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Impact of the COVID-19 pandemic on working conditions and mental well-being of mental health professionals in the Netherlands: a cross-sectional study

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ABSTRACT

Objectives To examine the extent of the impact of the COVID-19 pandemic on the mental health and well-being of mental health professionals (MHPs) in the Netherlands and understand their needs during the COVID-19 pandemic.

Design and setting A cross-sectional, mixed-methods study was conducted with MHPs from the Netherlands from June 2020 to October 2020, consisting of an online survey and three online focus group discussions.

Participants Participants were MHPs from various occupational groups (psychologists, social workers, mental health nurses, developmental education workers, etc).

Primary and secondary outcome measures The online survey included questions about work-related changes due to COVID-19 perceived resilience to stress, changes in lifestyle behaviours and mental health symptoms. The focus group discussions focused mostly on work experiences during the first wave of the COVID-19 pandemic.

Results MHP's reported an increase in experience workload during the pandemic (mean score 8.04 based on a scale of 1-10) compared to before the pandemic (mean score of 7). During the first wave of the pandemic, 50% of respondents reported increased stress, 32% increased sleeping problems and 24% increased mental health problems. Adverse occupational (eg, increased workload OR 1.72, 95% CI 1.28–2.32), psychological (eg, life satisfaction OR 0.63, 95% CI 0.52–0.75), lifestyle (eg, increased sleep problems OR 2.80, 95% CI 2.07–3.80) and physical factors (decline in physical health OR 3.56, 95% CI 2.61–4.85) were associated with a decline in mental health. Participants expressed significant concern in the focus group discussions about the duration of the pandemic, the high workload, less work-life balance and lack of contact with colleagues. Suggestions to improve working conditions included ensuring clear communication about guidelines and facilitating worker contact and support via peer-to-peer coaching where experiences can be shared.

Conclusions The current study indicates that MHP experienced a decline in mental health status during the first wave of the COVID-19 pandemic, which should be taken into consideration by employers, policymakers and researchers.

STRENGTHS AND LIMITATIONS OF THIS STUDY

⇒ The survey was developed in consultation with different stakeholders such as psychologists, mental health nurses and researchers.
⇒ The survey was piloted among a diverse group of mental health professionals and researchers.
⇒ The survey results were further contextualised in focus group discussions with mental health professionals.
⇒ The cross-sectional design does not allow causal inference and data only reflect a snapshot of the experience of mental health professionals during a part of the pandemic.

BACKGROUND

As in many countries, the Netherlands reported its first infections due to COVID-19 in the beginning of 2020, transitioning to a lockdown in March 2020, referred to as the first wave of the pandemic.[1] This lockdown entailed staying at home as much as possible, wearing a face mask and practising physical distancing. All big events were cancelled, and schools and universities closed. Only people with 'essential jobs' (healthcare, police, supermarkets, etc) were allowed to physically go to their jobs. By the end of May 2020, restrictions were eased slightly; for example, day care and elementary schools partially reopened. Physical distancing and face mask recommendations persisted. In September 2020, restrictions were intensified and in October, the second wave started, which persisted until June 2021.[1]

Throughout the pandemic, there was international concern about how the pandemic and its measures might adversely impact the mental health of the general population.[2–4] Emerging evidence has demonstrated the adverse impacts of the pandemic on different mental health outcomes, such as loneliness, depression and anxiety symptoms.[5] In the

Netherlands, referrals in the first wave of the pandemic (March 2020 to May 2020) to mental healthcare almost halved compared with 2019, since face-to-face care was reduced in order to adhere to COVID-19 measures.[6] Though fewer people were accessing mental health services, this did not translate to a reduction in demand or a reduction in need for ongoing support.[6] Existing face-to-face mental health services were transferred, as much as possible, to telehealth and digital care, and strict protocols were drafted to guide inpatient and outpatient mental healthcare that aligned with COVID-19 measures.[7]

Emerging research shows that the COVID-19 pandemic has also substantially impacted the mental health and well-being of frontline health workers,[8–10] but less is known about the extent to which mental health and well-being of mental health professionals (MHPs) has been impacted and what their specific needs were throughout the pandemic. We define MHPs as professionals who deliver care with the aim of improving mental health. In the Netherlands, this includes psychologists, psychiatrists, social workers, developmental education workers and mental health nurses. The aim of this study is twofold. First, we aim to assess the impact of the COVID-19 pandemic on working conditions and mental health of MHPs in the Netherlands, and identify factors associated with a decline in mental health status through a cross-sectional survey. Second, we aim to obtain a more in-depth understanding of the experiences and needs of MHPs during the pandemic through qualitative work to complement the quantitative survey. Understanding the experiences and needs of MHPs in the first wave of the COVID-19 pandemic may provide useful lessons for future crisis situations or public health challenges.

