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## **In the wake of national trauma: Psychological reactions following The Charlie Hebdo terror attack**

To the Editor: On January 7, 2015 a terror attack targeted the satirical magazine 'Charlie Hebdo' leading to the death of 12 people. This terror attack was considered a national trauma that shook core beliefs and the French way of life (1). The association between mortality salience, reported shifts in political views and sense of safety with psychological distress and posttraumatic stress disorder symptoms following national trauma is understudied.

We conducted a nationally representative online panel survey (n = 1982) in France 4 weeks after the Charlie Hebdo attack. Of 2421 clicked who through to the survey, 1981 (82%) responded fully.

"To what extent has the recent attacks in Paris changed how you think about your own death?" measured mortality salience and "The Charlie Hebdo shooting led me to change my political view," measured shift in political view. Sense of safety was measured by the WHOQOL-BREF (2), psychological distress by Kessler's K6 (3) and PTSD by the proposed ICD-11 PTSD criteria (4).

Two step logistic regression (adjusted for demographics) showed that elevated psychological distress and endorsement of PTSD symptoms criteria were significantly associated with higher mortality salience and shift in political view (Odds Ratio  $\geq 2.27$  or better at  $p \leq .001$ ). The same results were replicated for each PTSD cluster (Odds Ratio  $\geq 2.07$  or better at  $p \leq .001$ ).

The study limitations are the use of cross-sectional design, possible response bias, lack of pre-measurement of participants with pre-existing PTSD symptoms, and potential confounders (the possibility of another traumatic event that the participant was exposed to before or concurrently with the terror attack).

In the wake of the Charlie Hebdo terror attacks, we found evidence of elevated PTSD symptoms compared to historical norms in France (7.6% vs. 4.9%). Substantial proportions of French people felt shifts in their perceptions of personal safety, thought more about their own mortality, and said they would shift their voting patterns as a consequence. These results expand previous study on 9/11 terrorist attacks (5). Clinicians should be aware that national trauma takes its toll on mental health in various ways including mortality salience, shift in political views and sense of safety.

### **References**

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**Table 1.** Psychological reactions associated with psychological distress and PTSD symptoms following the Charlie Hebdo shooting in Paris (n = 1982)

Variables	Statistics							
	Mean	SD	N	%	Elevated Psychological distress <sup>a</sup>		Endorsed PTSD symptoms <sup>b</sup>	
					Odds Ratio	95% C.I.	Odds Ratio	95% C.I.
<b>Step 1</b>								
Age (years)	41.16	10.95			1.01	(.99-1.02)	.99	(.98-1.01)
Female			1033	52.0	1.56**	(1.12-2.18)	1.23	(.88-1.71)
Currently single			697	35.2	.81	(.58-1.13)	1.37	(.95-1.98)
<b>Step 2</b>								
Age (years)					1.01	(.99-1.03)	1.00	(.98-1.02)
Female					1.41*	(.99-2.00)	1.12	(.78-1.59)
Currently single					.83	(.58-1.18)	1.49*	(1.01-2.18)
Mortality Salience <sup>c</sup>			323	16.3	3.86***	(2.71-5.51)	3.22***	(2.23-4.65)
Shift in political view <sup>d</sup>			754	38.0	2.27***	(1.60-3.21)	2.81***	(1.96-4.02)
Sense of safety <sup>e</sup>			1024	51.7	.37***	(.25-.54)	.34***	(.23-.50)

<sup>a</sup> Elevated Psychological distress criterion (K6 score  $\geq 13$ ) met by 158 (8.0%) participants ( $\alpha = .91$ ).

<sup>b</sup> Proposed ICD-11 PTSD symptoms criteria endorsed by 151 (7.6%) participants on a rating scale where a score of 3/5 or higher represented a positive symptom rating. Note all six symptoms must be positive for endorsement of PTSD.

<sup>c</sup> Mortality Salience score (range 1-5; 1 = a great deal less to 5 = a great deal more). A score of 4/5 or higher represented high mortality salience.

<sup>d</sup> Shift in political view score (range 1-5; 1 = not at all to 5 = very much). This was measured separately for each political wing. Variables were combined and aggregated to (0 = no shift; 1 = shift in political view).

<sup>e</sup> Sense of safety score (range 1-5; 1 = not at all to 5 = extremely). Variable aggregated: score of 4/5 or higher represented high sense of safety.

\* $p < 0.05$ . \*\* $p < 0.01$ . \*\*\* $p < 0.001$ .