Occupational disruptions during lockdown, by generation: A European descriptive cross-sectional survey

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Introduction. The periods of lockdown during 2020 led to changes in daily occupations. As participation relies on dynamic interactions between the person, his/her occupations and his/her environment, we wondered whether people from different generations shared the same perception of occupational disruptions during the lockdown.

Methods. We performed an online survey based on the Canadian Occupational Performance Measure of adults in 19 European Union countries, the United Kingdom, and Switzerland. Three groups were compared: young adults (YAs, aged 18-39), middle-aged adults (MAs, aged 40-59) and older adults (OAs, aged 60 and over).

Results. 2865 participants (YAs: 47%; MAs: 33%; OAs: 20%) reported a total of 6549 disrupted occupations. The most frequently disrupted domain was leisure (83%), followed by productivity (16%) and self-care (2%); there were no significant intergroup differences (p=0.18). In a multivariate analysis, socializing disruptions were more likely to be associated with younger age (adjusted odds ratio [95% confidence interval] = 0.62 [0.50-0.76] for YAs vs. MAs and 0.46 [0.30-0.71] for YAs vs. OAs.

Conclusion. With the exception of socializing, the main disrupted occupations were similar from one generation to another. Our findings might enable the more accurate assessment of the risk of occupational disruption in a restrictive environment.

Keywords: lockdown, occupational disruption, generation, occupational science

Introduction

In January 2020, the Chinese government decreed the first period of lockdown in the city of Wuhan, in order to contain the growing outbreak of infections by severe acute respiratory syndrome coronavirus 2. The outbreak of coronavirus disease 2019 (COVID-19) soon spread to several European countries, followed by the USA, African countries, and South American countries. Almost all of these countries declared lockdown measures during the following weeks, which led to a number of occupational changes (WFOT, 2020). In France, people were only allowed to leave their home for one hour a day (except for absolute necessities) and had to remain within a radius of 1 km. In France and Italy, people had to fill out and carry a form stating the reason for their journey outside the house; in the event of non-compliance, they faced a fine or (for repeated offences) even a prison sentence. In Spain, all sport and exercise outside the home was prohibited. In contrast, people in Germany could go out running or cycling as long as they complied with social distancing. By way of another example, people in Belgium were not allowed to meet friends or relatives outside the home. The COVID-19 pandemic and its impact on everyday life led to occupational disruption (Hammell Whalley, 2020; Luck, Doucet, & Luke, 2021; Mynard, 2020). Nizero et al. defined occupational disruption as a typically temporary or transient state that occurs "when a person's normal pattern of occupational engagement is disrupted due to significant life events (such as having a baby), environmental changes (such as moving house or location), becoming ill or sustaining an injury from which full recovery is expected" (Nizzero, Cote, & Cramm, 2017).

In fact, occupational participation relies on dynamic interactions between the person, his/her occupations, and his/her environment (Townsend & Polatajko, 2013). Age is one of the personal components that might affect occupational participation (Hayase, et al., 2004). It has been stated that "many older adults face challenges that prevent them from accomplishing common daily activities such as moving around, home maintenance, and leisure activities" (Orellano-Colon, et al., 2015). The generational approach focusses on what people from one generation share with people from other generations, rather than inter-individual differences. This approach is based on the fact that people from the same generation share values and have a lot in common because of the experiences and events that they have experienced (Cynthia Engels, 2017; Hills et al., 2013; Lambert,

2008). Hence, we wondered whether people from different generations had similar perceptions of occupational disruptions during the lockdown. A given generation tends to share a number of general social and life events, which create common reference points (Borges, Manuel, Elam, & Jones, 2006). In the context of lockdown, older generations might perform vigorous occupations less frequently (Källdalen, Marcusson, & Wressle, 2013). However, since older adults are usually retired, lockdown might affect their participation in productive occupations less. In contrast, older adults might rely on relatives for certain self-care occupations or might be less likely to use social media to maintain social interactions; these activities might be more affected during a period of lockdown. Thus, the primary objective of the present study was to analyse occupational disruptions during lockdown as a function of the generation. The secondary objectives were to (i) analyse the types of occupation disrupted during lockdown, as a function of the generation, and (ii) describe the levels of importance, performance and satisfaction for disrupted occupations during lockdown, relative to normal times and as a function of the generation.

Method

Study design and participants

In April 2020, 9 of the world's 15 most affected countries were in Europe. Hence, several European countries were among the first to implement lockdown measures on a national level. Given the European Union (EU)'s common legislative and regulatory framework, we focused on the 27 current EU member states, the United Kingdom (an EU member state until January 31st, 2020), and Switzerland (a country surrounded by EU member states). We decided not to include people living in institutions because they face occupational disruptions under normal circumstances. Hence, we conducted the "Occupational Participation during COVID-19 Lockdown in Europe during Spring 2020, by generation" (COPACO) online cross-sectional survey of adults (aged 18 and over) locked down in EU countries, the UK, or Switzerland. The COPACO survey's objectives were to analyze (as a function of the generation, in each case) (i) occupational disruptions during lockdown (the subject of the present report), (ii) new occupations or occupations practiced more widely during lockdown, and (iii)

occupational balance during lockdown.

Study instrument

Our online survey was based on the literature data (Dür, et al., 2014; Townsend & Polatajko, 2013; Zeidan, 2012) in general and the Canadian Model of Occupational Performance and Engagement (CMOP-E) in particular (Townsend & Polatajko, 2013), The first part of the questionnaire addressed the person's characteristics (with six multiple-choice questions), the second part addressed the physical and social environment (seven multiple-choice questions) and the third part borrowed from the Canadian Occupational Performance Measure (COPM) (Law, et al., 2014): participants could quote up to three disrupted occupations, and then rate the perceived levels of occupational importance (i.e. '*how much is this activity important to you?*'), performance ('*How would you rate the way you perform this activity?*') and satisfaction ('*how satisfied are you with the way you do this activity?*') on a Likert scale ranging from 1 (the lowest level) to 10 (the highest level) under normal circumstances and during lockdown. An additional question probed the frequency with which the occupation was performed during usual times and during lockdown. Given that the present analysis focused on occupational disruptions, the rest of the questionnaire (new occupations and occupational balance) is not analysed here.

The French version of the survey was tested by five adults, and the content was adjusted as required. The official languages of the nine European countries included in the world's 15 most affected countries were Dutch, English, French, German, Italian and Spanish; we therefore translated the questionnaire into those languages. To check the quality of the translation, each questionnaire was tested by a native speaker and adjusted as required.

Data collection

The questionnaire was created online, using SurveyMonkey software. We selected the "anonymous" option, so that IP addresses were not recorded. A specific link was generated for each of the six languages. The links were published on web sites and social media, in order to produce snowball sampling. These links were released on April

9th, 2020, and were closed three weeks later. Since no personal data was collected and the survey was anonymous, approval by an independent ethics committee was not required. The primary endpoints were disruptions in each of the occupational domains: leisure, productivity, and self-care. The secondary endpoints (based on the COPM) were the measures of importance and the changes in the levels of satisfaction, productivity and frequency. The covariates were gender, socioprofessional characteristics (profession, income, etc.), the physical environmental (type of housing, urban/rural place of residence, etc.), and the social environment.

