

THE PSYCHOLOGICAL IMPACT OF THE COVID-19 PANDEMIC ON PATIENTS WITH EARLY BREAST CANCER

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BACKGROUND

Direct impact of the COVID-19 pandemic, in addition to the measures adopted to control its spread, may cause a significant emotional burden, especially in vulnerable groups, such as patients with cancer.

AIMS

Explore the psychological impact of COVID-19 pandemic on patients with early breast cancer.

METHODS


Study design


Prospective longitudinal multi-centre study with data collected in 4 countries (Italy, Finland, Israel and Portugal) in **three** endpoints.

Participants

Women diagnosed with early breast cancer.

Measures

 Hospital Anxiety and Depression Scale (HADS)
- Global **psychological distress, Depression and Anxiety**

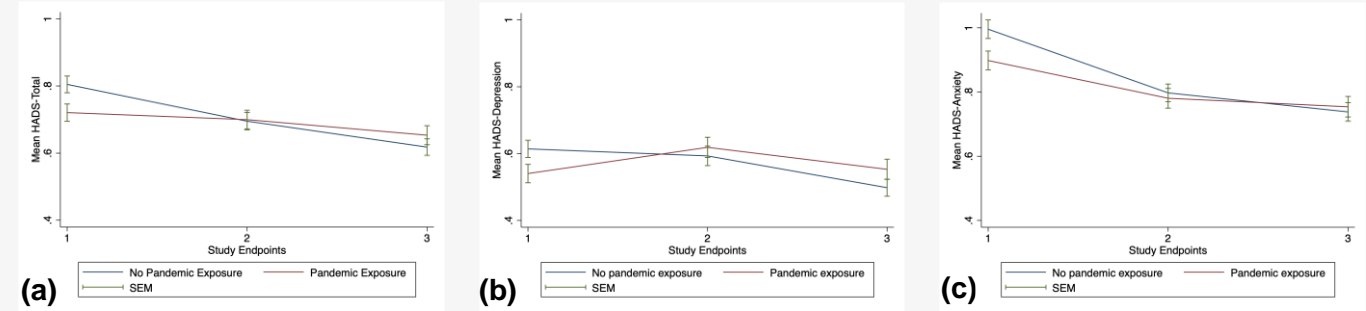
 COVID-related variables extracted from 'Our World in Data' databases:
- Weekly **COVID-19 incidence** per 100 000 people;
- Weekly **COVID-19 death** rate 100 000 people;
- Weekly **stringency level** of government-imposed COVID-19 containment measures

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RESULTS

417 participants had no pandemic exposure; **307** participants were exposed to the pandemic during any endpoint of the study

Figure 1. HADS Total scale (a), HADS-Depression (b) and HADS-Anxiety (c) in the no pandemic vs. pandemic exposure groups across the study endpoints.



(a)

(b)

(c)

- Post-hoc analyses showed significant differences between No Pandemic Exposure vs. Pandemic Exposure at the first study endpoint in HADS-total and -Anxiety, but no differences between No Pandemic Exposure vs. Pandemic Exposure in HADS-Depression in any study endpoint.
- Additional post-hoc analysis, performed separately for both Pandemic Exposure groups, revealed that while in HADS-total and -Anxiety both groups decreased significantly across the study endpoints, in HADS-Depression only the No Pandemic Exposure group decreased significantly across the study endpoints.
- In exploratory analyses, within the **Pandemic Exposure** group, specific COVID-related variables (**weekly COVID-19 incidence and containment measures**) impacted significantly the **HADS-Depression** scores:
 - Weekly COVID-19 incidence and containment measures** significantly increased **HADS-Depression** scores.
- There was a significantly negative interaction between the **weekly COVID-19 incidence and containment measures**, and study endpoints.

		HADS Total		HADS-Depression		HADS-Anxiety	
		B (SE)	P value	B (SE)	P value	B (SE)	P value
Model 1	Weekly COVID incidence	0.003 (0.003)	0.23	0.006 (0.003)	0.03	-0.002 (0.003)	0.94
	Study Endpoints	-0.02 (0.01)	0.07	0.02 (0.01)	0.16	-0.06 (0.02)	<0.001
	Weekly COVID incidence x Study Endpoints	-0.001 (0.001)	0.18	-0.002 (0.001)	0.02	-0.0001 (0.001)	0.95
Model 2	Weekly COVID deaths	0.06 (0.06)	0.30	0.13 (0.07)	0.06	0.002 (0.07)	0.98
	Study Endpoints	-0.03 (0.01)	0.01	0.01 (0.01)	0.34	-0.08 (0.02)	<0.001
	Weekly COVID deaths x Study Endpoints	-0.02 (0.02)	0.37	-0.04 (0.02)	0.07	0.003 (0.03)	0.92
Model 3	COVID stringency index	0.002 (0.001)	0.08	0.004 (0.001)	0.003	0.0003 (0.002)	0.86
	Study Endpoints	-0.04 (0.02)	0.04	0.02 (0.02)	0.31	-0.11 (0.02)	<0.001
	COVID stringency index x Study Endpoints	-0.001 (0.001)	0.25	-0.002 (0.001)	0.01	0.0003 (0.001)	0.64

TABLE 1. Statistical models of the impact COVID pandemic in HADS-total, HADS-Depression and HADS-Anxiety across study endpoints. Multilevel mixed-effects linear regression models exploring the impact of COVID-related variables over study endpoints (independent variables) in HADS scores (dependent variables), controlling for age, education and marital status. All values are unstandardized beta coefficients (B) with standard error (SE). Abbreviations: HADS Total = Hospital Anxiety and Depression Scale – total score; HADS-D = HADS Depression subscale; HADS-A = HADS Anxiety Subscale.

DISCUSSION

- The results of our study suggests that COVID-19 pandemic had a psychological impact in patients with early breast cancer, particularly in depressive symptoms.
- These **preliminary** results support that further analyses, including **timewise longitudinal regressions**, are needed to clarify the psychological impact of COVID-19 pandemic in breast cancer population.