

Key worker health status pre- and during the COVID-19 pandemic: an explorative analysis using the EQ-5D-5L

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DISCLAIMER

This project [The Resilience Hubs: A multi-site, mixed-methods evaluation of an NHS Outreach, Screening and Support Navigation service model to address the mental health needs of key workers affected by the COVID-19 pandemic] was funded by the NIHR Health and Social Care Delivery Research COVID-19 funding stream (Reference Number NIHR132269).

The views expressed are those of the authors and not necessarily those of the NIHR or the Department of Health and Social Care.

FUNDED BY

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BACKGROUND

- Health and social care key workers are at high risk for acute and long-lasting mental health issues due to adversities faced during the pandemic
- The NHS Clinical Leaders Network (2020) issued an urgent call for action to ensure that the NHS prioritised initiatives to enhance mental health resilience and support provision for key workers¹
- Research priorities²:
 - Monitoring of mental health
 - Determining the best ways of signposting and delivering mental health services for key workers
 - Identify and provide interventions to promote wellbeing and prevent mental health difficulties
 - Delivered now and at scale

¹ NHS Clinical Leaders Network (2020) Enhancing mental health resilience and anticipating treatment provision of mental health conditions for frontline healthcare workers involved in caring for patients during the COVID-19 Pandemic – A call for action. Available from: https://www.rcpsych.ac.uk/docs/default-source/about-us/covid-19/covid-19---call-to-action-mh-resilience-nhs-cln.pdf?sfvrsn=712021ae_2 [Accessed 12 January 2021].

² Holmes, E.A., O'Connor, R.C., Perry, V.H., Tracey, I., Wessley, S., Arseneault, L., et al. (2020) Multidisciplinary Research Priorities For the Covid-19 Pandemic: A Call For Action For Mental Health Science. *The Lancet Psychiatry*. 7 (6), pp. 547-560.

BACKGROUND

- The Resilience Hubs mixed-methods study is evaluating an NHS outreach, screening and support service, to address the mental health needs of key workers during the COVID-19 pandemic.
- The research was conducted over 20 months to evaluate the Hub model in four UK sites:
 - Quantitative analyses of routine mental health screening data collected
 - Health economic analyses conducted using Hub clients' service use and health status data;
 - In-depth interviews with Hub providers (recovery workers; therapists; service managers; commissioners), and key workers who did and did not register with the Hubs
 - Triangulate findings from the above, by producing mixed methods case studies for each Hub

AIM

?

- To summarise the health status of key workers accessing Hub support.
- **To compare them to a pre-pandemic sample of key workers using 2018 data from Health Survey for England (HSE).**

METHODS



Service use questionnaire sent (email invitation, alternative versions offered) to key workers screened by a Hub (Hub clients) approximately 6-month after screening



299 Hub clients recruited from 4 Resilience Hubs

- Mainly NHS staff
- Many had several mental health difficulties, including anxiety, depression, and PTSD



The EQ-5D measure of health status

- Includes 5 domains (mobility, self-care, usual activity, pain/discomfort, anxiety/depression) with 5 levels
- Converted to utility values using published crosswalk algorithm
- 270 complete cases summarised using simple descriptive statistics

METHODS



To assess how the Resilience Hub clients health status compared to other groups, we identified relevant groups for comparison



- General population norms



- Mental health conditions



- Key worker groups (majority health and social care professionals)
 - No identified published studies in this groups
 - 2018 HSE data reported the EQ-5D and also occupation groups that allowed us to restrict to health and social care professionals to represent a sample of key workers pre-COVID-19 pandemic (n=348)

RESULTS



General population

- Age group 35-44 mean EQ-5D norm is 0.893 and age group 45-54 norm is 0.855



Mental health conditions

- Resilience Hub clients health status was typically higher when compared with publications (UK trials of mental health interventions)



Key worker groups (health and social care professionals)

- When compared with the HSE sample, Resilience Hub clients health status is lower than would be expected

