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Physical Activity during the Covid-19 Pandemic. Changes in the Frequency of Sports and Walking among People in the Second Half of Life

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Sonja Nowossadeck, Markus Wettstein and Anja Cengia

7.1 Key Messages

A quarter of people in the second half of life reported having reduced their physical activity. According to their self-reports, roughly a quarter (27.8 per cent) had reduced their sporting activities, while 7.7 per cent had done more sport than before the start of the pandemic. Compared to before the pandemic, 15.1 per cent of respondents reported walking more while 10.2 per cent reported walking less. Two-thirds of those aged 46–90 reported that they had maintained the same frequency of sports, and three-quarters stated that they had maintained the same frequency of walks since the start of the pandemic.

46–60-year-olds were the most likely to say that their sporting activity had changed during the pandemic. 11.4 per cent in this age group said they had done more sports—that was about 5 to 10 percentage points more than in the older groups. However, almost a third (30.9 per cent) of this age group had done less sports, which is also more than in the older groups (about 4 to 9 percentage

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points). In contrast, proportionately more people in the oldest group limited their walking than in the other age groups (76–90 years: 15.0 per cent, 46–60 years: 8.8 per cent).

Women more often reported a reduction in their sporting activity during the pandemic than men. One third of women aged 46–90 (32.8 per cent) and only 22.4 per cent of men of this age reported having done less sports than before the pandemic.

People with a high educational level were particularly likely to have reported changes in their sporting behaviour during the pandemic. On the one hand, a greater proportion of this group reported doing more sports than before the pandemic (11.1 per cent) than any other group. On the other hand, people in the group with a high educational level also cut back on sports more often than people with a lower educational level (28.0 per cent vs. 20.8 per cent). Almost one in five (19.0 per cent) of people with a high educational level said they went for walks more often, compared to only one in twenty (5.2 per cent) with a low educational level.

People living in cities and people from Western Germany were more likely to report changes in their sporting activity than people from Eastern Germany and rural counties. One third (32.2 per cent) of respondents living in large cities reported a reduction in their sporting activities during the pandemic; this was only true for 25.1 per cent of the population in sparsely populated rural districts. However, those living in large cities also reported that they had increased their sporting activities (10.4 per cent) more frequently than those living in sparsely populated rural counties (7.3 per cent). Since March 2020, 10.7 per cent of Western Germans said they had done more sports since March 2020 and almost a third (30.4 per cent) reported having done less sports. Both proportions were lower for Eastern Germans (2.8 per cent more sports, 21.0 per cent less sports).

Individuals with functional limitations more often reported reduced activity in sports and walking. Those with functional limitations self-reported reduced sporting activities more often than those who did not have such limitations (32.2 vs. 26.9 per cent) and tended to reduce walking more often (11.9 versus 7.4 per cent).

Those who were already regularly active in sports before the pandemic particularly often reported changes in sporting activities during the pandemic. Regular sporting activity before the pandemic influenced reported change in physical activity during the pandemic. 38.7 per cent of those who were regularly active in sports in 2017 (versus 14.7 per cent of those who were inactive) self-reported having reduced their sporting activities, but 11.0 per cent (vs. 6.5 per cent) also did more sports than before.

Only a quarter of the people who did less sports during the pandemic made up for this deficit by taking more frequent walks. More frequent walking could at least partially have made up for the reduction in sporting activity. However, this rarely took place: only a quarter (24.6 per cent) of the people who had reduced their sporting activity said that they had gone for a walk more often after mid-March than before. By contrast, more than half of those who had been more active in sports since March (52.0 per cent) said they had also gone for a walk more often since then. So those who did more sports during the pandemic often also got more exercise through more walks.

7.2 Introduction

Regular physical activity, such as walking, swimming, or cycling, has positive effects on health, also for older people (Rütten et al. 2005). For example, physically active people over the age of 65 have a lower mortality rate compared to inactive peers, especially from cardiovascular diseases, as well as a generally stronger immune system (WHO 2020; Jordan et al. 2020; Weyh et al. 2020). They are better protected against certain diseases and health risks such as high blood pressure, obesity, type 2 diabetes and certain cancers (WHO 2020). There is also evidence that physical activity has a positive impact on mental abilities (Colcombe and Kramer 2003) and positively influences mood and well-being (Hogan et al. 2013). Therefore, the World Health Organization recommends regular physical activity for all adults aged 65 and older. This should include at least 150–300 min of moderate-intensity aerobic (i.e. more endurance-oriented) physical activity, such as jogging or brisk walking, and other exercise, such as muscle strengthening and balance training, per week. Similar recommendations apply for adults under 65 years of age (WHO 2020).

Due to social distancing and hygiene rules during the Covid-19 pandemic, the conditions for physical activity changed fundamentally within a short period of time after March 2020. This might have affected the frequency of sport and walking among people in the second half of life and may have had different implications for different population groups. There are already some initial indications that the pandemic had a negative impact on the general frequency of physical activity (e.g. Ammar et al. 2020). However, we still lack more differentiated findings that show which population groups were particularly at risk of being less physically active because of the pandemic, with corresponding effects on their health and general well-being.

