

SUPPLEMENTARY FILE 1

Questionnaire

Healthcare professionals' experiences with COVID-19 patients in intensive care units in Norway

Demographics

1. What is your age?

2. Gender

- ☐ Female
- ☐ Male

3. What is your marital status?

- ☐ Married / partner
- ☐ Unmarried
- ☐ Widow / widower
- ☐ Other

4. What is your pre-Covid profession?

- ☐ Registered nurse
- ☐ Intensive care nurse
- ☐ Anaesthetic nurse
- ☐ Operating theatre nurse
- ☐ Clinical teacher
- ☐ Paediatric nurse
- ☐ Anaesthesiologist
- ☐ Intensive care physician
- ☐ Cardiologist
- ☐ MD, Permanent resident

- ☐ MD Physician under specialization (LIS)
- ☐ MD Physician, external supervisory tasks
- ☐ Psychiatrist
- ☐ Manager/leader

5. If you are a doctor, how many years have you practiced medicine since earning your degree? If you are a nurse, how many years have you practiced nursing since you trained as a nurse?

6. Have you had any previous experience working in an intensive care unit?

- ☐ Yes
- ☐ No

7. Have you previously had symptoms of anxiety?

- ☐ Yes
- ☐ No

8. Have you previously had symptoms of depression?

- ☐ Yes
- ☐ No

9. Do you currently have any of the following risk factors for becoming infected with the coronavirus?

Heart disease, including high blood pressure; lung disease; older than 65 years of age; immune disease / immune depressants; diabetes; obesity (BMI> 30)

- ☐ Yes
- ☐ No

10. Have you considered quitting your job because of the pandemic?

- ☐ No
- ☐ Yes, sometimes

- ☐ Yes, often
- ☐ Yes, specifically planning to quit / have already resigned

11. Have you been vaccinated?

- ☐ Yes, once
- ☐ Yes, twice
- ☐ No

12. Have you been infected with COVID-19?

- ☐ Yes
- ☐ No

COVID-ICU related factors

13. Did you experience being well-prepared to begin your work in a COVID-ICU?

- ☐ Not at all
- ☐ To a small degree
- ☐ Partly
- ☐ To a high degree
- ☐ To a very high degree

14. Have you participated in practice / simulation with treatment teams in a situation that may be like working with COVID-ICU patients?

- ☐ Yes, once
- ☐ Yes, several times
- ☐ No, never

15. Have you been afraid of being infected with COVID-19 at work?

- ☐ Yes
- ☐ No

16. Have you felt lonely?

- ☐ Not at all
- ☐ To a small degree
- ☐ Partly
- ☐ To a high degree
- ☐ To a very high degree

Do/did your employer have any kind of support measures during the COVID ICU work?

17. No special support measures ☐ Yes ☐ No

Did you find other measures at work supportive?

18. Daily debrief ☐ Yes ☐ No

19. Talk to leader ☐ Yes ☐ No

20. Talk to colleague ☐ Yes ☐ No

21. Professional information ☐ Yes ☐ No

PCL-5

Below is a list of issues that may be reactions to highly stressful events such as the COVID-19 pandemic.

Please indicate whether any experiences related to the COVID-19 pandemic have been stressful for you by answering each question. Have you experienced any of the following issues during the last month?

	Not at all	A little bit	Moderately	Quite a bit	Extremely
22. Repeated, disturbing, and unwanted memories of the stressful experiences of the pandemic?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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|---|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 23. Repeated, disturbing dreams of the stressful experience of the pandemic? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 24. Suddenly feeling or acting as if the stressful experience were actually happening again (as if you were actually back there reliving it)? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 25. Feeling very upset when something reminded you of the stressful experience of the pandemic? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 26. Having strong physical reactions when something reminded you of the stressful experience of the pandemic? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 27. Avoiding memories, thoughts, or feelings related to the stressful experience of the pandemic? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 28. Avoiding external reminders of the stressful experience of the pandemic (for example, people, places, conversations, activities, objects, or situations)? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 29. Trouble remembering important parts of the stressful experience of the pandemic? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 30. Having strong negative beliefs about yourself, other people, or the world (for example, | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

having thoughts such as: I am bad, there is something seriously wrong with me, no one can be trusted, the world is completely dangerous)?					
31. Blaming yourself or someone else for the pandemic?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
32. Having strong negative feelings such as fear, horror, anger, guilt, or shame?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
33. Loss of interest in activities that you used to enjoy.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
34. Feeling distant or cut off from other people?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
35. Trouble experiencing positive feelings (for example, being unable to feel happiness or have loving feelings for people close to you)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
36. Irritable behaviour, angry outbursts, or acting aggressively?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
37. Taking too many risks or doing things that could cause you harm?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
38. Being “super alert” or watchful or on guard?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
39. Feeling jumpy or easily startled?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
40. Having difficulty concentrating?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