METHODS

We carried out a mixed-methods study to investigate the impact of the first wave of pandemic on MHPs in the Netherlands using both quantitative methods through administration of a cross-sectional survey and qualitative methods using focus group discussions (FGDs). First, we carried out an online survey. The online survey was administered among MHPs from 23 June to 20 July 2020. Before administering the survey, it was piloted among a diverse group of MHPs. Second, three FGDs were held online during the second wave of the pandemic, in October 2020, with different categories of MHPs. Participants were included in the study if they (1) provided direct mental health or support to clients between March and May 2020; and (2) were remunerated for care delivery or support, that is, the worker did not work as a volunteer or in an internship capacity. Professionals included: psychologists working in primary care or specialised mental health services, psychiatrists, mental health nurses, clinical nurse specialists, social workers, remedial education workers and developmental education workers. Convenience and snowball sampling were used, as the survey link was disseminated throughout existing networks of MHPs known to the authors, and through the (social media) networks of professional associations, research institutes and umbrella organisations representing mental health services. The same organisations recruited participants purposively in their network for the FGDs. The recruitment of participants for the FGDs was done independently of the recruitment for the online survey. Though disseminated in the same networks, different professionals may have completed the survey than those who participated in the FGDs.

Reflexivity

The qualitative part of the study was performed from a contextualist point of view because we believe the historical, cultural and social contexts of MHPs' individual perceptions are essential to understand the experiences of MHPs.[11] In order to acknowledge contextual factors, we ensured different perspectives were present in our research team. These differed due to our professional backgrounds: psychology (LJJ), public mental health (LSZ and MvB-M), neurosciences (TJvD), epidemiology (MvB-M) and mental health nursing (BvM).

Tools

Survey

The anonymous survey contained questions about age and sex, personal circumstances, personal resources, occupational characteristics, working conditions, lifestyle choices and behaviours, working conditions, perceived stressors and overall self-rated health status (see online supplemental file 1 for an overview of the survey domains and instruments). The survey took approximately 20 min to complete. The full survey (in Dutch) is available on request.

Focus group discussions

The aim of the FGDs was twofold: first, to obtain more in-depth data to complement the findings from the survey data, and second, to understand the needs of MHPs for continued service delivery during the pandemic as well as needs for managing their own mental health and well-being. Three FGDs were held: one with MHPs in specialised mental healthcare, one with mental health nurses/clinical nurse specialists and one with social workers and human resources employees from social work organisations. These occupational groups were chosen because (1) these occupational groups were the biggest groups in the survey and (2) we worked with (among others) their umbrella organisations (Dutch Association of Mental Health and Addiction Care, Social Work Netherlands, Dutch Association for Nurses and Carers) to develop the study and recruit participants. The FGDs took place online in Microsoft Teams. During the FGDs, descriptive findings from the survey were presented to participants. The impact of the pandemic on work and working conditions was presented first, followed by the impact of the pandemic on mental health and well-being of participants. FGD participants were then asked to review, verify,

interpret, extend and enrich the findings from the survey through structured dialogue, facilitated by two moderators. The end of the FGD concluded with identification of possible solutions for the problems experienced and concrete actions to be undertaken for MHPs to do their job well (block 1), and remain healthy at work (block 2).

Ethical considerations

The Central Committee on Research Involving Human Subjects in the Netherlands does not require approval from an ethical review committee for non-medical survey research, therefore this survey was exempt from medical-ethical review. All respondents digitally signed an informed consent form before starting the survey. Confidentiality was guaranteed as no names or contact information was gathered through the survey. The focus group participants were asked for their consent to record the meeting at the beginning of the meeting. Participants who did not want their videos recorded turned off their videos.

Patient and public involvement

The study was codeveloped with numerous mental health stakeholders in the public health system, including the survey scope and topic selection, participant recruitment and dissemination of findings. Stakeholders included professional associations, policy advisors, MHPs and researchers.

Analysis

For the survey, descriptive statistics were first tabulated to describe the survey for the total sample. Stepwise logistic regression analysis was then used to explore factors associated with a decline in mental health in MHPs. First, only profession-specific factors were included as independent variables. Second, we extended this model stepwise with working conditions, job resources, sociodemographic factors, stressors, personal resources, lifestyle factors and health-related factors. Change in self-perceived mental health was determined by calculating the difference in scores on two questions (score from 1 to 10) about self-rated mental health before the pandemic outbreak (asked retrospectively) and at the time of survey completion (during the first wave of the pandemic). Scores were dichotomised into 1, representing a decline in mental health status if participants declined by 1 point or more in mental health compared with before the pandemic, and 0, representing no change in mental health before pandemic compared with the time of survey completion during the pandemic. As our research question focused specifically on the factors associated with a decline in mental health status, participants reporting an improvement in mental health were excluded from these analyses. No statistical weights were used in the regression analysis, and only complete cases were analysed (listwise deletion of missing cases). All quantitative statistical analyses were performed using SPSS V.27.