Analysis

Continuous variables were described as the median [interquartile range (IQR), range]. Categorical variables were described as the number (percentage). We took Generation Y as the reference for the group of young adults (YAs, i.e. people aged between 18 and 39 in 2020) (Engels, 2017). As a generation is typically described as people born in the same 20-year period (Borges, Manuel, Elam, & Jones, 2006), we then constituted a group of middle-aged adults (MAs, aged between 40 and 59) and a group of older adults (OAs, aged 60 and over). Intergroup comparisons were performed with the Kruskal-Wallis test (for continuous variables) and Pearson's chi-squared test or Fisher's exact test (as appropriate) for categorical variables. All tests were two-tailed, and the threshold for statistical significance was set to $p<0.05$. When the overall p-value between the three groups was <0.2 for a given domain (i.e. self-care, productivity or leisure), sub-domain (e.g. active recreation, quiet recreation, socializing, etc.) or sub-sub domain (e.g. participating in sports or cultural outings), we performed pairwise comparisons. We used a multivariate logistic regression analysis to identify the independent factors associated with disruptions in the primary endpoints. Adjustments were made for gender, the type of environment (house/flat; agglomeration/countryside); socioprofessional status (craftsperson, trader or company manager; employee; executive or intellectual profession; farmer; intermediate profession; worker). Associations were assessed by calculation of the adjusted odds ratio (OR), the latter's 95% confidence interval (CI), and the p-value (in Wald's test). Missing data were not imputed. The threshold for statistical significance was set to $p<0.05$. All statistical analyses was performed using Stata software (version 15.0, StataCorp LLC, College Station, TX, USA). Given that (i) the lockdown measures differed from one country to another and

(ii) most of the respondents were living in France, we stratified our results and compared respondents in France with respondents in other countries.

For questions with qualitative answers, the lead author (CE) analysed the thematic content manually. The categorization was based on the CMOP-E's theoretical framework (Townsend & Polatajko, 2013): each occupation was allocated to one of the three occupational domains and then to the appropriate sub-domain and sub-sub-domain. As we did not have all the specific information usually gathered during the COPM interview, it was not always clear in which domain an occupation belonged for one specific respondent. Hence, we endeavoured to stay as close as possible to the examples given in Appendix A of the COPM booklet (Law, et al., 2014). For example, "cooking" was always allocated to household management, and "intellectual learning" was always allocated to play/school, even though interviews would usually provide a better understanding of the value a client places on an occupation. Furthermore, "active" or 'quiet' leisure can depend on the person's age (Desmond, Jackson, & Hunter, 2015); however, in order to compare disruptions between groups, we again referred to the examples given in the COPM booklet.

Results

A total of 3241 answers were received: 166 were excluded because the respondent had not stated his/her year of birth and 210 were excluded because the respondent did not answer the question about occupational disruptions. Hence, we included 2865 respondents from 21 different countries - mainly France (n=2477), where the survey was launched. The other participants were from Belgium (n=99), Switzerland (n=76), Spain (n=46), the United Kingdom (n=31), Germany (n=29), Austria (n=25), Italy (n=24), the Republic of Ireland (n=13), Denmark (n=7), the Netherlands (n=6), Portugal (n=5), Greece (n=4), Malta, Sweden (n=2 each), Croatia, Finland, Luxemburg, Poland, Romania, and Slovenia (n=1 each). Thirteen participants did not report their country of residence.

Characteristics of the study population

Forty-seven percent of the respondents were in the YA group, with 33% in the MA

group and 20% in the OA group (Table 1). There was female predominance, especially among YAs: 81%, vs. 75% of the MAs and 68% of the OAs (p<0.001). Executive or intellectual professions were the most represented (53%). Most of the YAs were workers (63%) or students (31%), while the great majority of MAs were workers (89%). Most of the OAs were retired (80%; p<0.001). Half of the YAs were living in a flat or a two-level flat, while the majority of the MAs and OAs were living in a house (61% and 65%, respectively; p<0.001). Most respondents were living in an urban area or a city (66%, p=0.13), and 98% lived with the same people during lockdown as they would usually (p=0.52). Most YAs (57%) and MAs (66%) were working/studying from home, while 72% of OA, 17% of MAs and 23% of YAs were not working or studying at all during lockdown. The majority of respondents did not report a loss of income during lockdown (77%), although a partial, major or even total loss of income was significantly more common among YAs (29%) and MAs (24%) than among OAs (9%; p<0.001).

Occupations that were disrupted during lockdown

OAs felt less disrupted in their participation (Table 2): 9% (95%CI: 7-12) declared that they had no occupational disruptions due to lockdown (MAs: 5%, 95%CI: 3-6; YAs: 6%, 95%CI: 4-7; p=0.01). Fourteen percent of respondents mentioned one disrupted occupation, 24% mentioned two, and 56% mentioned three (the maximum allowed in the survey). A total of 6606 disrupted occupations were reported, of which 6549 could be allocated to a CMOP-E domain. For all three generations, the most disrupted domain was leisure (82% of the disrupted occupations), followed by productivity (15%) and then self-care (2%); the intergroup differences were not significant (p=0.1).

Leisure.

On a 1-to-10 scale, the median [IQR] importance score was 8 [7;10] among YAs and MAs and 9 [8;10] among OAs (p<0.01). The median change in performance (relative to normal times) was -7 [-8;-5] among YAs and MAs and -7 [-9;-6] among OAs (p<0.001). The median satisfaction score (relative to normal times) was -7 [-8;-4] among YAs, -7 [-8;-5] among MAs, and -7 [-9;-6] among OAs (p<0.001). Lastly, the median frequency score (rated on a 7-point Likert scale ranging from *everyday* to *never*) was -3 [-5;-1] among YAs, -3 [-4;-2] among MAs and -4 [-5;-2] among OAs (p=0.01).

Hence, OAs attached the most importance to leisure and felt most affected (relative to normal times) with regard to performance, satisfaction, and frequency.

Active recreation was the most disrupted leisure activity in each of the three groups and accounted for 58% of all disrupted occupations. After adjustment for sociodemographic and environmental variables, the intergeneration difference was not statistically significant. Sixteen categories of active recreation were identified. Participation in physical activities was most disrupted; the most frequently mentioned were walking (especially for OAs; $p<0.001$), swimming (although less for YAs; $p<0.001$), going to the gym, and cycling. The second category corresponded to cultural outings (especially among MAs and OAs) in general and going to the cinema in particular. Dining out was also important, especially for YAs ($p<0.001$). However, OAs mentioned travelling more ($p=0.1$). OAs were likely more to mention gardening ($p<0.001$) and going to a second home ($p<0.001$).

Socializing comprised 23% of the disrupted occupations among YAs, 16% among MAs, and 14% among OAs ($p<0.001$). The intergeneration difference remained significant even after adjustment for sociodemographic and environmental variables (OR [95%CI] for YAs vs. MAs: 0.62 [0.50-0.76], $p<0.001$; for YAs vs. OAs: 0.46 [0.30-0.71], $p<0.001$). Some respondents mentioned missing being able to share special life moments, such birthdays and weddings.

Quiet recreation comprised 6% of the disrupted occupations. Nine categories of quiet recreation were identified. The most frequently mentioned were reading (with no significant differences between generations; $p=0.4$) and then crafts (especially by OAs; $p<0.001$). The disruption in singing was significantly greater among OAs ($p<0.001$). The multivariate analysis did not reveal any significant differences (Table 3).

Productivity.

The median [IQR] importance score was 9 [8-10] among YAs, 8 [7-10] among MAs, and 8.5 [8-10] among OAs ($p=0.02$). The median [IQR] difference in performance (compared with normal times) was -7 [-9;-4] ($p=0.6$), the median difference in satisfaction was -6 [-8;-3] ($p=0.1$), and the median difference in frequency was -2 [-5;-1] ($p=0.8$).

Paid/unpaid work was the most mentioned disrupted productive occupations in each group (p=0.7). Paid work occupations were most frequently mentioned, albeit less by OAs (p<0.001). This disruption included people who had to work less, people who continued to work but felt disrupted in their participation because they could not go to their usual working environment, and people who had to stop looking for a job. Unpaid work was mentioned more frequently by OAs (p<0.001).

A univariate analysis identified five categories of disrupted household activities that were mentioned more frequently by OAs (p=0.02). However, this difference was no longer significant after adjustment for sociodemographic and environmental variables. People living in a house and women were more likely to report occupational disruptions on household activities. Buying groceries (for example going to the market or buying groceries other than basic food) was the most frequently mentioned by all generations (p=0.1), followed by DIY and household chores.

Play/school constituted 3% of the disrupted occupations; the intergeneration differences were not significant in a multivariate model.

Self-care.