41. Trouble falling or staying asleep?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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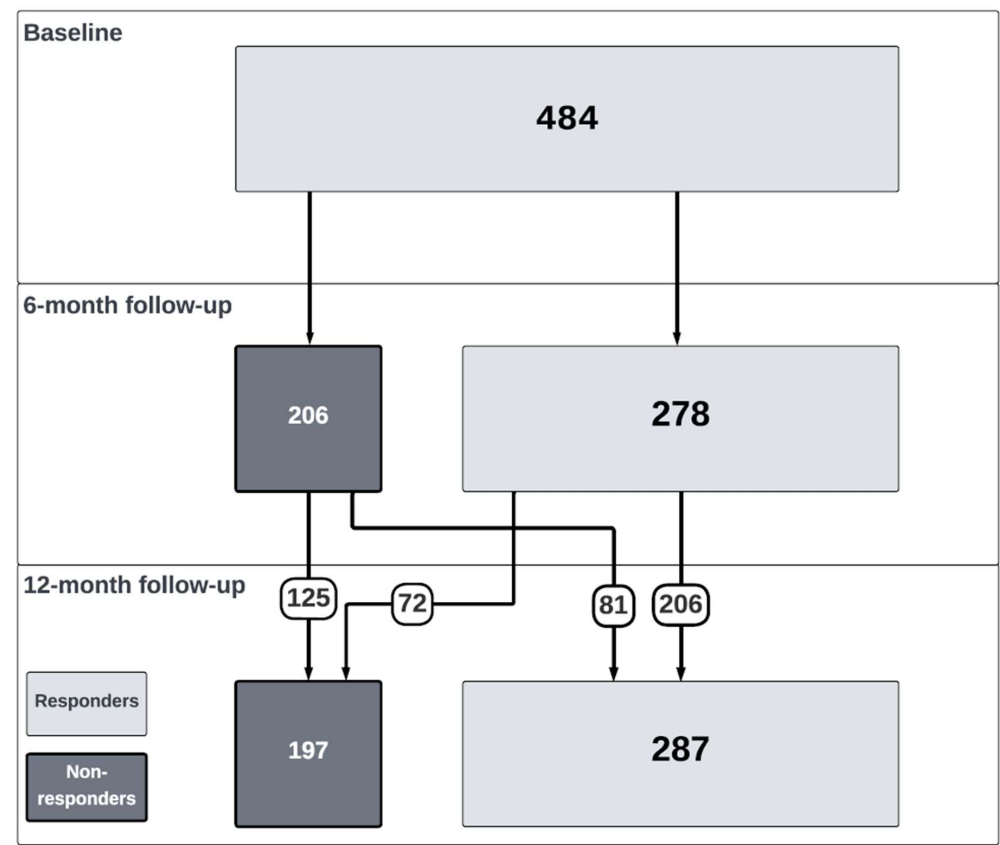
HSCL-10

Have you experienced any of these during the last week (including today)

	Not bothered	A little	Quite a bit	Very much bothered
42. Suddenly scared for no reason	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
43. Feeling fearful	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
44. Faintness, dizziness or weakness	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
45. Feeling tense or keyed up	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
46. Blaming yourself for things	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
47. Difficulties in falling asleep or staying asleep	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
48. Feeling blue	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
49. Feelings of worthlessness	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
50. Feeling everything is a effort	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
51. Feeling hopeless about the future	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

SUPPLEMENTARY FILE 2

Flowchart of the study participants



SUPPLEMENTARY FILE 3

Table 1 Symptoms of anxiety and depression by HSCL-10 at baseline, 6-month and 12-month follow-up, N=206.						
	Baseline		6-month		12-month	
	Median (IQR, min- max)	n ≥ 1.85 (%)	Median (IQR, min- max)	n ≥ 1.85 (%)	Median (IQR, min- max)	n ≥ 1.85 (%)
Total population	1.25 (0.5, 1.0-3.6)	23 (11.2)	1.10 (0.5, 1.0-3.9)	19 (9.2)	1.20 (0.5, 1.0-3.9)	26 (12.6)
Nurses (n=164)	1.30 (0.58, 1.0-3.6)	19 (11.2)	1.20 (0.5, 1.0-3.9)	17 (10.4)	1.30 (0.6, 1.0-3.9)	24 (14.6)
Physicians (n=21)	1.30 (0.45, 1.0-2.4)	2 (9.5)	1.10 (0.4, 1.0-2.3)	1 (4.8)	1.00 (0.4, 1.0-2.3)	1 (4.8)
Leaders (n=21)	1.20 (0.55, 1.0-2.2)	2 (9.5)	1.00 (0.6, 1.0, 2.3)	1 (4.8)	1.1 (0.45, 1.0-2.1)	1 (4.8)
Difference between professions ^a	0.798		0.365		0.032*	

Notes: HSCL-10 scale 1.0-4.0, cut off ≥1.85. ^a Kruskal-Wallis test *p≤0.05

Wilcoxon signed rank test

Baseline to 6-month 0.025*

6-month to 12-month 0.022*

Baseline to 12-month 0.926

Table 2 Symptoms of PTSD by PCL-5 at baseline, 6-month and 12-month follow-up, N=206.