For the analysis of the FGDs, first, notes from the FGDs and FGD transcripts were read and viewed by two researchers. Then, two researchers identified the main themes emerging across the FGDs. Then, the main themes were summarised into three draft reports (one for each FGD). The draft reports were sent to the participants of each focus group for a member check. The main themes (findings) from across the three FGDs, verified by participants, are presented below.

RESULTS

There were 2055 respondents who met the inclusion criteria, of which 1862 (91%) completed sociodemographic and profession-specific questions, and 1595 (78%) completed the entire survey.

For the descriptive analyses of the occupational and mental health characteristics, data from the 1862 respondents who completed sociodemographic and profession-specific questions were included (mean age in years: 43.7, SD: 11.9; female: n=1510, 81.1%). However, various variables had missing values in which case valid percentages were reported. The final analytical sample for the regression analyses consisted of 1460 complete cases. Of the 1862 respondents, 1465 (79%) could be included in the regression analyses after excluding 397 respondents (21%) who either did not complete the entire survey or showed a positive increase in their mental health. Furthermore, as five respondents had a missing value on the variable 'practical support' there were 1460 complete cases (79%) that could be analysed.

Respondents could choose more than one answer to a question about their profession. Professions were grouped into five categories (see online supplemental file 2). However, of the 1465 respondents, 72 chose two professions and four chose three professions (online supplemental file 2). For the analyses, these 76 respondents were assigned to one of the categories in the following order: psychologist/psychotherapist (n=20), nurse/healthcare assistant (n=18), social worker (n=36) and youth service professional/(remedial) education worker (n=2).

Occupational and mental health characteristics

During the first wave of the pandemic, the experienced workload (mean score (scale 1–10) before pandemic: 7.0; during pandemic: 8.1) increased for MHPs. The main reasons cited for the perceived increase in workload included the extra time needed for client outreach and communication in lieu of face-to-face contact being possible (65%), additional effort and time to comply with COVID-19 protocols (55%) and changes in the availability of colleagues (46%). Most professionals (n=1557, 91%) indicated that one or more out of five of the applicable COVID-19 measures negatively impacted the quality of their work. Half of the respondents (n=807, 50%) indicated that they experienced high stress levels due to the pandemic in the 4 weeks prior to assessment. In addition,

32% (n=513) of the MHPs experienced (a lot) more sleeping problems since the pandemic began, and 24% (n=401) reported an increase in symptoms related to mental ill health in the past 4 weeks.

Factors associated with a decline in mental health status

Of the 1465 participants included in the regression analyses, n=753 (51%) indicated that their mental health had declined, n=609 (49%) reported no change in their mental health since the start of the pandemic began. The first regression model (which included only profession-specific factors) showed that only the type of profession was significantly associated with a decline in mental health status (see table 1). Social workers and youth service professionals/(remedial) education workers had higher odds of experiencing a decline in mental health compared with the reference group ('other' professions). After adding all other factors in the full model, none of the profession-specific factors significantly predicted a decline in mental health (see table 1). Experiencing an increase in workload, high levels of stress due to the

Table 1 Factors associated with a decline in mental health status during the first wave of the pandemic

Factors	First model OR (95% CI)	Full model† OR (95% CI)
Profession-specific factors		
Profession category (other profession=reference group)		
Youth service professional/(remedial) education worker	1.93** (1.28–2.93)	1.10 (0.65–1.87)
Nurse/healthcare assistant	1.08 (0.77–1.50)	0.81 (0.53–1.24)
Psychologist/psychotherapist	1.18 (0.84–1.65)	0.86 (0.55–1.34)
Social worker	1.66* (1.11–2.49)	1.19 (0.72–1.99)
Care setting		
On-site ambulatory care, yes (no=reference group)	1.18 (0.78–1.77)	1.02 (0.59–1.76)
Ambulatory outreach care, yes (no=reference group)	1.00 (0.66–1.51)	0.98 (0.56–1.72)
Inpatient care, yes (no=reference category)	1.00 (0.71–1.41)	0.91 (0.59–1.42)
Supported living services, yes (no=reference group)	0.94 (0.61–1.44)	0.76 (0.43–1.33)
Working conditions		
Change in workload before COVID-19 and at time of assessment (no change=reference group)		
Decrease in workload		0.82 (0.52–1.27)
Increase in workload		1.72*** (1.28–2.32)
Job resources		
Energy sources (mean score, range 1–5)		0.75* (0.59–0.96)
Stressors		
(Very) high level of stress due to the COVID-19 pandemic, yes (mean score of 4 or 5) (no=reference group)		1.81** (1.27–2.60)
Stress in daily work or private life (mean score, range 1–5)		1.59** (1.19–2.13)
Personal resources		
Life satisfaction (range 0–10)		0.63*** (0.52–0.75)
Lifestyle factors		
(A lot) more sleep problems than before the COVID-19 pandemic, yes (no=reference group)		2.80*** (2.07–3.80)
More alcohol use during the COVID-19 pandemic, yes (no=reference group)		1.71* (1.13–2.60)
Health-related factors		
Physical health deteriorated during the COVID-19 pandemic, yes (no=reference group)		3.56*** (2.61–4.85)
Good current personal functioning, yes (no=reference group)		0.57** (0.41–0.80)