The median importance score was 9 [8;10], (p=0.39). The median change in performance (compared with normal times) was -5 [-7;-3] among YAs, -8 [-9;-5] among MAs, and -7 [-9;-5] among OAs (p=0.02). The median change in satisfaction was -5 [-7;-3] among YAs, -7 [-9;-4] among MAs, and -7.5 [-9;-5] among OAs (p=0.04). The median change in frequency was -2 [-4;-1] overall (p=0.34).

Personal care was the most affected self-care occupation in each generation (p=0.3). Four categories were identified, with no significant differences between generations. Health care was most frequently mentioned; this included going to the doctor or the physiotherapist for example. The second most frequently mentioned category was appearance care, such as going to the hairdresser or a beauty parlour. Engaging in sexual activity was also disrupted - either because the respondents was separated from his/her partner during lockdown or because dating was disrupted.

Other.

Without mentioning a specific occupation, 41 respondents (1%) stated that they felt disruptions in just being able to do things freely without being limited by time, physical distance, fear of becoming ill, or fear of infecting someone.

Specific features of respondents in France

We compared the findings for people living in France (Table 4) with those for people living in other countries (Table 5). The overall results were similar, with the exception of walking (9.8% of the disrupted occupations in France vs. 5.0% in the other countries) and running (1.8% of the disrupted occupations in France vs. 0.3% in the other countries).

Discussion and implications

Leisure and then productivity were the most significantly disrupted occupations for all three generations

In each group, leisure was the occupation (83%) most affected during lockdown, followed by productivity (16%) and self-care (2%). Cruyt et al. (2021) found that these activities were performed differently during lockdown than in normal circumstances. More precisely, active recreations were the most disrupted leisure activity in all groups - mainly because they were usually performed outdoors or in clubs. The fact that 382 individuals (13%) mentioned disruptions of quiet recreation might be considered surprising, since Cruyt et al. (2021) found that only 3% of the 1781 Belgian participants in their study reported having discontinued indoor free-time activities. Our respondents' comments help to clarify our data because some of these quiet recreations were typically performed or were not possible because shops had sold out of the required material. Some perceived disruptionswere related to the specific environment in the occupations was performed, such as "reading *on a café terrace*". Furthermore, we

looked at the nature of disrupted occupations only, which might have accentuated the respondents' perception of disruption. Lastly, the need to look after children at home full-time (due to school closures) might also explain those occupational disruptions.

Hence, leisure in general (albeit less frequently addressed by occupational therapists (Dutil, Bier, & Gaudreault, 2006) and active recreation in particular were the main disrupted occupations in all three generations. Occupational therapists might therefore provide useful tips for individuals of all ages, groups and communities wishing to continuing an occupation (especially active recreation) during lockdown. Indeed, occupational therapists are used to enabling participation in a context of environmental disruptions(e.g. going to a retirement home or being admitted to a psychiatric facility) and also advising people living in low-density regions and people with limited ability to travel. In a context of global lockdown, occupational therapists can facilitate participation in meaningful occupations while offering strategies for preventing transmission of the virus (Kamalakannan & Chakraborty).
Lastly, we found some notable differences between respondents in France and respondents in other countries with regard to walking and running. This can be explained by the particularly strict nature of the lockdown in France; people were only allowed to exercise outside their home for an hour a day and had to remain within a 1 km radius of their home.

Surprisingly, we did not find many intergeneration differences in perceived disruptions on productivity in general and paid/unpaid work in particular (p=0.7). Similarly, Cruyt et al (2021)'s study in Belgium found that nearly 50% of the participants who performed voluntary work before the lockdown had to stop during lockdown. Some literature reports show that volunteering is increasing among OA, with a positive effect on quality of life (Milbourn, Sarawati, & Buchanan, 2018). Lastly, YAs and OAs felt more disrupted in their learning activities (5% and 3% of respondents, respectively) than MAs (1%). This is an important outcome, as it has been shown that learning in older adulthood increases well-being (Merriam & Kee, 2014) and that OAs are barely taken not account in formal educational programmes (Findsen, 2006). Hence, as occupational therapists, we need to be able to offer opportunities for formal and informal learning at all life stages.

More importance for (and less satisfaction with) leisure in all generations

In our univariate analysis, leisure was more important for OAs than for YAs or MAs – meaning that the disruption of leisure has an even greater impact on OAs. There were also significant intergeneration differences in the importance given to productivity, which was less valued by MAs than by OAs and YAs. The median satisfaction score in normal times was 8 in each domain; we observed a median change during lockdown of -7 for leisure and -6 for productivity and self-care. Hence, leisure activities were not only more frequent cited as disrupted activities but also provided less satisfaction, relative to productivity and self-care activities. This finding is partly in line with Brousse's report (2015) that during typical times, leisure provided the highest level of satisfaction (followed by self-care and then productivity).

Our results can also be compared with Sima et al.'s analysis of occupational disruption following a natural disaster (2017), in which five steps are needed to reach the '*new normal'*: recovery occupations, interruption to leisure and productive occupations, reconstruction as a second disaster, occupational liminality, and, lastly, a new normal.

Hence, leisure and productivity are highly valued - especially by OAs. This is an important finding because leisure and productivity have not been extensively studied in certain specific groups of OAs - especially outside the literature on occupational therapy (Dutil, Bier, & Gaudreault, 2006; Engels, Bairet, Canouï-Poitrine, & Laurent, 2021).

Some disruptions are more frequent for one generation

Although our results showed the same overall occupational disruptions and the same order when considering a domain or sub-domain level for all three generations, some specific occupations were more typical of one generation than of another. For example, YAs felt more disrupted in dining out, partying/nightclubbing, and socializing. Conversely, Brousse's study (2015) showed that YAs had a richer social life than OA, so YAs might have been more affected in these respects. One can also hypothesize that OAs socialize less in normal times, which also raises questions about OA's usual occupational balance and well-being.

In contrast, YAs were less likely than MAs and OAs to mention cultural outings in their

disruptions. This could be explained by the fact that cultural outings are common among OAs (Gitton & Loquet, 2016) and because YAs might have found more online opportunities for seeing films or concerts (for example) during lockdown.

Furthermore, OAs were more likely to mention disrupted participation in gardening, crafts, and meditation/relaxation – notably because these activities were usually performed in groups or required certain consumables. This finding is in line with previous reports in which (i) gardening is the first or second most important physical activity for 9% of under-65s and 24% of over-65s, and (ii) some activities (e.g. gardening) might be considered as quiet leisure for YAs but as active leisure for OAs (Desmond, Jackson, & Hunter, 2015). Lastly, OAs were more likely to go walking, go swimming, do yoga and play golf and less likely to go running and play team sports, relative to YAs. This observation might be helpful for better picturing specific occupational disruptions as a function of the generation.

Limitations

Our study had several limitations. Firstly, our sampling method used social media and thus disrupted our study population to people with access to the Internet in general and social media in particular. This limits the ability to extrapolate our data to the general population. Indeed, the percentage of OAs was 20% in our survey and 27% in the French general population (INSEE, 2016). Moreover, the respondents' social and health-related profiles might not be representative of typical over-60 respondents, who are less likely to access and use the Internet. Therefore, intergeneration differences might have been underestimated. Secondly, and despite our efforts to spread the survey from France to other EU countries, 87% of the respondents were living in France. However, that still left 388 respondents from 20 other countries. Thirdly, the nature of the lockdown differed in France vs. other EU countries. To address this difference, we carried out sensitivity analyses by comparing respondents living in France with respondents living in other countries. Except for walking and running (which were mentioned more frequently by respondents living in France), the overall were similar. We therefore decided to pool the data from all the countries.

Although we tried to stay as close as possible to the COPM process, this tool has been psychometrically validated for use in an interview and not in an online survey. The

online nature of our survey prevented us from collecting all the information typically obtained in a COPM interview. We therefore had to decide how to allocate certain occupations without being able to talk to the respondents and understand their individual perceptions. However, the online questionnaire enabled us to obtain 3241 answers in six different languages in three weeks, which would not have been possible in an interview-based study. We translated our questionnaire without performing any cross-cultural validation process. However, the questions that might have been influenced by the respondent's cultural background were open questions and so did not restrict the respondents' ability to cite his/her occupations. Furthermore, all these analyses were performed by the same investigator. However, in order to remain as neutral and congruent as possible and make the analysis as reproducible as possible, the investigator relied on the examples given in the appendix of the COPM booklet.

