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## Love in the time of COVID-19: The negative effects of the pandemic on psychological well-being and dyadic adjustment

### ARTICLE INFO

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The COVID-19 outbreak represented a particularly stressful event that put a strain on social and interpersonal relationships (Xiong et al., 2020). Both the first lockdown and the restraining measures during the second wave have forced people to self-isolate and to work at home, prolonging cohabitation with the partner and children. For couples, particularly, confinement and isolation may have had an impact on both psychological well-being and dyadic adjustment (Coop Gordon and Mitchell, 2020; Donato et al., 2021). More generally, previous studies showed a high prevalence of mental health symptoms in the general population as a consequence of the COVID-19 outbreak (Castelli et al., 2020; Wang et al., 2021a, 2021b).

The main aim of this study was to explore the impact that the COVID-19 outbreak could have had on the participants' relationship. Specifically, we aimed to investigate mental health (anxiety/depressive symptoms and posttraumatic symptoms – PTSS) and dyadic adjustment in people who were in a stable romantic relationship.

The data were collected using an online survey from December 4, 2020, to January 10, 2021. A snowball sampling strategy was employed, wherein the participants were initially recruited via online advertisements and were encouraged to pass the survey link to others. The responses of 410 participants who were in a steady romantic relationship at the time of the evaluation were included in the final dataset.

Participants were asked to provide sociodemographic and COVID-19-related information (age, gender, educational level, profession, romantic relationship duration, having/not having children, current job status). They expressed the impact of the COVID-19 pandemic on their romantic relationship with the following item: “Do you think that the restraining measures introduced to stem the COVID-19 emergency and the new daily life that resulted from it have had an impact on your romantic relationship?”, choosing from three response options: “positive, negative or no impact”. Moreover, participants were asked to complete: (1) State-Trait Anxiety Inventory-Form Y1 (STAI Y1) to evaluate anxiety symptoms; (2) Beck Depression Inventory (BDI-II) to assess depressive symptoms; (3) PTSD Checklist for DSM-5 (PCL-5) to investigate PTSS; (4) and Dyadic Adjustment Scale (DAS) to evaluate dyadic adjustment.

The study was approved by the University of Turin Ethics Committee

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(protocol n. 488,755) and conducted according to the Declaration of Helsinki. All the participants gave their written informed consent to participate in the study.

In order to explore the impact (i.e., positive, negative, or none) that the COVID-19 outbreak could have had on the participants' relationship, descriptive analyses were first run (see **Appendix A** for results).

As a next step, Pearson's chi-squared test ( $\chi^2$ ) for categorical variables and one-way analyses of variance (ANOVAs) for continuous variables were performed to evaluate the presence of possible statistically significant differences between subgroups of participants (based on the impact – positive, negative, or none – that the COVID-19 outbreak had on their relationship) on sociodemographic and psychological variables.

Results of chi-squared tests showed the presence of statistically significant differences between the three subgroups of participants on children ( $p = .001$ ) and current job status ( $p = .030$ ) variables, whereas univariate ANOVAs revealed a significant difference on both age and relationship duration, as well as on all the psychological variables we assessed (**Table 1**). Particularly, Games-Howell post hoc tests showed statistically significant differences between the negative impact group and both the positive and no impact groups on age (negative vs. positive:  $-5.764$ , 95% CI  $(-10.07$  to  $-1.46)$ ,  $p = .005$ ; negative vs. none:  $-7.187$ , 95% CI  $(-10.49$  to  $-3.88)$ ,  $p < .001$ ), relationship duration (negative vs. positive:  $-55.300$ , 95% CI  $(-103.76$  to  $-6.84)$ ,  $p = .021$ ; negative vs. none:  $-79.450$ , 95% CI  $(-114.64$  to  $-44.26)$ ,  $p < .001$ ), and PCL-5 (negative vs. positive:  $7.353$ , 95% CI  $(2.06$  to  $12.65)$ ,  $p = .004$ ; negative vs. none:  $7.310$ , 95% CI  $(2.89$  to  $11.73)$ ,  $p < .001$ ). Similarly, Tukey HSD post-hoc analyses showed statistically significant differences between the negative impact group and both positive and no impact groups on STAI Y1 (negative vs. positive:  $6.168$ , 95% CI  $(1.80$  to  $10.53)$ ,  $p = .003$ ; negative vs. none:  $4.868$ , 95% CI  $(1.48$  to  $8.26)$ ,  $p < .001$ ), BDI-II (negative vs. positive:  $-55.300$ , 95% CI  $(-104.98$  to  $-5.82)$ ,  $p = .025$ ; negative vs. none:  $-79.450$ , 95% CI  $(-118.10$  to  $-40.80)$ ,  $p < .001$ ), and DAS (negative vs. positive:  $-7.899$ , 95% CI  $(-12.58$  to  $-3.21)$ ,  $p < .001$ ; negative vs. none:  $-6.971$ , 95% CI  $(-10.61$  to  $-3.33)$ ,  $p < .001$ ).