*P<0.05; **p<0.01; ***p<0.001.
†Only significantly associated factors are shown with regard to working conditions, job resources, sociodemographic factors, stressors, personal resources, lifestyle factors and health-related factors.

consequences of COVID-19, stress in daily work or private life, an increase in alcohol use, an increase in sleep problems and a decrease in physical health (see table 1) were identified as risk factors, as they significantly predicted greater odds of a decline in mental health status. Having a greater number of resources at work that restore energy and promote well-being, higher life satisfaction and a high degree of personal functioning were identified as protective factors for mental health.

Results from the FGDs

The MHPs in the FGD could relate to the survey findings presented, but were surprised by the extent to which the COVID-19 pandemic had adverse consequences on work as well as on mental health and well-being. As the FGDs took place during the second wave, this allowed for participants to reflect on their experiences during the first wave of the pandemic. The results of the FGDs can broadly be categorised into (1) concerns and issues related to the care they provide and their own well-being, and (2) opportunities for better addressing the work-related mental health and well-being needs of MHPs. The majority of concerns raised by participants related to how they experienced their workload and work processes, such as connecting with colleagues, understanding what was expected of them related to COVID-19 measures and time management given the impact of the restrictions on care delivery.

MHPs also indicated numerous concerns about their mental health and well-being. For example, participants did not know how long the pandemic and its measures would last, which resulted in uncertainty and, in some cases, feelings of stress. In addition, participants articulated that the pandemic presented new challenges such as a higher workload, difficulty in maintaining work-life balance and no face-to-face contact with colleagues. They noted that a contributing factor adding to this higher workload was feeling hindered in providing the quality of care they would have liked to have provided, given the COVID-19 protocol restrictions, which were sometimes unclear. Furthermore, participants noted that initially, some clients did not take the restrictions seriously, which led to clients who came too close to the participants and brought them in a dangerous situation. This led to cancellation of face-to-face appointments, despite the fact that face-to-face consultations were considered important to maintain or improve the mental health of clients.

> A colleague of mine even crawled under a desk to escape one of the elderly clients that came too close. The client didn't see the severity (of coming closer) or thought 'But I know you, it isn't a big deal'. That's when we asked: 'What is still possible and what is not?' Thereafter, we decided that if clients can't adhere to the protocols, we can't organize those [face-to-face] activities any more. Period. (HR employee)

They also mentioned that (abruptly) having to work remotely added to their workload and well-being, despite provisions for remote work being well organised by their employer. Remote work was perceived as draining as client care and family life took place in the same physical space, which required getting used to.

> The contrast between our work and private life is too big [during the pandemic]. For example, for work you're talking to a suicidal child whilst looking outside your window where you see your own child playing. It's difficult to process, which causes extra exhaustion. (Psychologist)

Professionals also noted difficulty in maintaining a healthy work-life balance, as they felt the pressure to deliver a high standard of care from their homes, which often translated to more work and longer working days.

> It's easier to think: 'Oh, I'll take that on as well, since I'm busy anyway.' Your phone stays on longer, as will your computer. I truly believe there should be a stricter work-from-home protocol. (Nurse)

Participants also articulated their needs for supporting their work processes and mental health, as the pandemic continued. First, participants mentioned that although many diverse initiatives were launched to support the mental well-being of health professionals, they were hardly used. Participants articulated that they instead needed more opportunities to connect with peers (as opposed to professional help), such as sparring with colleagues about how to manage care demands and achieve a work-life balance, which protocols to use, communication approaches with clients during lockdown measures and support in delivering telehealth. It was noted that physical opportunities to connect with colleagues were needed to maintain a sense of team building and togetherness in a crisis, as were informal communication moments to discuss issues unable to be shared beyond a small circle of colleagues due to confidentiality reasons. Additionally, professionals stressed the need for a roadmap on what care delivery would look like in the future, as the COVID-19 measures continued. Positive experiences for both professionals and clients were also raised, such as outdoor walking appointments, where the client and the professional would carry out a physically distanced consultation outdoors rather than indoors.