Moreover, the present analysis considered occupations that were disrupted during lockdown and not the other parts of the COPACO study on new occupations, more frequently performed occupations and occupational balance during lockdown.

Lastly, the sample was predominantly composed of women (77%). Occupations can differ from one sex to another (Källdalen, Marcusson, & Wressle, 2013; Lantz, Marcusson, & Wressle, 2012; Townsend & Polatajko, 2013). In particular, the literature data show that engagement in leisure activities is less affected by age and worsening health in women than in men's (Freysinger & Stanley, 1995). However, all our results were adjusted for gender, which limited the corresponding risk of confusion bias.

Despite these limitations, our study allowed an in-depth qualitative and quantitative analysis of a large sample of disrupted occupations across the EU: this could be of great value for knowledge in occupational science and for understanding how environmental disruptions of any kind can affect people across generations.

Conclusion

The results of a large, Europe-wide descriptive survey with a focus on occupational disruptions during the periods of lockdown in the spring of 2020 showed that leisure occupations were the most affected in all generations. There were no major

intergeneration differences other than in disruptions in socializing, which affected YAs more than older generations. Healthcare providers should therefore remain open-minded when assessing occupational needs, whatever the person's age.

Our present results offer a better picture of the nature of occupational disruptions that accompany a change in environment; this knowledge might be helpful for occupational therapists working with clients in a restrictive environment. Although occupational therapists usually know how to manage their clients' occupational deprivations, the global COVID-19 pandemic and its socioeconomic consequences may generate new occupational challenges - notably those related to new technologies.

In view of our present results on restrictive environmental contexts and the need to avoid negative consequences for the population's well-being, a check-up with an occupational therapist (e.g. via telehealth) might even be of value for healthy people. The COVID-19 pandemic is generating unique opportunities for primary care provision with an occupational perspective, which might enable community-dwelling adults to engage in a successful occupational transition. However, occupational challenges also lead to the development of new occupations; these need to be studied further so that we can better understand how people adjust and find an occupational balance in restrictive environments. This is the objective of the next part of the COPACO study.

Key findings

- Leisure in general and active recreation in particular were the most affected occupations during lockdown in Europe.
- The affected occupational domains and sub-domains were similar in all three generations, although the exact type of occupation differed.
- Socializing was affected more among younger adults than among middle-aged adults and older adults.

What the study has added

- This study helps to picture how occupational disruption affects the general population, whereas most other studies focus more on disabled or disadvantaged

populations. Our detailed, description of the exact nature of the occupations also highlights those valued by people of all generations in their everyday lives.

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Tables

Table 1: Sociodemographic characteristics of participants in the COPACO study

	Total (n=2865) n (%), unless otherwise indicated	**YA** (n=1341, %=46.8) n (%), unless otherwise indicated	**MA** (n=943, %=32.9) n (%), unless otherwise indicated	**OA** (n=581, %=20.3) n (%), unless otherwise indicated	**p value***
Age					
Median [IQR]	41 [29-56]	28 [24-33]	49 [44-53]	68[64-72]	<0.001
Range	(18-87)	(18-39)	(40-59)	(60-87)	
Gender, N=2855					
Women	2181 (76.0)	1084 (81.1)	704 (74.7)	393 (68.1)	<0.001
Place of residence during lockdown, N=2788					
Flat	1199 (43.0)	663 (49.8)	353 (38.3)	183 (34.2)	
House	1558 (55.9)	652 (49.0)	558 (60.5)	348 (65.1)	<0.001
Two-level flat	31 (1.1)	16 (1.2)	11 (1.2)	4 (0.8)	
Environment during lockdown, N=2845					
Urban area or city	1885 (66.3)	889 (66.6)	635 (67.8)	361 (62.9)	0.1
People sharing the place of residence during lockdown, N=2864					
Same as usual	2814 (98.3)	1314 (98.0)	929 (98.6)	571 (98.3)	0.7
Pet at the place of residence during lockdown, N=2850					
Pet	1169 (41.0)	577 (43.1)	426 (45.4)	166 (29.1)	<0.001
Professional status, N=2859					
Student	434 (15.2)	409 (30.5)	25 (2.7)	0 (0.0)	
Part-time worker	309 (10.8)	117 (8.7)	165 (17.6)	27 (4.7)	
Full-time worker	1469 (51.4)	727 (54.3)	673 (71.7)	69 (11.9)	
Unemployed	84 (2.9)	49 (3.7)	30 (3.2)	5 (0.9)	<0.001
Retired	474 (16.6)	0 (0.0)	10 (1.1)	464 (80.0)	
Other	89 (3.1)	38 (2.9)	36 (3.8)	15 (2.6)	
Professional/study activity during lockdown, N=2631					
Part-time homeworking/study	497 (18.9)	270 (20.4)	186 (20.2)	41 (10.7)	
Full-time homeworking/study	956 (36.3)	483 (36.4)	426 (46.2)	47 (12.3)	
Part-time at place of work/study	215 (8.2)	131 (9.9)	73 (7.9)	11 (2.9)	<0.001
Full-time at place of work/study	237 (9.0)	141 (10.6)	87 (9.4)	9 (2.4)	
No work/study	726 (27.6)	302 (22.8)	150 (16.3)	274 (71.7)	
Socioprofessional category, N=1914					
Craftsman, trader or company manager	108 (5.7)	43 (4.6)	55 (6.4)	10 (7.9)	
Employee	503 (26.3)	339 (36.6)	147 (17.1)	17 (13.4)	
Executive or intellectual professions	1015 (53.0)	395 (42.6)	545 (63.5)	75 (59.1)	<0.001
Farmer	3 (0.2)	2 (0.2)	0 (0.0)	1 (0.8)	
Intermediate professions	260 (13.6)	134 (14.4)	104 (12.1)	22 (17.3)	
Worker	25 (1.3)	15 (1.6)	8 (0.9)	2 (1.6)	
Change in income during lockdown, N=2739					
Total	134 (4.9)	82 (6.5)	41 (4.4)	11 (2.0)	
Major	148 (5.4)	87 (6.9)	53 (5.7)	8 (1.5)	
Partial	355 (13.0)	193 (15.2)	131 (14.0)	31 (5.8)	<0.001
None	2066 (75.4)	880 (69.3)	703 (75.4)	483 (90.1)	
Increase in income	36 (1.3)	28 (2.2)	5 (0.5)	3 (0.6)	

Table 2: Types of occupational disruption during lockdown, by generation; the COPACO study.