This chapter compares self-reported changes in physical activity between different groups. Older people might have reduced their physical activity or at least their out-of-home sports more than younger people to minimize their risk of infection due to their higher risk of severe Covid-19 (Robert Koch Institute 2020). On the other hand, people in middle adulthood might have needed to look after their children themselves when childcare facilities and schools were closed and may therefore have lacked time for leisure activities such as sports. This in turn might have applied more to women than to men, as women perform more childcare than men. Education could have played a role, as people with a higher educational level are generally more active in sports than people with a lower educational level (Lippke and Vögele 2006; Finger et al. 2017) and they may also have been more likely to remain active in sports during the pandemic. Regarding place of residence, both urban-rural differences and the differences between Eastern and Western Germany may also have been relevant for the change in physical activity. Previous studies showed that sporting participation is lower in rural areas than in cities (Röding 2016). At the time of reunification, sporting activity was lower in Eastern Germany than in Western Germany and since then, the differences have become smaller (Röding 2016). Nevertheless, data from earlier DEAS surveys also showed higher proportions of regular sporting activity in Western Germany (Mahne et al. 2017, table appendix). If people in the cities and in Western Germany engaged in regular sport in larger proportions, we can assume that more people in these areas were also affected by the restrictive effects of the pandemic on recreational sport.

Functional health could also have been important for self-reported changes in physical activity: functional health limitations likely resulted in a limited capacity to be physically active. As such individuals may also have been more at risk of becoming severely ill from Covid-19 (Robert Koch Institute 2020), they may have reduced their physical activity even more than people with good functional health during the pandemic.

Finally, previous physical activity may have played an important role. The extent to which individuals are physically active is generally quite stable over several years (Friedman et al. 2008; Hirvensalo et al. 2000). People who reported regular physical activity before the pandemic were therefore more likely to remain physically active during the pandemic, while physically inactive people were rather unlikely to become more physically active.

During the Covid-19 crisis, people could no longer do sports in clubs or gyms but they could still compensate with other types of exercise, such as walking. A larger proportion of respondents who did less sports than before the pandemic likely engaged in such compensatory behaviours to reap the health benefits of

exercise even in this situation. On the other hand, many respondents who reduced their physical activity for fear of contracting Covid-19 may also have walked less than before the pandemic for the same reason.

This chapter investigates reported changes in physical activity in the second half of life as a result of the Covid-19 pandemic. The following research questions were asked:

- What changes did people in the second half of life report in sports and walking after the start of the Covid-19 pandemic?
- Did these reported changes differ by age, gender and education?
- Is there a correlation between place of residence (Western or Eastern Germany, urban or rural) and reported changes in physical activity?
- How was functional health related to reported changes in physical activity?
- What was the difference in reported changes in exercise and walking between those who were regularly physically active before the pandemic (here: in 2017) and those who were not?
- Did people who did less sport during the pandemic compensate for this deficit by walking more often?

The results of this chapter were based on analyses of the seventh wave of the German Ageing Survey (DEAS; Vogel et al. 2020). For the present evaluations, the data of 4762 persons aged between 46 and 90 were considered. For some measures (previous physical activity, functional limitations), we had access to information collected in the DEAS survey in 2017—accordingly, these measures were based on information from people who participated in DEAS in both 2017 and 2020. The following measures were used for the analyses:

The survey asked about **self-reported changes in physical activity** during the Covid-19 pandemic separately for sport and walking during the period between March and June/July 2020. For sport, the question was: “Have your sporting activities changed since mid-March?” with the response options “Yes, I do more sports”/“Yes, I do less sports”/“No, my activity has remained the same”. For walking, the question was: “Has this [walking] changed since mid-March?” with the answer options “Yes, I go for walks more often”/“Yes, I go for walks less often”/“No, this has remained the same”.

Age, gender and educational level To examine the role of age, three age groups were formed: 46–60-year-olds ($n=996$; 20.9 per cent), 61–75-year-olds ($n=2166$; 45.5 per cent) and people between 76 and 90 years of age ($n=1600$; 33.6 per cent). In addition, women ($n=2434$; 51.1 per cent) and men ($n=2328$;

48.9 per cent) were compared. Education was categorized in three groups (according to the ISCED definition): Individuals with a low ($n=205$; 4.3 per cent), medium ($n=2250$; 47.2 per cent) and high educational level ($n=2306$; 48.4 per cent).

In addition to differentiating respondents' place of residence according to **Eastern and Western Germany**, the analysis also differentiated according to the **district type** (as of DEAS 2017). People were grouped according to which category of district they live in—large cities, urban districts, rural districts, and sparsely populated rural districts (see Federal Institute for Research on Building, Urban Affairs and Spatial Development 2020).

Functional health was measured in the 2017 DEAS survey with the GALI indicator (Global Activity Limitation Indicator) and adopted for the 2020 analyses as a proxy for functional health 2020. For GALI (see Robine and Jagger 2003), respondents were asked: "Have you been limited in doing normal activities during the past 6 months due to health problems?" Respondents could answer with: "Yes, very limited"/"Yes, slightly limited"/"No, not limited". For the analyses, the answers were summarised as "functionally restricted" ("severely restricted" and "restricted") and "functionally not restricted".

The data in the DEAS 2017 on sports and walking were used as indicators of **previous physical activity before March 2020**. Specifically, in 2017, people were asked how often they did sport or went for a walk. The answer "daily"/"several times a week"/"once a week"/"1 to 3 times a month"/"less often" or "never" could be selected. For the analyses, these answer categories were combined into two groups, one for sports and one for walking: regular sports or walking (daily, several times a week or once a week) and non-regular sports or walking (1 to 3 times a month, less often or never).