DISCUSSION

This study aimed to investigate the experiences and needs of MHPs during the initial phases of the COVID-19 pandemic in the Netherlands using a mixed-methods approach. We found that MHPs experienced an increase in perceived workload, stress, sleeping problems and a decline in mental health. Compared with other studies, sleep problems (32%) and mental health problems (24%) were nearly two to three times higher in our study as compared with the general Dutch population (11%–14% and 12%, respectively) during the first wave of the pandemic.[12] Prior research has also found that stress

levels and sleep problems are higher among health professionals.[8 13] Increased workload, high levels of stress related to COVID-19 and its measures, higher demands in both work and private life, increased alcohol use, increased sleep problems and poorer physical health were significantly associated with a decline in mental health status. Factors identified in our study that adversely affected mental health, such as stress, physical health complaints and fatigue, were also found in a review exploring factors that impacted the mental health of healthcare professionals during pandemics.[13] Our study also identified protective factors for mental health, such as work-related resources to promote well-being (eg, supportive and collegial work environment, opportunities for growth and personal development), general life satisfaction and high levels of personal functioning. These findings are in line with other studies which have found that organisational support and social support are protective factors against mental health decline.[13]

The qualitative part of our study showed that the MHPs could relate to the survey findings; however, focus group participants did not expect the extent to which the pandemic adversely affected health and mental health as what was found in the survey. Although we did not investigate this further, we propose that this realisation came during the FGDs because MHPs were working around the clock under a lot of stress to make sure clients received the best care. They simply did not have the time to stand still and realise the earnest of the situation.

Uncertainty about the future, the wish to deliver the same quality of care in constrained circumstances, increased workload and increased difficulty in finding a work-life balance were all sources of concern for MHPs. These findings are in line with a qualitative study among MHPs in the UK.[14] Despite the challenges, participants also mentioned some positive aspects of the pandemic, such as the rapid organisation of technological solutions to facilitate remote work, and finding creative ways to have face-to-face contact despite the pandemic (eg, place-based consultations or outdoor meetings with clients and colleagues).

A strength of our study is that it adds to the scarce literature on the occupational and mental health impact of the COVID-19 pandemic, specifically among MHPs. Moreover, our inclusion criteria ensured that participants were a diverse group of MHPs affected by the COVID-19 pandemic. Additionally, the mixed-methods study gives a unique insight in the experiences and needs of MHPs. A limitation is the cross-sectional study design, limiting any inferences about causation and generalisability. An additional limitation is that changes in work and health were self-reported and assessed retrospectively, which could impact the internal validity of our findings (eg, recall bias). As we excluded respondents who showed an increase in mental health status in our quantitative analyses, our findings are not geared towards identifying factors that are associated with an increase in mental health, thus precluding the generalisability of our findings to MHPs who showed an increase in mental health during the pandemic. Despite the participation of a substantial number of participants from various MHPs, the participants do not constitute a representative sample of the MHP population, as they were sampled via convenience and snowball sampling. Moreover, our findings may not translate to other country contexts with different protocols and COVID-19 measures, as well as different mental health system infrastructures, which may limit the generalisability of the findings. Overall, our findings point to a few potential solutions to protect the mental health and well-being among MHPs during the pandemic, such as the need to ensure clear communication about guidelines, allocating extra resources (financial or time) to provide online care to clients and offering peer-to-peer coaching sessions for MHPs.

Lastly, as research on this topic and this target group is scarce and since the workload of MHPs will likely increase due to the continued adverse mental health impacts of the pandemic, more research is needed to better understand the impact on MHPs, care delivery and client outcomes, and on effectiveness of strategies proposed to support the mental well-being of MHPs.

In conclusion, the current study indicates that MHPs experienced occupational and mental health problems during the pandemic. These signals should be taken seriously by employers, policymakers and researchers to help prevent burnout as well as any further decline in mental health and well-being.

Contributors MvB-M, TJvD, SSL, BvM, LJJ and LSZ all contributed to the writing of the manuscript. MvB-M, TJvD and LSZ were the core project team leading the study. MvB is the author responsible for the overall content as guarantor. MvB-M and TJvD conducted the survey and held the focus group discussions. MvB-M, TJvD and SSL conducted the data analysis. MvB-M, TJvD, BvM, LJJ, SSL and LSZ interpreted the overall results.

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Competing interests None declared.