						Pairwise comparisons when the p value for the domain or sub-domain is <0.2		
	Total (n=6549) n (%)	**Disrupted occupations for YAs (n=3110, %=47.49) n (%)**	**Disrupted occupations for MAs (n=2153, %=32.88) n (%)**	**Disrupted occupations for OAs (n=1286, %=19,64) n (%)**	**p value***	**YAs vs MAs, p value****	**YAs vs OAs, p value****	**MAs vs OAs, p value****
Leisure	**5404 (82.5)**	**2545 (81.3)**	**1797 (83.5)**	**1062 (82.6)**	**0.3**			
Active recreation	**3786 (57.8)**	**1697 (54.6)**	**1325 (61.5)**	**764 (59.4)**	**<0.001**	**0.003**	**0.01**	**0.22**
Participating in sports/physical activities	2166 (33.1)	947 (30.5)	773 (35.9)	446 (34.7)	<0.001	0.003	0.01	0.5
Walking	*603 (9.2)*	*223 (7.2)*	*206 (9.6)*	*174 (13.5)*	*<0.001*			
Swimming	*186 (2.8)*	*58 (1.9)*	*79 (3.7)*	*49 (3.8)*	*<0.001*			
Gym/fitness	*153 (2.3)*	*65 (2.1)*	*52 (2.4)*	*36 (2.8)*	*0.4*			
Cycling	*137 (2.1)*	*39 (1.3)*	*66 (3.1)*	*32 (2.5)*	*<0.001*			
Running	*106 (1.6)*	*46 (1.5)*	*50 (2.3)*	*10 (0.8)*	*0.002*			
Other outside sports	*82 (1.3)*	*44 (1.4)*	*26 (1.2)*	*12 (0.1)*	*0.4*			
Dancing	*81 (1.2)*	*46 (1.5)*	*24 (1.1)*	*11 (0.9)*	*0.2*			
Yoga/pilates/qi gong	*79 (1.2)*	*23 (0.7)*	*31 (1.4)*	*25 (1.9)*	*0.002*			
Racket sports	*43 (0.7)*	*26 (0.8)*	*11 (0.5)*	*6 (0.5)*	*0.2*			
Horse riding	*33 (0.5)*	*22 (0.7)*	*9 (0.4)*	*2 (0.2)*	*0.1*			
Other water sports	*31 (0.5)*	*9 (0.3)*	*15 (0.7)*	*7 (0.5)*	*0.1*			
Team sports	*22 (0.3)*	*19 (0.6)*	*3 (0.1)*	*0 (0.00)*	*0.001*			
Other individual sports	*22 (0.3)*	*6 (0.2)*	*4 (0.2)*	*12 (0.9)*	*0.001*			
Golf	*17 (0.2)*	*2 (0.1)*	*1 (0.1)*	*14 (1.1)*	*<0.001*			
Combat sports	*16 (0.2)*	*6 (0.2)*	*9 (0.4)*	*1 (0.1)*	*0.1*			
Not specified	*555 (8.5)*	*313 (10.1)*	*187 (8.7)*	*55 (4.3)*	*<0.001*			
Cultural outings	460 (7.0)	175 (5.6)	163 (7.6)	122 (9.5)	<0.001	0.01	0.003	0.05
Cinema	*181 (2.8)*	*74 (2.4)*	*64 (3.0)*	*43 (3.3)*	*0.2*			
Museum/exhibition	*45 (0.7)*	*13 (0.4)*	*15 (0.7)*	*17 (1.3)*	*0.004*			
Concert	*33 (0.5)*	*11 (0.4)*	*12 (0.6)*	*10 (0.8)*	*0.2*			
Theatre	*33 (0.5)*	*10 (0.3)*	*14 (0.7)*	*9 (0.7)*	*0.1*			
Show	*27 (0.4)*	*5 (0.2)*	*12 (0.6)*	*10 (0.8)*	*0.01*			
Not specified	*141 (2.2)*	*62 (2.0)*	*46 (2.1)*	*33 (2.6)*	*0.5*			
Dining out in restaurants or bars	336 (5.1)	194 (6.2)	108 (5.0)	34 (2.6)	<0.001	0.06	0.002	0.002
Travelling	202 (3.1)	81 (2.6)	73 (3.4)	48 (3.7)	0.1	0.2	0.1	0.6
Leisure shopping	157 (2.4)	73 (2.4)	64 (3.0)	20 (1.6)	0.03			
Going into green spaces	133 (2.0)	60 (1.9)	51 (2.4)	22 (1.7)	0.4			
Seafront	*58 (0.9)*	*25 (0.8)*	*24 (1.1)*	*9 (0.7)*	*0.4*			
Woods	*34 (0.5)*	*15 (0.5)*	*15 (0.7)*	*4 (0.3)*	*0.3*			
Park	*23 (0.4)*	*16 (0.5)*	*6 (0.3)*	*1 (0.1)*	*0.1*			
Mountain	*13 (0.2)*	*3 (0.1)*	*5 (0.2)*	*5 (0.4)*	*0.1*			
Not specified	*5 (0.1)*	*1 (0.03)*	*1 (0.1)*	*3 (0.2)*	*0.1*			
Going out (without more details)	91 (1.4)	51 (1.6)	32 (1.5)	8 (0.6)	0.03			
Going to playgrounds with children	48 (0.7)	31 (1.0)	15 (0.7)	2 (0.2)	0.01	0.3	0.01	0.1
Gardening	42 (0.6)	8 (0.3)	8 (0.4)	26 (2.0)	<0.001	0.5	0.002	0.002

Visiting libraries	26 (0.4)	10 (0.3)	9 (0.4)	7 (0.6)	0.6			
Going to nightclubs/partying	26 (0.4)	22 (0.7)	3 (0.1)	1 (0.1)	0.001	0.01	0.001	1
Attending religious services	16 (0.2)	10 (0.3)	3 (0.1)	3 (0.2)	0.5			
Caring for a pet	14 (0.2)	5 (0.2)	6 (0.3)	3 (0.2)	0.6			
Driving a car or a motorcycle	14 (0.2)	3 (0.1)	3 (0.1)	8 (0.6)	0.01	0.7	0.01	0.04
Travelling to a second home	10 (0.2)	0 (0.0)	3 (0.1)	7 (0.5)	<0.001	0.1	0.003	0.1
Other	45 (0.7)	27(0.9)	11 (0.5)	7 (0.5)	0.2			
Socializing	**1236 (18.9)**	**710 (22.8)**	**346 (16.1)**	**180 (14.0)**	**<0.001**	**0.002**	**0.002**	**0.10**
Quiet recreation	**382 (5.8)**	**138 (4.4)**	**126 (5.8)**	**118 (9.2)**	**<0.001**	**0.02**	**0.002**	**0.002**
Reading	91 (1.4)	37 (1.2)	35 (1.6)	19 (1.5)	0.4			
Crafts	84 (1.3)	28 (0.9)	18 (0.8)	38 (3.0)	<0.001	0.8	0.002	0.002
Drawing/painting	*30 (0.5)*	*12 (0.4)*	*3 (0.1)*	*15 (1.2)*	*<0.001*			
Needlework	*16 (0.2)*	*10 (0.3)*	*4 (0.2)*	*2 (0.2)*	*0.6*			
Other or not specified	*38 (0.6)*	*6 (0.2)*	*11 (0.5)*	*21 (1.6)*	*<0.001*			
Playing music	74 (1.1)	28 (0.9)	28 (1.3)	18 (1.4)	0.2			
Singing	51 (0.8)	9 (0.3)	19 (0.9)	23 (1.8)	<0.001	0.01	0.003	0.02
Watching sports on TV	26 (0.4)	18 (0.6)	5 (0.2)	3 (0.2)	0.1	0.2	0.2	1
Playing games	25 (0.4)	11 (0.3)	6 (0.3)	8 (0.6)	0.3			
Meditation/relaxation	10 (0.2)	2 (0.1)	3 (0.1)	5 (0.4)	0.04	0.4	0.1	0.2
Photography	10 (0.2)	2 (0.1)	5 (0.2)	3 (0.2)	0.2			
Other	11 (0.2)	3 (0.1)	7 (0.3)	1 (0.1)	0.1			
Productivity	**1012 (15.5)**	**504 (16.2)**	**305 (14.2)**	**203 (15.8)**	**0.1**	**0.1**	**0.7**	**0.3**
Paid/unpaid work	**464 (7.1)**	**219 (7.0)**	**159 (7.4)**	**86 (6.7)**	**0.7**			
Paid work	386 (5.9)	211 (6.8)	137 (6.4)	38 (2.9)	<0.001	0.6	0.002	0.002
Unpaid work	78 (1.2)	8 (0.3)	22 (1.0)	48 (3.7)	<0.001	<0.001	<0.001	<0.001
Household management	**326 (5.0)**	**131 (4.2)**	**116 (5.4)**	**79 (6.1)**	**0.02**	**0.1**	**0.02**	**0.4**
Buying groceries	159 (2.4)	61 (2.0)	65 (3.0)	33 (2.6)	0.1	0.03	0.3	0.4
DIY	74 (1.1)	27 (0.9)	23 (1.1)	24 (1.9)	0.02	0.5	0.02	0.1
Doing household chores	51 (0.8)	24 (0.8)	11 (0.5)	16 (1.2)	0.1	0.3	0.2	0.1
Cooking	21 (0.3)	12 (0.4)	5 (0.2)	4 (0.3)	0.7			
Caring for children	21 (0.3)	7 (0.2)	12 (0.6)	2 (0.2)	0.1	0.1	1	0.1
Play/school	**222 (3.4)**	**154 (5.0)**	**30 (1.4)**	**38 (3.0)**	**<0.001**	**0.002**	**0.003**	**0.002**
Self-care	**133 (2.0)**	**61 (2.0)**	**51 (2.4)**	**21 (1.6)**	**0.3**			
Personal care	**114 (1.7)**	**51 (1.6)**	**46 (2.1)**	**17 (1.3)**	**0.2**			
Healthcare	64 (1.0)	25 (0.8)	30 (1.4)	9 (0.7)	0.5			
Appearance care	25 (0.4)	9 (0.3)	9 (0.4)	7 (0.5)	0.4			
Engaging in sexual activity	13 (0.2)	8 (0.3)	4 (0.2)	1 (0.1)	0.6			
Basic needs	12 (0.2)	9 (0.3)	3 (0.1)	0 (0.0)	0.1	0.4	0.2	0.4
Community management	**19 (0.3)**	**10 (0.3)**	**5 (0.2)**	**4 (0.3)**	**0.8**			
Administrative management	10 (0.2)	2 (0.1)	4 (0.2)	4 (0.3)	0.1	0.4	0.2	0.5
Preparing to move house	9 (0.1)	8 (0.3)	1 (0.1)	0 (0.0)	0.1	0.2	0.2	1