7.3 Findings

A quarter of people in the second half of life said they had reduced their sporting activities

During the Covid-19 pandemic, respondents reported both continuity and change in physical activity in middle and older adulthood. About two-thirds of individuals (64.5 per cent) reported being active or inactive in *sports as* frequently as before the pandemic. Those who reported a change in the frequency of sporting activity were much more likely to have reduced it than to have increased it: Roughly a quarter (27.8 per cent) said they had reduced their sporting activities, and only 7.7 per cent had done more sports than before the start of the Covid-19

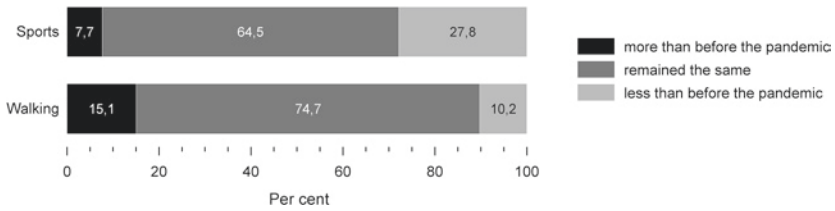


Fig. 7.1 Self-reported change in physical activity (sports and walking) (in per cent). *Source* DEAS 2020 (n=4679 (sports), n=4718 (walking)), weighted analyses, rounded estimates

pandemic (Fig. 7.1). 61.5 per cent of all 46–90-year-olds stated that they did sports regularly, meaning at least once a week.

The frequency of *walking* changed even less overall (Fig. 7.1). About three quarters of people (74.7 per cent) said they went for a walk as often as before the pandemic, 10.2 per cent went less often and 15.1 per cent went more often. So, when it comes to walking, unlike sports, more people had increased their activity than decreased it. Overall, 71.1 per cent of all 46–90-year-olds were going for a walk regularly at the time of the survey, meaning at least once a week.

7.3.1 Differences According to Age, Gender and Education

46- to 60-year-olds reported the greatest changes in sporting frequency

The greatest change in the frequency of sport was among people aged 46–60 (Fig. 7.2). They reported increases but also decreases in sporting activity more often than other age groups: 11.4 per cent in this age group reported doing more sports than before the pandemic. This share is larger than in the older groups (61–75 years: 6.1 per cent, 76–90 years: 1.9 per cent). 30.9 per cent of this age group of 46–60-year-olds reported doing less sports, which was also more than in the other age groups (at 27.0 and 22.2 per cent respectively). The frequency of sport remained most stable among the oldest group of 76–90-year-olds, where three quarters (75.9 per cent) reported no changes. However, the oldest group continued to have the lowest proportion of regular sports participants (76–90 years: 50.7 per cent versus 46–60 years: 62.4 per cent).

In the oldest group, more people than in the other age groups said they had limited their walking (76–90 years: 15.0 per cent, compared to 46–60 years: 8.8

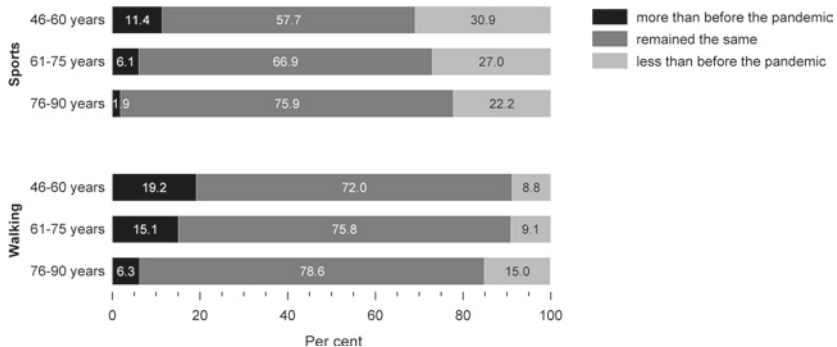


Fig. 7.2 Self-reported changes in physical activity (sports and walking) by age group (in per cent). *Source* DEAS 2020 (n=4679 (sports), n=4718 (walking)), weighted analyses, rounded estimates. Group differences statistically significant ($p < 0.05$)

per cent) (Fig. 7.2). In contrast, a particularly large number of those aged 46 to 60 (19.2 per cent) said they had walked more often than before the pandemic. Just under 70 per cent of both the youngest (46–60 years) and the oldest group (76–90 years) regularly went for a walk.

More women reported reduced physical activity during the pandemic than men

One third of women aged 46 to 90 (32.8 per cent) and only 22.4 per cent of men of this age reported having done less sports than before the pandemic. About the same proportion of both genders, about 8 per cent, reported that they had increased their sporting activity (Fig. 7.3). Roughly one in ten went for a walk less often than before the pandemic, just under one in seven went more often and about three quarters reported no change in the frequency of walking. The differences between women and men in walking were only slight and not statistically significant.

People with high educational levels more often reported changes in their sporting behaviour during the pandemic

The data showed a correlation between educational level and changes in the frequency of *sports* in the pandemic: people with a high educational level most frequently increased their sporting activities (11.1 per cent), but, on the other hand, they also frequently restricted them (28.0 per cent) (Fig. 7.4). Of those with a low educational level, on the other hand, only 2.6 per cent said they did more sport and 20.8 per cent did less.