Patient and public involvement Patients and/or the public were involved in the design, or conduct, or reporting, or dissemination plans of this research. Refer to the Methods section for further details.

Patient consent for publication Not applicable.

Ethics approval This study involves human participants and the Trimbos Institute Ethical Review Committee approved the protocol for the study. All participants provided informed consent to participate in the study before taking part.

Provenance and peer review Not commissioned; externally peer reviewed.

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Supplementary File 1 Overview of measures used in the survey

Factor	Instrument	Items and scale
Biological factors		
Age, in years	Self-report item	Age in years, range 18-72
Sex, male	Self-report item	Male/Female
Personal circumstances		
Children under 18 living at home, yes	Self-report item	One item asking "With whom do you live?" with 7 response options (e.g. with a partner/ husband/ wife, with children under 18, with parents, alone). Item was dichotomised into children under 18 living at home, yes and no= other.
Personal resources		
Life satisfaction, scale 1-10	Cantrill ladder [1]	One item asking 'How satisfied are you with your life'? The item is rated on a scale of 1-10 with 1 being 'The worst life I can imagine' and 10 being 'The best life I can imagine'
Resilience, total score range 0-36	Resilience Evaluation Scale (RES) [2]	The RES consists of 9 items about how the respondent evaluates how they usually respond to difficult situations (e.g. 'I am perseverant', 'I believe in myself'). Items are scored on a 5 point scale (0=completely disagree to 4=completely agree). Items are summed to create a total score ranging from 0-36.
Personal resources, mean range 1-5	ARQ Self-Screener [3]	The personal resources subscale is one of the three subscales of the ARQ self-screener. This subscale consists of 6 items measuring individual characteristics that contribute to functioning at work even in difficult circumstances (e.g. 'I am flexible', 'I have from support of my partner, family or friends'). Respondents rate to which degree each characteristic is applicable to them on a 5-point scale (1= not to 5 = a very strong degree). The mean score on the items was calculated ranging from 1-5.
Occupational characteristics		
Profession	Self-report item	One item asking "What is your profession?". Respondents could choose from a list of 20 professions or add their own. Multiple responses could be given. Professions were grouped into 5 categories: • *Youth service professional/ (remedial) educationalist* consisting of: child, youth and family professionals, youth workers, youth care workers, remedial educationalists, and educationalists. • *Nurse/healthcare assistant* consisting of: clinical nurse specialists, psychiatric nurse practitioner and carers. • *Psychologist/psychotherapist* consisting of: health care psychologists, clinical (neuro) psychologists and psychotherapists. • *Social worker* consisting of: social workers, and social counsellors.

		• *Other* consisting of: physician (including psychiatrists), lived experience workers, mental health, primary care mental health worker, creative therapists, and other therapists. A categorical variable with 5 categories was used in the analysis with 'other' as the reference group.
Care setting	Self-report item	One item asking "In which care setting do you work?". Respondents could choose from a list of 8 professions or add their own. Multiple responses could be given. Professions were grouped into 4 categories based: • *On-site ambulatory care* consisting of online/ remote care, ambulatory care (excluding ambulatory living services), ambulatory youth care AND prior to the Covid-19 crisis more than 70% of contacts with clients took place during in-person visits on location, via telephone or video calls. • *Ambulatory outreach care* consisting of online/ remote care, ambulatory care (excluding ambulatory living services), ambulatory youth care AND prior to the Covid-19 crisis more than 30% of contacts with clients took place during street visits, in the community, home-visits or outreach walks. • *Inpatient care* consisting of day care, clinical inpatient care, and youth care with stay. • *Supported living services* consisting of supported housing and ambulatory living services. Four dichotomous variables were included in the analysis with each category being contrasted with the other three categories. E.g. On-site ambulatory care vs. not on-site ambulatory care.
Occupational resources and support		
Perceived practical job support, mean score range 0-2	Self-report items	This variable measures whether respondents experience sufficient practical support to do their work. Respondents indicated the whether they experienced sufficient practical support by rating the availability of 9 practical resources (e.g. personal protective equipment, financial compensation for loss of income or for incurred extra costs, professional autonomy to organise work) using 4 answer options: 0= yes, 1=partly, 2=no or not applicable. The mean score of the applicable items was calculated ranging from 0-2.
Occupational energy resources, mean score range 1-5	ARQ Self-Screener [3]	The occupational energy resources subscale is one of the three subscales of the ARQ self-screener. This subscale consists of 9 items measuring work characteristics that contribute to employees staying motivated and able to do their job (e.g. 'Support from collegues', 'job