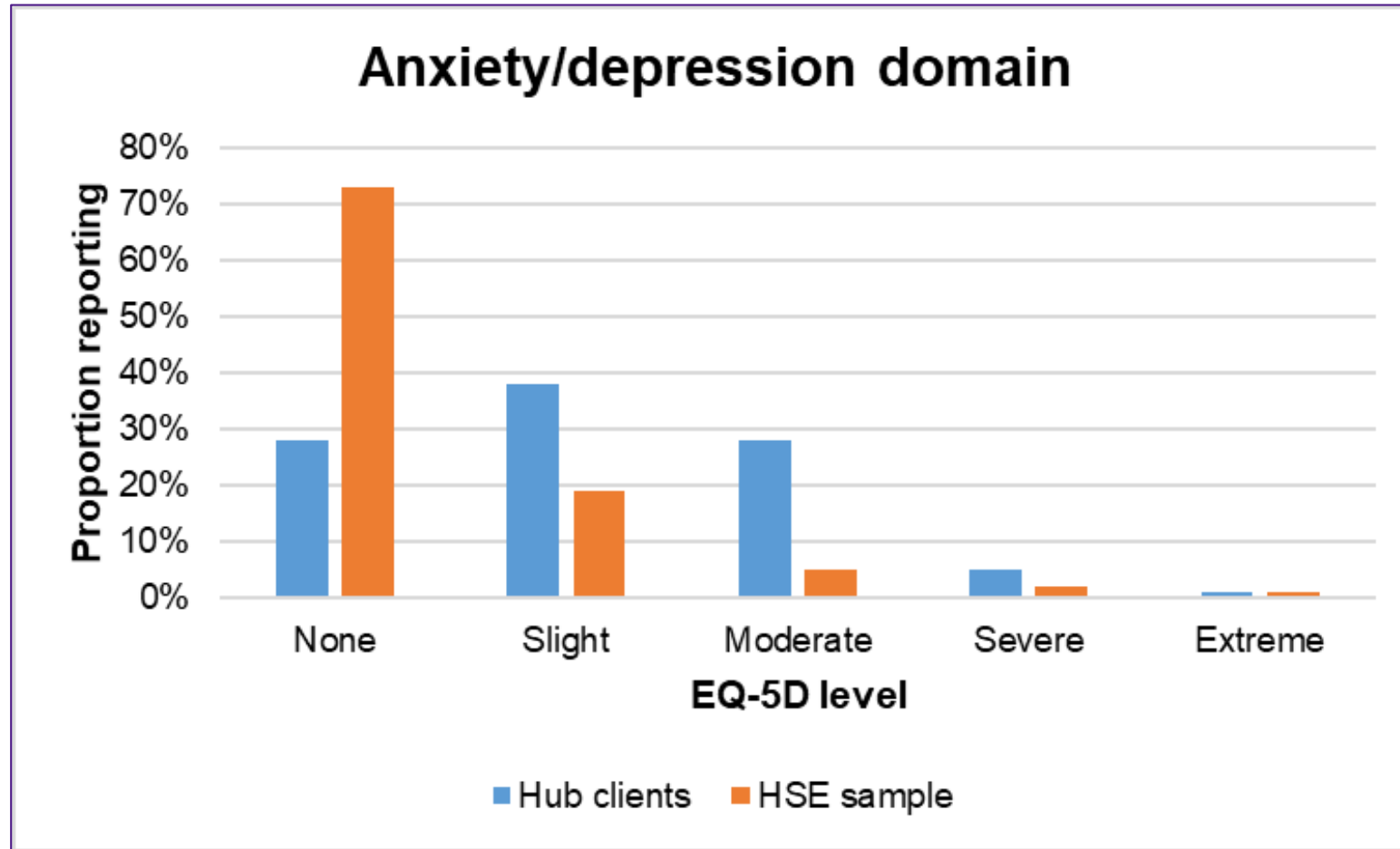
Hub client sample mean EQ-5D 0.755 (95% CI 0.731, 0.779)

- Mean age 44
- 84% female

RESULTS

Domain	Dataset	Percentage reporting across EQ-5D domains				
		None	Slight	Moderate	Severe	Extreme
Mobility	Hub clients	76%	13%	9%	2%	0%
	HSE sample	85%	8%	5%	2%	0%
Self-care	Hub clients	88%	8%	4%	0%	0%
	HSE sample	96%	3%	1%	0%	0%
Usual activities	Hub clients	55%	27%	12%	4%	1%
	HSE sample	86%	9%	4%	0%	1%
Pain/ discomfort	Hub clients	49%	28%	17%	6%	1%
	HSE sample	59%	29%	10%	1%	1%
Anxiety/ depression	Hub clients	28%	38%	28%	5%	1%
	HSE sample	73%	19%	5%	2%	1%

RESULTS



RESULTS

Sample	Age group						
	18-24	25-34	35-44	45-54	55-64	65-74	Total
Resilience clients^a							
Mean	0.729	0.787	0.771	0.721	0.764	0.765	0.755
95% CI	0.494, 0.964	0.732, 0.842	0.729, 0.812	0.673, 0.77	0.707, 0.822	-	0.731, 0.779
n	6	47	78	89	46	1	270
HSE health professional crosswalk							
Mean	0.885	0.936	0.901	0.868	0.871	0.812	0.870
95% CI	0.827, 0.942	0.914, 0.959	0.859, 0.944	0.829, 0.907	0.835, 0.908	0.759, 0.866	0.853, 0.888
n	31	50	61	59	69	46	348
Notes: ^a Includes participants with missing gender or who identified in another way							

DISCUSSION

- First known EQ-5D data related to a sample of keyworkers
- The Hub client sample EQ-5D scores were lower than would be expected from the population norms and the sample of keyworkers from HSE data, which aligns with wider evidence on health of keyworkers during the pandemic¹
 - Proportion undergoing treatment/on waiting lists
 - Impact of COVID-19²
 - Evidence of delayed dysfunction following disasters³
- Challenges making these comparisons (e.g. sample differences)

Further research needed

- Exploratory analysis
- More data needed to assess changes in health status resulting from Hub support
- Changes in health status of keyworkers pre and post pandemic (future HSE data?)

¹ Health-related quality of life and mental well-being of healthy and diseased persons in 8 countries: Does stringency of government response against early COVID-19 matter?

² Chandola T, Kumari M, Booker CL, Benzeval M. The mental health impact of COVID-19 and lockdown-related stressors among adults in the UK. *Psychol Med*. 2020 Dec 7:1-10.

³ Goldmann E, Galea S. Mental health consequences of disasters. *Annu Rev Public Health*. 2014;35:169-83.