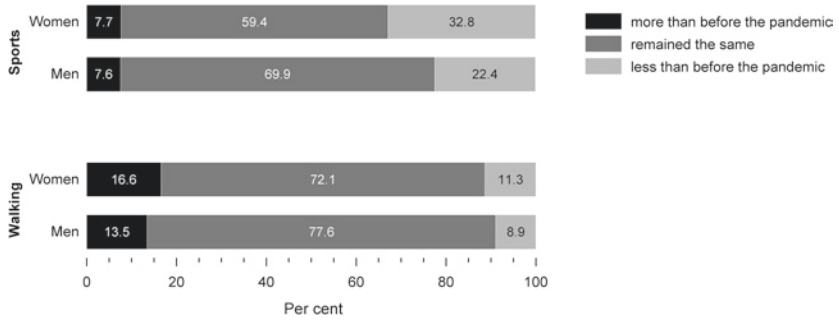


Fig. 7.3 Self-reported change in physical activity (sports and walking) by gender (in per cent). *Source* DEAS 2020 (n=4680 (sports), n=4719 (walking)), weighted analyses, rounded estimates. Group differences statistically significant ($p < 0.05$) only for sport

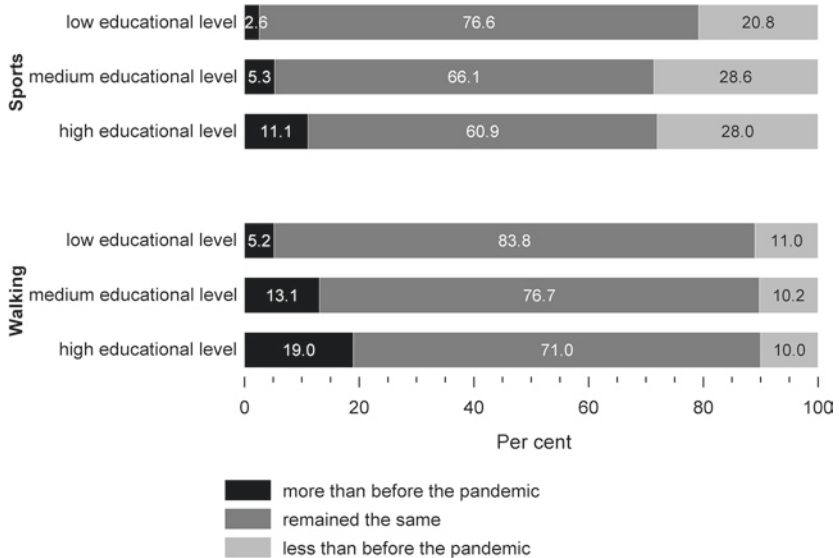


Fig. 7.4 Self-reported changes in physical activities (sports and walking) by educational level (in per cent). *Source* DEAS 2020 (n=4679 (sports), n=4718 (walking)), weighted analyses, rounded estimates. Group differences statistically significant ($p < 0.05$)

When it comes to *walking*, the education groups differed starkly in terms of those who reported walking more: almost one in five (19.0 per cent) of those with a high educational level walked more, but only one in twenty (5.2 per cent) with a low level of education did so. On the other hand, the proportion of those who less frequently went for a walk was very similar in all educational groups and amounted to between 10 and 11 per cent.

7.3.2 Differences According to Place of Residence

People who lived in cities more often reported that their frequency of sport had changed than those from rural areas

During the pandemic, sporting activity appeared to have changed more in cities than in rural areas (Fig. 7.5): only 57.4 per cent of people between 46 and

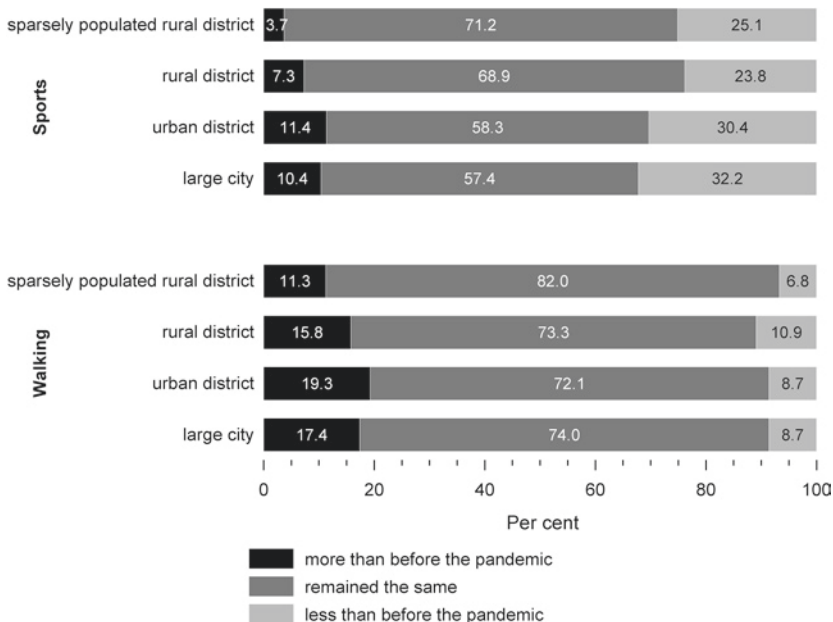


Fig. 7.5 Self-reported change in physical activity (sports and walking) by district type (in per cent). *Source* DEAS 2020 (n=4111 (sports), n=4138 (walking)), weighted analyses, rounded estimates. Group differences statistically significant (p<0.05) only for sports

90 years of age living in large cities, but 71.2 per cent of people in sparsely populated rural counties, reported having done as much sports as before the pandemic. While almost a third (32.2 per cent) of people living in large cities had reduced their sporting activities, only 25.1 per cent of people in sparsely populated rural counties have done so. However, according to their own statements, city dwellers had also increased their sports activities more frequently (10.4 per cent) than those living in sparsely populated rural districts (7.3 per cent).