	Baseline		6-month		12-month	
	Median (IQR, min- max)	n ≥31 (%)	Median (IQR, min- max)	n ≥31 (%)	Median (IQR, min- max)	n ≥31 (%)
Total population	7 (14, 0-64)	14 (6.8)	5.5 (14, 0-68)	11 (5.3)	6.5 (15, 0-71)	11 (5.3)
Nurses (n=164)	7 (13, 0-64)	12 (7.3)	6.5 (14, 0-68)	10 (6.1)	10 (15,0-71)	11 (6.7)
Physicians (n=21)	4 (6, 0-27)	0	2 (7, 0-15)	0	4 (7, 0-22)	0
Leaders (n=21)	6 (15, 0-35)	2 (9.5)	4 (16, 0-40)	1 (4.8)	3 (9, 0-23)	0
Difference between professions ^a	0.038*		0.097		0.002*	

Notes: PCL-5 scale 0 -80, cut off: 31. ^a Kruskal-Wallis test *p≤0.05

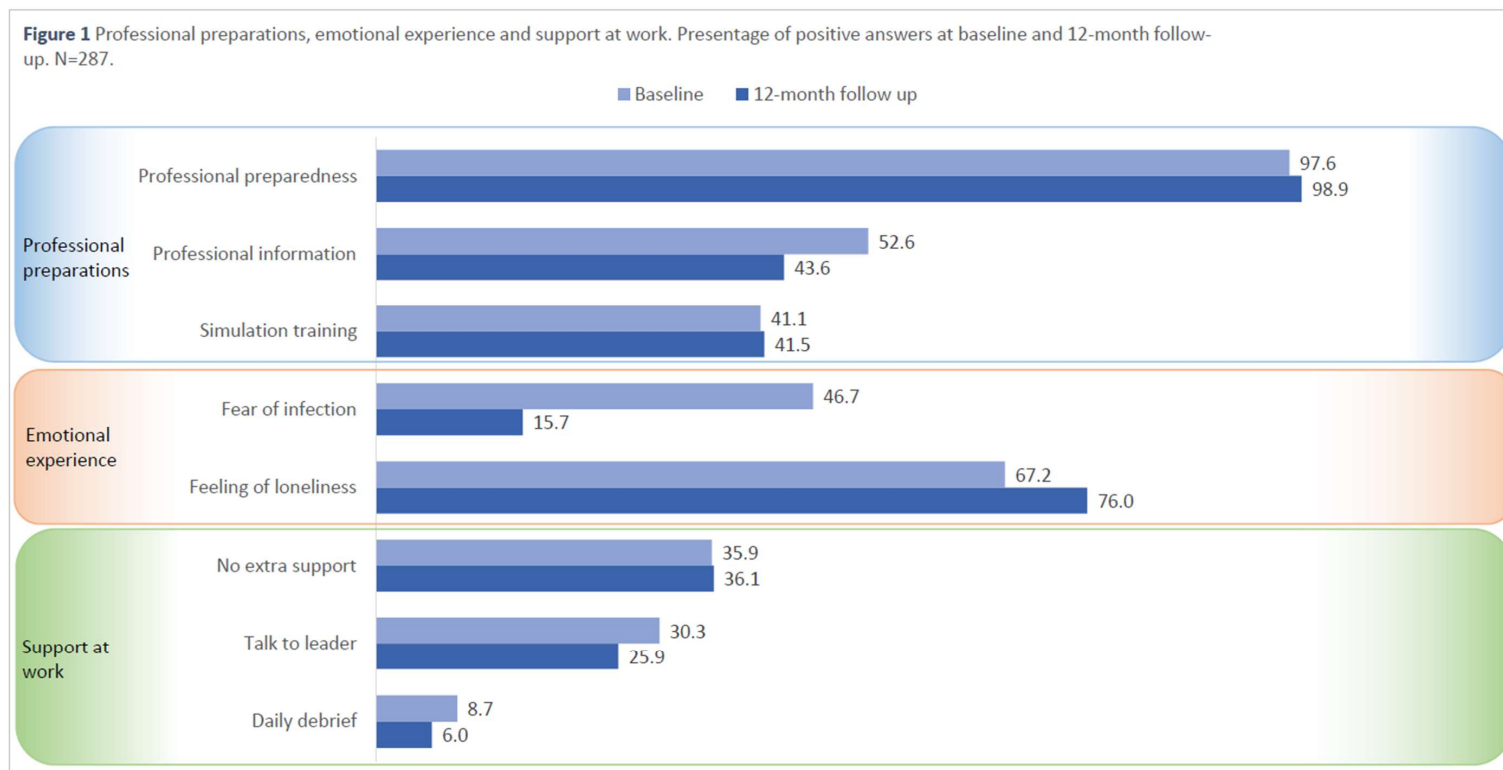
Wilcoxon signed rank test

Baseline to 6-month 0.503

6-month to 12-month 0.004*

Baseline to 12-month 0.108

SUPPELMENATARY FILE 4



SUPPLEMENTARY FILE 5

Table 1 Demographic variables and preparations, emotional experience and support at baseline and their effect on HSCL-10 at 12 month follow up. Multiple regression analysis. 20 imputed datasets of n=484					
Demographic variables			Coefficient	95% CI	P-value
Gender	Female		Ref		
	Male		-0.06	-0.2, 0.08	0.398
Marital status	Single		Ref		
	Married/partner		-0.04	-0.2, 0.09	0.569
Years of professional experience			-0.003	-0.01, 0.01	0.351
Profession	Nurse		Ref		
	Physician		-0.07	-0.3, 0.1	0.509
	Leader		0.02	-0.2, 0.2	0.839
Previous ICU experience	No		Ref		
	Yes		0.1	-0.1, 0.3	0.343
Self-reported previous symptoms of anxiety	No		Ref		
	Yes		0.1	-0.2, 0.3	0.477
Self-reported previous symptoms of depression	No		Ref		
	Yes		0.2	0.001, 0.4	0.047
Risk factors for serious COVID-infection	No		Ref		
	Yes		-0.02	-0.2, 0.2	0.811
Professional preparations	Professional preparedness	No	Ref		
		Yes	0.002	-0.4, 0.4	0.990
	Professional information	No	Ref		