		autonomy', 'challenging work'). Respondents rate to which degree each characteristic is applicable to them on a 5-point scale (1= not to 5 = a very strong degree). The mean score on the items was calculated ranging from 1-5.
Working conditions		
Change in working conditions or hours, yes	Self-report item	One item asking "What does is your current working situation?". Respondents could choose from a list of 6 options (e.g. 'I work more now', 'I work less now', 'I do other work than I'm used to doing') or add their own. Multiple responses could be given. If none of the options were chosen If at least one option was chosen this item was scored as yes (1) otherwise it was scored no (0).
Change in type of client contact	Self-report items	This variable measures, the difference in the amount of face-to-face contacts before and during the Covid-19 crisis. Respondents were asked to indicate the amount of time they spent on various types of client contact before the Covid-19 crisis and at the time they completed the questionnaire (during the crisis). They were asked to divide 100% between 7 types of contact (e.g. in-person visits on location, video call, home visit). The amount of face-to-face contacts was calculated as the sum of the percentages assigned to in-person visits on location, visits in the community/ streets, walking appointments, and home visits. The change score was categorised as: no difference (reference), a decrease or an increase in the amount of face-to-face contacts.
Clients currently receiving the care or treatment that they need, no	Self-report item	Respondents indicated whether their clients are currently receiving the care or treatment that they need using 3 answer options: yes, partly or no. Scores were dichotomised into yes (ref) and no or partly.
Change in workload, no	Self-report item	This variable measures, the difference in self-reported workload before and during the Covid-19 crisis. Respondents indicated the level of their workload on a scale of 1 to 10 (1=extremely low workload and 10= extremely high workload) before the Covid-19 crisis and at the time completing the questionnaire. The change score was categorised as: no change (reference), and decrease or increase in workload.
Covid-19 measures are practically infeasible or bad for the quality of work, yes	Self-report item	This variable measures whether respondents experienced one or more Covid measures to be 1) practically infeasible or 2) bad for the quality of work/ care. Respondent rated the extent to which they agree, are neutral or disagree with five Covid measures (e.g. keeping 1.5 metres distance, avoid face-to-face contact, using personal protective equipment) being practically infeasible or bad for the quality of work. Score were dichotomised into yes (= agree that measures are infeasible/ bad for quality of work) and no (= neutral/ disagree that measures are infeasible/ bad for quality of work; reference).

Type of employment	Self-report item	Respondents could opt for one or more answers to the describe their type of employment (e.g. permanent employment, temporary employment, freelance, unemployed, incapacitated). The last two options were not chosen. Answers were categorised into: permanent (reference), temporary, freelance or multiple types.
Lifestyle		
Change in exercise, (a lot) less	Self-report item	The respondents indicated their level of exercise in the last 7 days as compared to before the Covid-19 crisis on a 5-point (1= a lot less to 5= a lot more). Scores were dichotomised into (a lot) less exercise = yes vs. no = reference.
Change in diet, (a lot) less healthy eating	Self-report item	The respondents indicated their level of healthy eating in the last 7 days as compared to before the Covid-19 crisis on a 5-point (1= a lot less to 5= a lot more). Scores were dichotomised into (a lot) less healthy eating = yes vs. no = reference. .
Change in sleep, (a lot) more sleep problems	Self-report item	The respondents indicated their level of sleep problems as compared to before the Covid-19 crisis on a 5-point (1= a lot less to 5= a lot more). Scores were dichotomised into (a lot) more sleep problems = yes vs. no = reference.
Change in substance use, more tobacco/ cigarette use	Self-report item	Respondents indicated that they either started using tobacco/ cigarettes during the Covid-19 crisis or that the use has increased.
Change in substance use, more alcohol use	Self-report item	Respondents indicated that they either started using alcohol during the Covid-19 crisis or that the use has increased.
Stressors		
Carer during Covid-19 crisis, yes	Self-report item	One item asking "Were you a carer during the Covid-19 crisis?". Respondents could choose from a list of 5 options (e.g. 'yes, for a family member living in my home', 'yes, for a family member living independently') or answer 'no'. Multiple responses could be given. If one of the 'yes' options was chosen this item was scored as yes otherwise it was scored no (reference).
Worry about change in income/ financial situation	Self-report item	The respondents indicated whether they were worried about the financial situation on a 3-point (1= not worried to 3 = worried a bit or a lot). Scores were dichotomised into worried a bit or a lot = yes vs. no = reference.
Stress due to Covid-19, yes (a lot)	Self-report items	Respondents indicated to what extent they experienced stress due to Covid-19 on 3 items: 'the consequences of the Covid-19 crisis for myself or loved ones', 'the media coverage about the Covid-19 crisis' and 'the media coverage about my work sector during Covid-19 crisis'. Items were rated on a 5 point scale 1= no/ almost no stress to 5= a lot of stress. The mean score on the items was calculated and rounded ranging from 1-5. Scores were then dichotomised into (a lot) of stress = yes vs. no = reference.
Worry about infecting others with Covid-19, yes (a lot)	Self-report items	Respondents indicated to what extent they worry about infecting others with Covid-19 on 4 items: 'my partner/ family/ housemate', 'clients' and 'co-workers' and '(grand)parents'.