For walks, too, more changes tended to be reported by people from urban regions (Fig. 7.5). However, the differences between the district types were small and not statistically significant.

People from Western Germany more often reported changes in sporting activity

The pandemic had a greater impact on the frequency of *sports* in Western Germany than in Eastern Germany. A significantly higher proportion of Eastern Germans (76.3 per cent) than Western Germans (58.9 per cent) said they had not changed their sporting activity during the pandemic. 10.7 per cent of the Western Germans said they had done more sports since March 2020 and almost a third (30.4 per cent) reported having done less sports. For Eastern Germans, both proportions were lower (2.8 per cent more sports, 21.0 per cent less sports; Fig. 7.6).

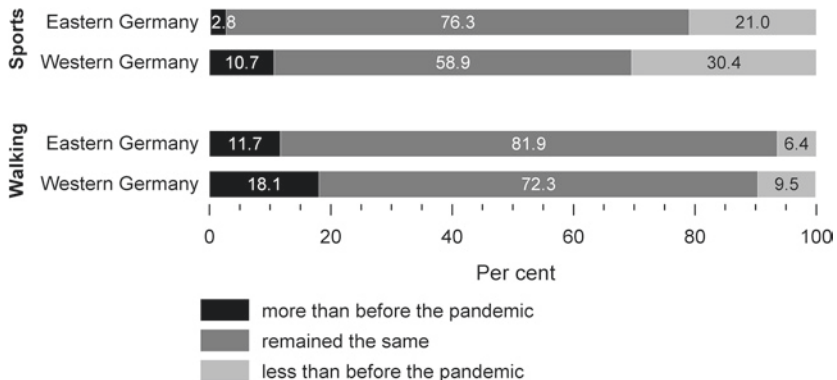


Fig. 7.6 Self-reported change in physical activities (sports and walking) by place of residence in Western or Eastern Germany (in per cent). *Source* DEAS 2020 (n=4111 (sports), n=4138 (walking)), weighted analyses, rounded estimates. Group differences statistically significant ($p < 0.05$)

The changes in *walking* during the pandemic were also greater in Western Germany than in Eastern Germany: of all Western Germans, 18.1 per cent said they went for a walk more often than before and 9.5 per cent reported doing so less often (Fig. 7.6). For Eastern Germans, these proportions were only 11.7 per cent (more frequent walking) and 6.4 per cent (less frequent walking).

7.3.3 Difference According to Functional Health

One third of people with functional limitations reported having done less sport during the pandemic

One third of the people in the DEAS survey 2020 had reported functional limitations in 2017, i.e. health limitations in everyday activities—two thirds were not functionally limited. More people without functional limitations estimated that they had done more sport since March 2020 than people with functional limitations (10.4 vs. 6.0 per cent, Fig. 7.7). Functionally impaired persons, on the other hand, reduced their sporting activities more often than functionally non-impaired persons (32.2 vs. 26.9 per cent).

In terms of self-reported changes in walking there were fewer clear differences according to health characteristics than were evident for changes in sport. However, people with limited functional health more often reported having reduced

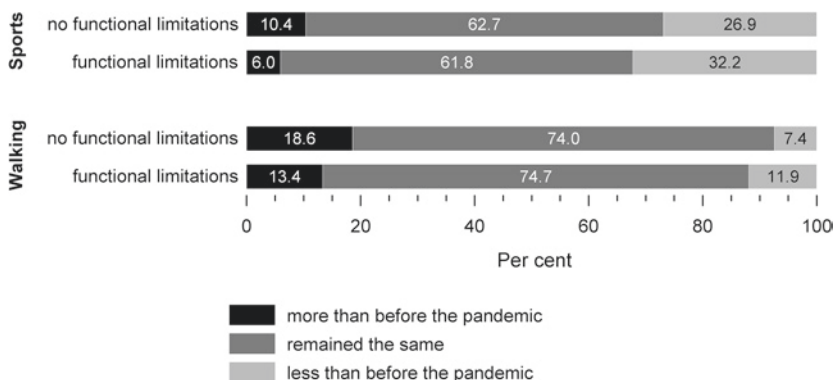


Fig. 7.7 Self-reported change in physical activities (sports and walking) according to presence of functional limitations (in per cent). *Source* DEAS 2020 (n=4085 (sports), n=4112 (walking)), weighted analyses, rounded estimates. Group differences statistically significant ($p < 0.05$)

walking than people with good functional health (11.9 vs. 7.4 per cent, Fig. 7.7). Individuals with good functional health were also more likely to take more walks than those with functional limitations (18.6 vs. 13.4 per cent).

