SPMSQ)	Yao et al. (2019)	Cognitive function
Cognitive Fusion Questionnaire (CFQ)	Liu et al. (2023a)	Cognitive fusion
Memory Complaint Questionnaire (MAC-Q)	Liddle et al. (2012)	Changes in subjective cognitive functioning

Questions about which health slogans or messages people can recall in relation to smoking, alcohol, physical activity, nutrition and sun protection	Mills et al. (2013)	Awareness of unsolicited health messages
Questions about attitudes towards mental illness and help-seeking behaviour	Blignault et al. (2010)	Stigma surrounding mental health
Attitude questions regarding the contribution of the collection (exhibition) to • better understanding of the nature of mental illness • greater understanding of the suffering of people with mental health conditions • appreciation of the abilities and creativity of people with mental illness	Koh & Shrimpton (2014)	Mental health literacy and a positive attitude towards people with mental illness
Self-Stigma of Depression Scale (SSDS)	Liu et al. (2023a)	Self-stigma regarding depression
Internalized Stigma of old age scale (IS65+)	Liu et al. (2023a)	Self-stigma regarding age

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