		Yes	0.06	-0.09, 0.2	0.433
	Simulation training	No	Ref		
	Yes	0.007	-0.1, 0.1	0.915	
Emotional experience	Fear of infection	No	Ref		
		Yes	0.14	0.02, 0.3	0.023
	Feeling of loneliness	No	Ref		
		Yes	0.09	-0.05, 0.2	0.226
Support at work	No extra support	No	Ref		
		Yes	-0.03	-0.2, 0.1	0.621
	Talk to leader	No	Ref		
		Yes	-0.05	-0.2, 0.1	0.517
	Daily debrief	No	Ref		
		Yes	-0.08	-0.3, 0.1	0.455

Table 2 Demographic variables and preparations, emotional experience and support at baseline and their effect on PCL-5 at 12 month follow up. Multiple regression analysis. 20 imputed datasets n=484

Demographic variables			Coefficient	95% CI	P-value
Gender	Female		Ref		
	Male		-0.3	-3.9, 3.4	0.891
Marital status	Married/partner		Ref		
	Single		0.5	-3.4, 4.3	0.809
Years of professional experience			-0.04	-0.2, 0.1	0.640
Profession	Nurse		Ref		
	Physician		-4.2	-9.3, 0.8	0.099
	Leader		-2.0	-6.6, 2.5	0.377
Previous ICU experience	No		Ref		
	Yes		4.2	-1.7, 10.1	0.159
Self-reported previous symptoms of anxiety	No		Ref		
	Yes		0.7	-4.2 5.7	0.782
Self-reported previous symptoms of depression	No		Ref		
	Yes		5.6	1.0, 10.2	0.017
Risk factors for serious COVID-infection	No		Ref		
	Yes		0.6	-3.8, 4.9	0.801
Professional preparations	Professional preparedness	No	Ref		
		Yes	-4.2	-16.3, 8.0	0.491
	Professional information	No	Ref		
		Yes	0.5	-3.3, 4.3	0.787
	Simulation training	No	Ref		
		Yes	1.4	-1.5, 4.3	0.330
Emotional experience	Fear of infection	No	Ref		
		Yes	4.3	0.8, 7.8	0.017
	Feeling of loneliness	No	Ref		
		Yes	4.7	1.1, 8.3	0.011
Support at work	No extra support	No	Ref		
		Yes	-0.4	-3.8, 3.0	0.815
	Talk to leader	No	Ref		
		Yes	-0.9	-4.6, 2.7	0.611
	Daily debrief	No	Ref		
		Yes	-2.7	-7.5, 2.2	0.289