The present results revealed that people who declared a negative impact of the COVID-19 outbreak on their romantic relationship were younger and reported higher levels of anxiety/depressive symptoms and

**Table 1**

Sociodemographic and psychological data for the subgroups of participants who reported a Positive Impact, Negative Impact, and No Impact of COVID-19 on their romantic relationship ( $N= 410$ ). Mean (SD) or percentage, ANOVA ( $F$ ) or chi-squared ( $\chi^2$ ) test, and partial eta-squared ( $\eta^2$ ) are listed.

	Positive Impact ( $N=76$ )	Negative Impact ( $N=131$ )	No Impact ( $N=203$ )	Test (df)	$p$	Effect size
<b>Sociodemographic variables</b>						
Age	37.47 (13.37)	31.71 (11.15) <sup>a</sup>	38.90 (14.43)	$F(2, 198.74) = 13.974^*$	<0.001	0.06
Relationship duration	148.13 (156.76)	92.83 (110.71) <sup>a</sup>	172.28 (161.95)	$F(2, 193.80) = 14.719^*$	<0.001	0.06
Gender				$\chi^2(2) = 0.021$	.989	
Male	19 (25%)	32 (24.4%)	51 (25.1%)			
Female	57 (75%)	99 (75.6%)	152 (74.9%)			
Education				$\chi^2(2) = 1.336$	.513	
Primary/Secondary/High school diploma	19 (25%)	42 (32.1%)	64 (31.5%)			
B.Sc. or M.Sc. Degree/Postgraduate qualification	57 (75%)	89 (67.9%)	139 (68.5%)			
Children				$\chi^2(2) = 14.801$	.001	
Yes	29 (38.2%)	27 (20.6%)	82 (40.4%)			
No	47 (61.8%)	104 (79.4%)	121 (59.6%)			
Current job status				$\chi^2(2) = 10.709$	.030	
Working as before the pandemic	33 (43.4%)	45 (34.4%)	96 (47.3%)			
Working from home	17 (22.4%)	10 (7.6%)	32 (15.8%)			
Not working due to the pandemic	1 (1.3%)	10 (7.6%)	10 (4.9%)			
<b>Psychological variables</b>						
STAI Y1	41.47 (11.69)	47.64 (12.99) <sup>a</sup>	42.77 (13.19) <sup>a</sup>	$F(2, 407) = 7.627$	.001	0.04
BDI-II	9.24 (9.63)	14.40 (9.52) <sup>a</sup>	9.64 (8.83)	$F(2, 407) = 12.563$	<0.001	0.06
PCL-5	18.87 (14.13)	26.22 (17.70) <sup>a</sup>	18.91 (15.09)	$F(2, 198.03) = 8.409^*$	<0.001	0.05
DAS Total	110.11 (13.13)	102.21 (15.68) <sup>a</sup>	109.18 (12.74)	$F(2, 407) = 12.314$	<0.001	0.06

<sup>a</sup> Significant difference: Negative Impact vs. Positive Impact,  $p < .05$ ; Negative Impact vs. No Impact,  $p < .05$ . \* Welch's  $F$ .

STAI Y1 = State-Trait Anxiety Inventory; BDI-II = Beck Depression Inventory; PCL-5 = Posttraumatic Stress Disorder Checklist for DSM-5; DAS = Dyadic Adjustment Scale.

PTSS, a shorter relationship duration, and a lower dyadic adjustment than the other groups. Furthermore, a high prevalence of participants who reported a negative impact had no children and were not working due to the pandemic.

Taken together, these results suggest that people who have been most affected by the consequences of the pandemic have revealed the worst mental health and the poorest relationship quality. These findings could be carefully interpreted in light of a relationship conceptual framework (Karney and Bradbury, 1995; Pietromonaco and Overall, 2020) that illustrates the complex association between preexisting contextual vulnerabilities (e.g., age, parenting status), external stress (e.g., COVID-19, job loss), individual vulnerabilities (e.g., mental health), and dyadic adjustment. Particularly, people who show low levels of both dyadic adjustment and psychological well-being are likely to cope worse with a stressful event. Similarly, young couples may perceive their relationships as less stable and consequently may not be able to face problems in an adaptive way (Henry et al., 2007).

However, given the still limited evidence and the limitations that the present study has (i.e., a cross-sectional design, the use of self-report instruments, and a high prevalence of female and well-educated participants) future research is needed to identify those individual factors that could contribute to couples' quality relationships. In this way, it would be possible to detect ways in which the couple's well-being can be preserved in the face of extraordinarily stressful events, such as the COVID-19 pandemic.

## Author statement

### Contributions

Conceived and designed the study: AR, MDT. Data collection: AB. Data analyses: AR, MDT. Interpretation of data: AR, LC, AB, MDT. Wrote the paper: AR, MDT. Revised the manuscript for important intellectual content: LC. Results and paper discussed and final version approved by all authors.

## Declaration of competing interest

All authors declare no conflict of interest.

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## Supplementary materials

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