		Items were rated on a 5 point scale 1= completely not to 5= a lot. The mean score on the items was calculated and rounded ranging from 1-5. Scores were then dichotomised into (a lot) of worry about infecting others = yes vs. no = reference.
Illness or death of a loved one due to Covid-19, yes	Self-report item	Yes/ no response to the question whether a loved one had been ill or died due to a Covid-19 infection.
Stress in daily work or life	ARQ Self-Screener [3]	The stress in daily work or life subscale is one of the three subscales of the ARQ self-screener. This subscale consists of 10 items measuring work or life characteristics that can be experienced as stressful (e.g. 'High work pressure', 'stress at home', 'experiencing unwanted behaviour'). Respondents rate to which degree each characteristic is applicable to them on a 5-point scale (1= not to 5 = a very strong degree). The mean score on the items was calculated ranging from 1-5.
Health		
Perceived general health, (very) good	Self-report item	The respondents indicated how they rated their general health on a 5-point (1= very bad to 5= very good). Scores were dichotomised into (very) good = yes vs. no = reference.
Change in perceived general functioning, decrease	Self-report items	This variable measures, the difference in perceived general functioning before and during the Covid-19 crisis. Respondents rated the level of their perceived general functioning on a scale of 1 to 10 (1=extremely bad and 10= extremely good) before the Covid-19 crisis and at the time completing the questionnaire. Perceived general functioning had decreased if the score was at the time of completing the questionnaire was lower than the score before the Covid-19 crisis.
Personal functioning, good	Brief INSPIRE scale [4,5]	Personal function was measured using the translated and adapted Brief INSPIRE scale, which was originally a measure of recovery. This scale consists of 5 items and respondents rate to which degree each item is applicable to their situation on a 5-point scale (1= not at all to 5 = very much). Example items include 'I feel supported by other people', 'I have hopes and dreams for the future', and 'I feel good about myself') The mean score on the items was calculated ranging from 1-5. Score were dichotomised with a score of 3.5 or higher meaning good personal functioning.
Presumed Covid-19 infection	Self-report item	Respondents indicated whether they thought they were currently or previously infect with Covid-19. They could choose from the following options: 1. Yes, this was confirmed with a test 2. Yes, but it was not confirmed with a test 3. No, this was confirmed with a test 4. Nee, I don't think so, but this was not confirmed with a test 5. I don't know,/ I don't want to disclose

		Scores were dichotomised into presumed Covid-19 infection = yes (scores 1-2) and no = (scores 3-5; reference).

1 Cantril H. The pattern of human concerns. New Brunswick, NJ: Rutgers University Press; 1965.

2 Van der Meer CAI, te Brake H, van der Aa N, et al. Assessing psychological resilience: Development and psychometric properties of the English and Dutch version of the Resilience Evaluation Scale (RES). Front Psychiatry 2018; **9**:1–11. doi:10.3389/fpsyt.2018.00169.

3 ARQ Kenniscentrum Impact van Rampen en Crises. ARQ Zelfscreener. 2021.Www.impact-kenniscentrum.nl/nl/projecten/zelfscreener (accessed 4 Nov 2021).

4 Williams J, Leamy M, Bird V, Le Boutillier C, Norton S, Pesola F, Slade M. Development and evaluation of the INSPIRE measure of staff support for personal recovery. Social Psychiatry and Psychiatric Epidemiology 2015; **50**: 777-786.

5 Swildens WE, Visser E, Schaefer B, Nugter A, Van Weeghel J. Dutch version INSPIRE-O. Landelijke Expertraad ROM EPA; 2020. https://www.researchintorecovery.com/measures/inspire (accessed 13 december 2020).

Supplementary File 2 Assignment of survey respondents with more than one profession to subgroups for the regression analysis

Mental health profession chosen in the survey	**Mental health profession subgroups in the analyses**				
	Psychologist/psychotherapist	Nurse/healthcare assistant	Social worker	Youth service professional/ (remedial) educationalist	Other profession
Psychologist/psychotherapist	362				
Nurse/healthcare assistant		441			
• Combined with other profession	1				
Social worker	1	8	177		
• combined with youth service professional/ (remedial) educationalist		1			
Youth service professional/ (remedial) educationalist	8	1	28	179	
• Combined with other profession			2		
Other profession	10	8	6	2	230
Total in analyses	**382**	**459**	**213**	**181**	**230**