*chi-squared test

Table 3: Factors associated with disruptions in active leisure, socializing, quiet recreation, productivity, household management, and play/school in the COPACO study: a multivariate analysis

	Active recreation		**Socializing**		**Quiet recreation**		**Productivity**		**Household management**		**Play/school**	
	OR [95%CI]	**P value***	**OR [95%CI]**	**P value***	**OR [95%CI]**	**P value***	**OR [95%CI]**	**P value***	**OR [95%CI]**	**P value***	**OR [95%CI]**	**P value***
Young adults	1.00		1.00		1.00		1.00		1.00		1.00	
Middle-aged adults	1.02 [0.76-1.38]	0.88	0.62 [0.50-0.76]	<0.001	1.39 [1.00-1.93]	0.047	0.98 [0.77-1.23]	0.85	1.01 [0.73-1.39]	0.97	0.94 [0.52-1.68]	0.83
Older adults	1.27 [0.68-2.37]	0.45	0.46 [0.30-0.71]	0.001	1.51 [0.83-2.74]	0.18	1.17 [0.75-1.83]	0.49	0.82 [0.42-1.60]	0.55	0.89 [0.26-3.01]	0.85
Females	1.03 [0.74-1.44]	0.87	1.40 [1.11-1.78]	0.005	0.84 [0.59-1.18]	0.32	1.48 [1.14 -1.94]	0.004	1.84 [1.22-2.79]	0.004	1.14 [0.59-2.21]	0.7
House (vs. an apartment)	0.82 [0.60-1.12]	0.22	0.74 [0.59-0.92]	0.007	0.91 [0.65-1.28]	0.58	1.35 [1.06-1.72]	0.01	1.83 [1.31-2.56]	<0.001	0.51 [0.27-0.95]	0.03
Urban area/city (vs. rural)	1.32 [0.97-1.80]	0.08	0.89 [0.70-1.12]	0.31	0.88 [0.62-1.25]	0.47	0.99 [0.77-1.27]	0.93	1.33 [0.94-1.88]	0.11	0.42 [0.23-0.75]	0.004
Pet at the place of residence during lockdown	0.98 [0.73-1.31]	0.89	0.92 [0.75-1.13]	0.45	1.05 [0.76-1.44]	0.76	1.13 [0.90-1.41]	0.29	1.00 [0.73-1.37]	1	1.17 [0.67-2.03]	0.58
Socioprofessional category												
Craftsman, trader, company manager or farmer	1.00		1.00		1.00		1.00		1.00		1.00	
Executive or intellectual professions	1.88 [1.07-3.32]	0.029	0.95 [0.58-1.56]	0.85	2.15 [0.86-5.38]	0.1	0.67 [0.41-1.10]	0.12	0.38 [0.20-0.70]	0.002	1.13 [0.29-4.36]	0.86
Worker, Employee or Intermediate professions	1.29 [0.74-2.24]	0.38	1.21 [0.74-1.97]	0.45	2.34 [0.93-5.86]	0.07	0.78 [0.47-1.28]	0.33	0.44 [0.24-0.81]	0.009	1.87 [0.50-6.94]	0.35
Change in income during lockdown												
Total loss of income/Major loss of	1.00		1.00		1.00		1.00		1.00		1.00	

income												
Partial loss of income	0.76 [0.52-1.10]	0.15	0.82 [0.62-1.09]	0.17	1.15 [0.77-1.73]	0.49	1.85 [1.39-2.46]	<0.001	1.27 [0.84-1.91]	0.25	1.53 [0.79-2.97]	0.21
No loss of income/Increase in income	0.55 [0.36-0.84]	0.006	0.83 [0.59-1.16]	0.27	1.04 [0.61-1.78]	0.87	4.53 [3.21-6.39]	<0.001	0.98 [0.59-1.64]	0.94	1.41 [0.62-3.21]	0.41

OR: [95%CI]: adjusted odds ratio [95% confidence interval] in a multivariate logistic regression

All variables were adjusted for age, class, gender, place of residence during lockdown, socioprofessional class, and change of income during lockdown

* Wald's test

Table 4: Types of occupational disruption during lockdown, by generation and stratified for people living in France only: the COPACO study.