Almost 40 per cent of those who regularly exercised in 2017 reported exercising less often after March 2020

A big difference for the reported changes in sports during the pandemic concerned the frequency of sports during the past: 38.7 per cent of all people who engaged in sports regularly in 2017 (which is just under 60 per cent of all 2020 respondents) reported having reduced their sporting activities because of the pandemic. Among those who did not regularly participate in sports in 2017 (which is over 40 per cent of the 2020 respondents), only 14.7 per cent were doing even less sports. However, people who were regularly active in sports in 2017 were also more likely to have done more sports during the pandemic than people who were inactive in 2017 (11.0 vs. 6.5 per cent, Fig. 7.8).

The differences in walking, on the other hand, were not as large. Regardless of whether they went for a walk regularly in 2017 or not, about three quarters of people in the second half of life reported that they continued to do so after March 2020 (Fig. 7.8). Those who were already not walking regularly in 2017 were a bit more likely to cut back on this activity during the pandemic than those who were walking regularly in 2017 (10.2 vs. 8.1 per cent, Fig. 7.9). 18.7 per cent of those who were taking regular walks in 2017 went for a walk more often during the

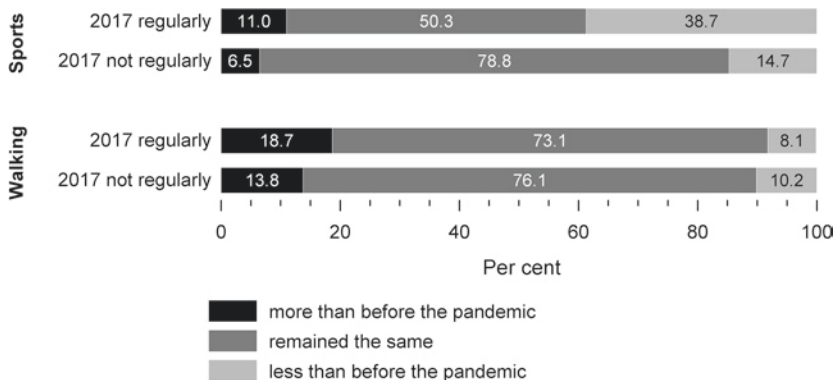


Fig. 7.8 Self-reported change in physical activity 2020 (sports and walking) by physical activity in 2017 (in per cent). *Source* DEAS 2020 (n=4109 (sports), n=4136 (walking)), weighted analyses, rounded estimates. Group differences statistically significant ($p < 0.05$)

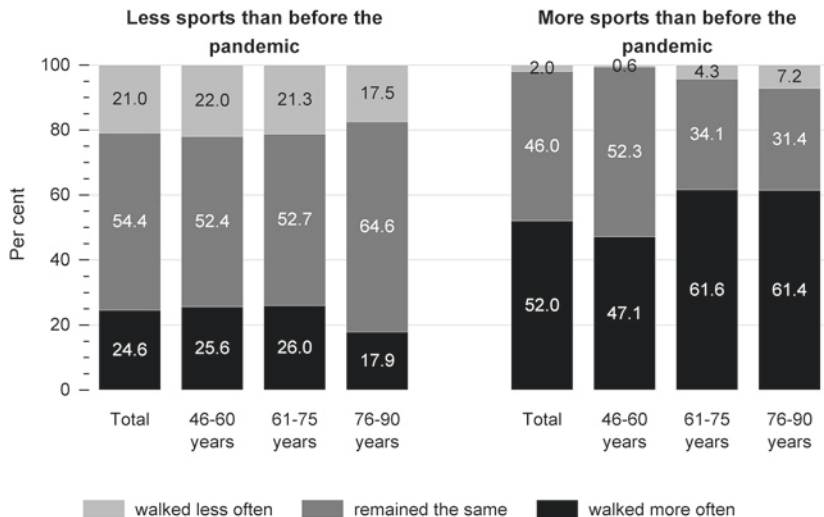


Fig. 7.9 Self-reported change in frequency of walking among people doing less or more exercise than before the pandemic, total and by age group (in per cent). *Source* DEAS 2020 (n=4642 (sports)), weighted analyses, rounded estimates. Group differences statistically significant (p<0.05)

pandemic. Of those who did not go for regular walks in 2017, 13.8 per cent took a walk more frequently in 2020.

7.3.4 Compensation Effects—Doing Less Sports and Walking More?

Only a quarter of those who exercised less during the pandemic compensated for this deficit by walking more often

Nearly 28 per cent of 46–90-year-olds said they had done less sports since the beginning of the pandemic than before. Did these people compensate for their decreased sporting activity by going for a walk more often? About half of this group (54.4 per cent, Fig. 7.9) said they went for a walk just as often as before the pandemic. About one in five of this group (21.0 per cent) said that they not only exercised less but had also reduced the frequency of their walks. Only a quarter (24.6 per cent) of those who exercised less often because of the pandemic went for a walk more often. The oldest group of 76–90-year-olds also less commonly

replaced one form of physical activity with another. In this group, only 17.9 per cent reported having reduced their sporting activity but going for a walk more often. However, there were also fewer people (17.5 per cent) in this group who did not only do sports less often, but also went for a walk less often than in the other age groups (46–60-year-olds: 22 per cent; 61–75-year-olds: 21.3 per cent).