	Total (n=5716) n (%)	Disrupted occupations among YAs (n=2727, %=47.7) n (%)	Disrupted occupations among MAs (n=1866, %=32.6) n (%)	Disrupted occupations among OAs (n=1123, %=19,6) n (%)	p value*
Leisure	**4738 (82.9)**	**2241 (82.2)**	**1570 (84.1)**	**927 (94.4)**	**0.2**
Active recreation	**3366 (58.9)**	**1505 (55.2)**	**1191 (63.8)**	**670 (59.7)**	**<0.001**
Participating in sports/physical activities	1964 (34.4)	858 (31.5)	705 (37.8)	401 (35.7)	<0.001
Walking	*559 (9.8)*	*211 (7.7)*	*189 (10.1)*	*159 (14.2)*	*<0.001*
Swimming	*172 (3.0)*	*55 (2.0)*	*71 (3.8)*	*46 (4.1)*	*<0.001*
Gym/fitness	*130 (2.3)*	*53 (1.9)*	*43 (2.3)*	*34 (3.0)*	*0.1*
Cycling	*126 (2.2)*	*33 (1.2)*	*63 (3.4)*	*30 (2.7)*	*<0.001*
Running	*104 (1.8)*	*45 (1.6)*	*50 (2.7)*	*9 (0.8)*	*0.001*
Other outside sports	*64 (1.1)*	*34 (1.3)*	*19 (1.0)*	*11 (1.0)*	*0.7*
Dancing	*73 (1.3)*	*41 (1.5)*	*22 (1.2)*	*10 (0.9)*	*0.3*
Yoga/pilates/qi gong	*69 (1.2)*	*17 (0.6)*	*27 (1.5)*	*25 (2.2)*	*<0.001*
Racket sports	*41 (0.7)*	*24 (0.9)*	*11 (0.6)*	*6 (0.5)*	*0.4*
Horse riding	*32 (0.6)*	*22 (0.8)*	*8 (0.4)*	*2 (0.2)*	*0.04*
Other water sports	*30 (0.5)*	*9 (0.3)*	*14 (0.8)*	*7 (0.6)*	*0.1*
Team sports	*18 (0.3)*	*15 (0.6)*	*3 (0.2)*	*0 (0.0)*	*0.01*
Other individual sports	*8 (0.1)*	*4 (0.2)*	*2 (0.1)*	*2 (0.2)*	*0.9*
Golf	*15 (0.3)*	*1 (0.04)*	*1 (0.05)*	*13 (1.2)*	*<0.001*
Combat sports	*15 (0.3)*	*5 (0.2)*	*9 (0.5)*	*1 (0.1)*	*0.1*
Not specified	*508 (8.9)*	*289 (10.6)*	*173 (9.3)*	*46 (4.1)*	*<0.001*
Cultural outings	417 (7.3)	158 (5.8)	149 (8.0)	110 (9.8)	<0.001
Cinema	*171 (3.0)*	*70 (2.6)*	*59 (3.2)*	*42 (3.7)*	*0.1*
Museum/exhibition	*41 (0.7)*	*10 (0.4)*	*14 (0.8)*	*17 (1.5)*	*0.001*
Concert	*29 (0.5)*	*9 (0.3)*	*11 (0.6)*	*9 (0.8)*	*0.1*
Theatre	*26 (0.5)*	*7 (0.3)*	*13 (0.7)*	*6 (0.5)*	*0.1*
Show	*27 (0.5)*	*5 (0.2)*	*12 (0.6)*	*10 (0.9)*	*0.01*
Not specified	*123 (2.2)*	*57 (2.1)*	*40 (2.1)*	*26 (2.3)*	*0.9*
Dining out in restaurants or bars	284 (5.0)	168 (6.2)	89 (4.8)	27 (2.4)	<0.001
Travelling	162 (2.8)	66 (2.4)	60 (3.2)	36 (3.2)	0.2
Leisure shopping	134 (2.3)	63 (2.3)	59 (3.2)	12 (1.1)	0.001
Going into green spaces	122 (2.1)	54 (2.0)	48 (2.6)	20 (1.8)	0.3
Seafront	*52 (0.9)*	*2 (0.8)*	*23 (1.2)*	*7 (0.6)*	*0.2*
Woods	*34 (0.6)*	*15 (0.6)*	*15 (0.8)*	*4 (0.4)*	*0.3*
Park	*20 (0.4)*	*14 (0.5)*	*5 (0.3)*	*1 (0.1)*	*0.1*
Mountain	*11 (0.2)*	*2 (0.1)*	*4 (0.2)*	*5 (0.5)*	*0.04*
Not specified	*5 (0.1)*	*1 (0.04)*	*1 (0.05)*	*3 (0.3)*	*0.1*
Going out (without more details)	79 (1.4)	45 (1.7)	27 (1.5)	7 (0.6)	0.04
Going to playgrounds with children	39 (0.7)	26 (1.0)	11 (0.6)	2 (0.2)	0.03
Gardening	39 (0.7)	8 (0.3)	7 (0.4)	24 (2.1)	<0.001
Visiting libraries	25 (0.4)	10 (0.4)	8 (0.4)	7 (0.6)	0.5
Going to nightclubs/partying	20 (0.4)	17 (0.6)	2 (0.1)	1 (0.1)	0.004

Attending religious services	11 (0.2)	5 (0.2)	3 (0.2)	3 (0.3)	0.8
Caring for a pet	14 (0.2)	5 (0.2)	6 (0.3)	3 (0.3)	0.6
Driving a car or a motorcycle	12 (0.2)	2 (0.1)	3 (0.2)	7 (0.6)	0.01
Travelling to a second home	10 (0.2)	0 (0.0)	3 (0.2)	7 (0.6)	<0.001
Other	34 (0.6)	20 (0.7)	11 (0.6)	3 (0.3)	0.2
Socializing	**1025 (17.9)**	**610 (22.4)**	**265 (14.2)**	**150 (13.4)**	**<0.001**
Quiet recreation	**347 (6.1)**	**126 (4.6)**	**114 (6.1)**	**107 (9.5)**	**<0.001**
Reading	86 (1.5)	35 (1.3)	34 (1.8)	17 (1.5)	0.3
Crafts	77 (1.4)	27 (1.0)	16 (0.9)	34 (3.0)	<0.001
Drawing/painting	*30 (0.5)*	*12 (0.4)*	*3 (0.2)*	*15 (1.3)*	*<0.001*
Needlework	*15 (0.3)*	*9 (0.3)*	*4 (0.2)*	*2 (0.2)*	*0.7*
Other or not specified	*32 (0.6)*	*6 (0.2)*	*9 (0.5)*	*17 (1.5)*	*<0.001*
Playing music	66 (1.2)	23 (0.8)	25 (1.3)	18 (1.6)	0.1
Singing	45 (0.8)	8 (0.3)	16 (0.9)	21 (1.9)	<0.001
Watching sports on TV	23 (0.4)	15 (0.6)	5 (0.3)	3 (0.3)	0.3
Playing games	23 (0.4)	11 (0.4)	6 (0.3)	6 (0.5)	0.6
Meditation/relaxation	10 (0.2)	2 (0.1)	3 (0.2)	5 (0.5)	0.1
Photography	9 (0.2)	2 (0.1)	5 (0.3)	2 (0.2)	0.2
Other	8 (0.1)	3 (0.1)	4 (0.2)	1 (0.1)	0.6
Productivity	**862 (15.1)**	**431 (15.8)**	**255 (13.7)**	**176 (15.7)**	**0.1**
Paid/unpaid work	**389 (6.8)**	**188 (6.9)**	**125 (6.7)**	**76 (6.8)**	**1.0**
Paid work	318 (5.6)	180 (6.6)	105 (5.6)	33 (2.9)	<0.001
Unpaid work	71 (1.2)	8 (0.3)	20 (1.1)	43 (3.8)	<0.001
Household management	**286 (5.0)**	**115 (4.2)**	**104 (4.6)**	**67 (6.0)**	**0.03**
Buying groceries	142 (2.5)	56 (2.1)	57 (3.1)	29 (2.6)	0.1
DIY	68 (1.2)	25 (0.9)	23 (1.2)	20 (1.8)	0.1
Doing household chores	43 (0.8)	22 (0.8)	9 (0.5)	12 (1.1)	0.2
Cooking	16 (0.3)	7 (0.3)	5 (0.3)	4 (0.4)	0.9
Caring for children	17 (0.3)	5 (0.2)	10 (0.5)	2 (0.2)	0.1
Play/school	**187 (3.3)**	**128 (4.7)**	**26 (1.4)**	**33 (2.9)**	**<0.001**
Self-care	**116 (2.0)**	**55 (2.0)**	**41 (2.2)**	**20 (1.8)**	**0.7**
Personal care	**100 (1.8)**	**46 (1.7)**	**38 (2.0)**	**16 (1.4)**	**0.4**
Healthcare	55 (1.0)	23 (0.8)	23 (1.2)	9 (0.8)	0.3
Appearance care	23 (0.4)	7 (0.3)	9 (0.5)	7 (0.6)	0.2
Engaging in sexual activity	10 (0.2)	7 (0.3)	3 (0.2)	0 (0.0)	0.2
Basic needs	12 (0.2)	9 (0.3)	3 (0.2)	0 (0.0)	0.1
Community management	**16 (0.3)**	**9 (0.3)**	**3 (0.2)**	**4 (0.4)**	**0.5**
Administrative management	8 (0.1)	2 (0.1)	2 (0.1)	4 (0.4)	0.1
Preparing to move house	8 (0.1)	7 (0.3)	1 (0.1)	0 (0.0)	0.1

Table 5: Types of occupational disruption during lockdown, by generation and stratified for people living outside France only: the COPACO study.