Those who exercised more during the pandemic often also went for a walk more often

On the other hand, just under 8 per cent of those aged 46 to 90 did more sports during the pandemic than before. More than half of these people (52.0 per cent, Fig. 7.9) supplemented this with more frequent walks. Those who did more sports during the pandemic thus often also went for more walks. This increased physical activity was particularly evident among those over 60 years of age—almost two-thirds of those in this group who exercised more also went for a walk more often. However, the proportion of those who did more sports but went for a walk less also increased with age (46–60 years: 0.6 per cent; 61–75 years: 4.3 per cent; 76–90 years: 7.2 per cent).

7.4 Discussion

This chapter investigated how people between 46 and 90 years of age changed their physical activity in terms of sports and walking after the onset of the Covid-19 pandemic, according to their self-reports. The study participants made these statements in June and July 2020.

Most people in middle and older adulthood said that they had not changed their physical activity. According to their own statements, two thirds of the respondents did as much (or little) sports as before, and even three quarters of the respondents went for a walk as often as before the pandemic. These results are in line with the findings of other studies. For example, the COSMO surveys of 18–74-year-olds from April and June 2020 did not show any severe changes in physical (leisure) activity (Betsch et al. 2020).

But even though stable levels of physical activity could be observed in large parts of the population in the second half of life, for one third of people, physical activity had changed in one direction or another. There were likely different reasons for these changes. Some of these people probably had to change their sporting behaviour because the conditions or even the infrastructure for exercise changed, for example, due to temporary closures of sports facilities. Others may have wanted to adapt their behaviour, for example, by using sports to compensate

for other leisure activities that were not feasible or difficult to do during the pandemic and to make up for a lack of exercise when working from home.

7.4.1 Differences in Reported Physical Activity by Age, Gender, and Education

Less frequent sporting activity and walks were most frequently reported by groups that had anchored physical activity in their lifestyle more often than others. Within the second half of life, these were mainly middle-aged adults, that is, those aged 46 to 60. Almost every third of them estimated that they had reduced the frequency of sports during the first wave of the pandemic; in the oldest age group of 76–90-year-olds, this was only every fifth person. It can be assumed that some of the respondents in this younger age group, who were still of working age, were particularly stressed by the Covid-19 crisis due to changes in job demands and additional family responsibilities and were therefore less able to engage in leisure activities such as sports. However, it is also possible that in view of the high proportion of physically inactive people in the oldest group, many of these very old people had not been able to reduce their activity even further, that is, they simply remained physically inactive.

It was also women rather than men who reported having done less sports during the pandemic—one third of women limited sports activities and only one quarter of men. There were findings that women were under greater stress than men during the Covid-19 period (Möhring et al. 2020; Czymara et al. 2020), for example, due to the organisation of everyday family life, home schooling and caring for family members (see chapter “Covid-19 crisis = care crisis? Changes in care provision and care-givers’ well-being during the Covid-19 pandemic”). Even though there were also findings that gender differences in the family division of labour had narrowed during this period (Bujard 2020), women still bore the main burden of family work. However, contrary findings on the reduction of sporting activities in a gender comparison showed that women reduced their activities less frequently than men and intensified them more frequently (Mutz and Gerke 2020; Sport England 2020). One of the reasons given for this is that women were more likely to avail of online and home sporting opportunities, while men were more likely to take part in sports in clubs or commercial facilities that were closed during the pandemic.

7.4.2 Differences in Reported Physical Activity by Place of Residence

Just under a third of those living in cities reported having reduced sporting activities—this was a greater proportion than in rural counties, where this applied to only about a quarter of respondents. Physical activity was possible in different ways. In the German Ageing Survey, leisure-time sporting behaviour was recorded, but physical activities due to occupational activity, work in the house and garden or transport routes were not. The profiles of physical activity may well have differed in urban and rural areas due to different occupational structures, infrastructures, and opportunities to exercise in the residential environment. More people from the upper classes may also have lived in big cities and their lifestyles may have included recreational sports more often. If physical activity in cities often took the form of (institutional and organised) recreational sports, and the opportunities for this were limited in the Covid-19 crisis, then sports activities in cities would logically have declined more than in rural areas.

A similar pattern can be seen in frequency changes of sports in Eastern and Western Germany: While three quarters of the Eastern German population in the second half of life reported no changes in the frequency of sports and only about one fifth reported reductions, in Western Germany, reported sporting behaviour remained unchanged for just under 60 per cent of respondents, and just under one third reported having done less sports than before the pandemic. One reason for this could be that there were fewer people in Eastern Germany who lived in large cities, where sporting activities were more strongly affected by the Covid-19 crisis. On the other hand, Eastern Germans were also less likely to be organised in sports clubs than Western Germans (Lampert et al. 2019). Therefore, the restrictions on the activity of sports clubs had fewer consequences for them than in Western Germany.

7.4.3 Differences in Reported Physical Activity by Functional Health

Functional limitations, that is, health restrictions in carrying out everyday activities such as climbing stairs or carrying shopping bags, led those affected to state more frequently than other people that they had limited their physical activity during the pandemic. A third of them said they did less sports than before (about a quarter in the case of functionally non-impaired people) and almost 12 per cent

said they went for a walk less often (functionally non-impaired people: 7 per cent). In addition, people with functional limitations increased sports and walks less often than others during the pandemic.

Conditions during the pandemic apparently led to physical activity deficits among those for whom targeted physical activity and even lighter physical exertion such as walking were particularly important for maintaining and improving their functional health. In the group of people with impaired functional health, many belonged to the high-risk group for whom there were particularly strict recommendations for keeping distance during the pandemic because of the risk of infection and the risk of severe disease. People with health problems also felt more threatened by the Covid-19 pandemic than people in better health, presumably because of their greater vulnerability (see chapter “How did individuals in the second half of life experience the Covid-19 crisis? Perceived threat of the Covid-19 crisis and subjective influence on a possible infection with Covid-19”). This could also have led to a decrease in motivation for these people to exercise and stay active outside their homes at all. In addition, institutionalised sports facilities were and are still not available a lot of times.

7.4.4 Differences in Reported Physical Activity According to Previous Physical Activity

Almost 40 per cent of people who reported doing regular sporting activity in 2017 said they had reduced their sporting activity after March 2020. In addition to the individual changes in everyday life, the restrictions due to the closure of sports facilities and gyms as well as the limitations in the activities of sports clubs may have contributed to this. These long-term limitations not only had individual consequences; the infrastructure of sports was also put at risk. Sports clubs have an important role to play, for example, in health-targeted sports and other specialised sports, especially for older people. But many clubs were already struggling with financial problems and difficulties such as a lack of exercise instructors and a decline in membership that had already existed before the Covid-19 pandemic (Breuer and Feiler 2019).

However, there was also a group who were active in sports before the pandemic and who seemed to have come to terms with the changed conditions for sports activities. 11 per cent of those who did sports regularly in 2017 said they did even more sports during the pandemic than before. Of the respondents who did not exercise regularly in 2017, only 6.5 per cent said this. It was likely that sporting activity or inactivity was shaped by long-term attitudes and habits (Hir-

vensalo et al. 2000; Friedman et al. 2008). Hopefully, events such as the Covid-19 pandemic will not permanently affect motivation to be physically active. Presumably, those who were active in sports were limited by the pandemic in the short term but they will likely not become inactive in sports in the long term. On the other hand, the Covid-19 pandemic did not turn inactive people into active athletes. The long-term consequences of the pandemic for sports motivation and sports behaviour are not yet foreseeable and should be the subject of longitudinal studies in the coming years. In addition, politics, media, and science have the important task of repeatedly pointing out the manifold positive effects of physical activity. The appeal to stay at home in times of a pandemic should not be misunderstood as a call for inactivity.

7.4.5 Declines in Sporting Activity only Marginally Compensated by Walks During the Pandemic

For the vast majority of respondents, their frequency of sports and going for a walk did not change during the pandemic. However, the pandemic seemed to produce “losers” and “winners” in terms of physical activity. Those who usually did less sports did not compensate for this by going for a walk more often. On the contrary, about one fifth of this group did not only do less sports, but also went for a walk less often than before the pandemic. About half of them went for a walk just as often as before and only a quarter compensated for their decline in sporting activity by taking more frequent walks. However, those who did more sports than before the pandemic often supplemented this with more walks. This is true for more than half of those who did more sports than before the pandemic.

It can be assumed that important conditions for physical activity were unequally distributed, and that this inequality was exacerbated by the pandemic. These included individual occupational and family pressures that limited time and energy for physical activity. Some people in the second half of life might have found more time for sports and walking, for example, due to working from home or the elimination of other leisure activities. Others, however, were unable to do sports or go for a walk due to increased workloads or additional family responsibilities. These people need support and relief in order to benefit from the positive effects of leisure and especially sports activities on health and well-being, especially in such challenging and stressful times of crisis.

7.4.6 Conclusion

How can people in middle and older adulthood be supported with physical activities in the ongoing Covid-19 crisis?

Sports clubs play an important role in sports programmes for older people. Almost every third sports club (that is around 28000 in Germany) offers health-related programmes (general health sports, rehabilitation courses, offers for people with disabilities and chronic diseases; Breuer and Feiler 2019). This potential should be supported reliably in the long term. Physical activity prevention takes place locally, so municipal institutions should be involved in order to promote low threshold offers. Locally emerging long-term structures that also function in crisis situations are important. Older people did less sports than younger people, although it has been proven that they would benefit in many ways from regular physical activity. More offers need to be developed especially for this age group and individually adapted to their individual physical condition and personal needs.

The Covid-19 pandemic showed that sporting offers based on indoor sports facilities may not be available for extended periods under pandemic conditions. Therefore, flexibility in services for older people that include outdoor exercise or sports that can be done alone at home would be beneficial. An important way to remain active in sports under pandemic conditions is through online sports offers, which, adapted to different age groups and fitness levels, could play an important role. However, this also requires policymakers to counteract the existing trend of the “digital exclusion” of older people (German Bundestag 2020; Seifert et al. 2020, see also chapter “Internet use by people in the second half of life during the Covid-19 pandemic: social inequalities persist”). This, too, is an urgent but long-term and ongoing task that extends beyond the pandemic period.

Finally, the challenge to offer physical activity programmes of different kinds to people who have not used such offers yet remains beyond the Covid-19 period. This is a long-term task independent of Covid-19. However, if new and more flexible forms of access to sport and other forms of physical activity develop and become permanently established during the pandemic, this could be an opportunity for a continued broader acceptance and performance of physical leisure activity.

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