	Total (n=805) n (%)	Disrupted occupations among YAs (n=378, %=47.0) n (%)	Disrupted occupations among MAs (n=286, %=35.5) n (%)	Disrupted occupations among OAs (n=141, %=17.5) n (%)	p value*
Leisure	**645 (80.12)**	**300 (79.4)**	**226 (79.0)**	**119 (84.4)**	**0.4**
Active recreation	**403 (50.1)**	**190 (50.2)**	**133 (46.5)**	**80 (56.7)**	**0.1**
Participating in sports/physical activities	193 (24.0)	89 (23.5)	67 (23.4)	37 (26.2)	0.8
Walking	*40 (5.0)*	*12 (3.2)*	*16 (5.6)*	*12 (8.5)*	*0.04*
Swimming	*12 (1.5)*	*3 (0.8)*	*8 (2.8)*	*1 (0.7)*	*0.1*
Gym/fitness	*22 (2.7)*	*12 (3.2)*	*9 (3.2)*	*1 (0.7)*	*0.3*
Cycling	*10 (1.2)*	*6 (1.6)*	*3 (1.1)*	*1 (0.7)*	*0.8*
Running	*2 (0.3)*	*1 (0.3)*	*0 (0.0)*	*1 (0.7)*	*0.4*
Other outside sports	*18 (2.2)*	*10 (2.7)*	*7 (2.5)*	*1 (0.7)*	*0.4*
Dancing	*8 (1.0)*	*5 (1.3)*	*2 (0.7)*	*1 (0.7)*	*0.9*
Yoga/pilates/qi gong	*10 (1.2)*	*6 (1.6)*	*4 (1.4)*	*0 (0.0)*	*0.4*
Racket sports	*2 (0.3)*	*2 (0.5)*	*0 (0.0)*	*0 (0.0)*	*0.7*
Horse riding	*1 (0.1)*	*0 (0.0)*	*1 (0.4)*	*0 (0.0)*	*0.5*
Other water sports	*1 (0.1)*	*0 (0.0)*	*1 (0.4)*	*0 (0.0)*	*0.5*
Team sports	*4 (0.5)*	*4 (1.1)*	*0 (0.0)*	*0 (0.0)*	*0.2*
Other individual sports	*13 (1.6)*	*2 (0.5)*	*2 (0.7)*	*9 (6.4)*	*<0.001*
Golf	*2 (0.3)*	*1 (0.3)*	*0 (0.0)*	*1 (0.7)*	*0.5*
Combat sports	*1 (0.1)*	*1 (0.3)*	*0 (0.0)*	*0 (0.0)*	*1*
Not specified	*47 (5.8)*	*24 (6.4)*	*14 (4.9)*	*9 (6.4)*	*0.7*
Cultural outings	42 (5.22)	16 (4.23)	14 (4.9)	12 (8.51)	0.1
Cinema	*10 (1.2)*	*4 (1.1)*	*5 (1.8)*	*1 (0.7)*	*0.7*
Museum/exhibition	*4 (0.5)*	*3 (0.8)*	*1 (0.4)*	*0 (0.0)*	*0.7*
Concert	*4 (0.5)*	*2 (0.5)*	*1 (0.4)*	*1 (0.7)*	*0.8*
Theatre	*7 (0.9)*	*3 (0.8)*	*1 (0.4)*	*3 (2.1)*	*0.2*
Show	*0 (0.0)*				
Not specified	*17 (2.1)*	*4 (1.1)*	*6 (2.1)*	*7 (5.0)*	*0.03*
Dining out in restaurants or bars	51 (6.3)	26 (6.9)	19 (6.6)	6 (4.3)	0.5
Travelling	39 (4.8)	15 (4.0)	13 (4.6)	11 (7.8)	0.2
Leisure shopping	21 (2.6)	10 (2.7)	5 (1.8)	6 (4.3)	0.3
Going into nature	10 (1.2)	6 (1.6)	3 (1.1)	1 (0.7)	0.8
Seafront	*5 (0.6)*	*3 (0.8)*	*1 (0.4)*	*1 (0.7)*	*0.7*
Woods	*0 (0.0)*				
Park	*3 (0.4)*	*2 (0.5)*	*1 (0.4)*	*0 (0.0)*	*1.0*
Mountain	*2 (0.3)*	*1 (0.3)*	*1 (0.4)*	*0 (0.0)*	*1.0*
Not specified	*0 (0.0)*				
Going out (without more details)	11 (1.4)	6 (1.6)	5 (1.8)	0 (0.0)	0.3
Going to playgrounds with children	8 (1.0)	4 (1.1)	4 (1.4)	0 (0.0)	0.5
Gardening	3 (0.4)	0 (0.00)	1 (0.4)	2 (1.4)	0.04
Visiting libraries	1 (0.1)	0 (0.0)	1 (0.4)	0 (0.0)	0.5

Going to nightclubs/partying	6 (0.8)	5 (1.3)	1 (0.4)	0 (0.0)	0.3
Attending religious services	5 (0.6)	5 (1.3)	0 (0.0)	0 (0.0)	0.1
Caring for a pet	0 (0.0)				
Driving a car or a motorcycle	2 (0.3)	1 (0.3)	0 (0.0)	1 (0.7)	0.5
Travelling to a second home	0 (0.0)				
Other	11 (1.4)	7 (1.9)	0 (0.0)	4 (2.8)	0.01
Socializing	**209 (26.0)**	**98 (25.9)**	**81 (28.3)**	**30 (21.3)**	**0.3**
Quiet recreation	**33 (4.1)**	**12 (3.2)**	**12 (4.2)**	**9 (6.4)**	**0.3**
Reading	5 (0.6)	2 (0.5)	1 (0.4)	2 (1.4)	0.3
Crafts	5 (0.6)	1 (0.3)	2 (0.7)	2 (1.4)	0.3
Drawing/painting	*0 (0.0)*				
Needlework	*1 (0.1)*	*1 (0.3)*	*0 (0.0)*	*0 (0.0)*	*1.0*
Other or not specified	*4 (0.5)*	*0 (0.0)*	*2 (0.7)*	*2 (1.4)*	*0.06*
Playing music	8 (1.0)	5 (1.3)	3 (1.1)	0 (0.0)	0.6
Singing	6 (0.8)	1 (0.3)	3 (1.1)	2 (1.4)	0.2
Watching sports on TV	3 (0.4)	3 (0.8)	0 (0.0)	0 (0.0)	0.3
Playing games	2 (0.3)	0 (0.0)	0 (0.0)	2 (1.4)	0.03
Meditation/relaxation	0 (0.0)				
Photography	1 (0.1)	0 (0.0)	0 (0.0)	1 (0.7)	0.2
Other	3 (0.4)	0 (0.0)	3 (1.1)	0 (0.0)	0.1
Productivity	**143 (17.8)**	**72 (19.1)**	**50 (17.5)**	**21 (14.9)**	**0.5**
Paid/unpaid work	**74 (9.2)**	**31 (8.2)**	**34 (11.9)**	**9 (6.4)**	**0.1**
Paid work	67 (8.3)	31 (8.2)	32 (11.2)	4 (2.8)	0.01
Unpaid work	7 (0.9)	0 (0.0)	2 (0.7)	5 (3.6)	0.001
Household management	**34 (4.2)**	**15 (4.0)**	**12 (4.2)**	**7 (5.0)**	**0.9**
Buying groceries	15 (1.9)	4 (1.1)	8 (5.3)	3 (2.1)	0.2
DIY	4 (0.5)	2 (0.5)	0 (0.0)	2 (1.4)	0.1
Doing household chores	6 (0.8)	2 (0.5)	2 (0.7)	2 (1.4)	0.5
Cooking	5 (0.6)	5 (1.3)	0 (0.0)	0 (0.0)	0.1
Caring for children	4 (0.5)	2 (0.5)	2 (0.7)	0 (0.0)	1.0
Play/school	**35 (4.4)**	**26 (6.9)**	**4 (1.4)**	**5 (3.6)**	**0.002**
Self-care	**17 (2.1)**	**6 (1.6)**	**10 (3.5)**	**1 (0.7)**	**0.2**
Personal care	**14 (1.7)**	**5 (1.3)**	**8 (2.8)**	**1 (0.7)**	**0.3**
Healthcare	9 (1.1)	2 (4.2)	7 (2.5)	0 (0.0)	0.1
Appearance care	2 (0.3)	2 (0.5)	0 (0.0)	0 (0.0)	0.7
Engaging in sexual activity	3 (0.4)	1 (0.3)	1 (0.4)	1 (0.7)	0.6
Basic needs	0 (0.0)				
Community management	**3 (0.4)**	**1 (0.3)**	**2 (0.7)**	**0 (0.0)**	**0.8**
Administrative management	2 (0.3)	0 (0.0)	2 (0.7)	0 (0.0)	0.3
Preparing to move house	1 (0.1)	1 (0.3)	0 (0.0)	0 (0.0)	1.0