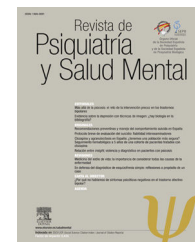




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SCIENTIFIC LETTER

Is the alteration in emotional recognition a specific risk factor of suicide attempt?[☆]



¿Es la alteración en el reconocimiento emocional un factor de riesgo específico de tentativa suicida?

Suicide is the primary cause of unnatural death in our country. All efforts aimed at better prediction and prevention of suicide attempts are an indirect way to lower the number of completed suicides.¹ Despite the numerous efforts made to date, current psychiatry bases its diagnoses on observations and descriptions of behaviour,² but it is to be hoped that future precision psychiatry will evolve to using risk algorithms and individualisation, offering all patients a personalised perspective.³ Recent studies have shown that various cognitive impairments might be related to suicidal vulnerability, these include: working memory deficits, verbal fluency, problem-solving, inhibition, cognitive flexibility, and emotional recognition.⁴ It is well known that the latter is a central component of non-verbal communication, and difficulties in this area are a crucial factor in social competence, interpersonal functioning and quality of life. This skill not only encompasses the interpretation of social emotions, but also the skill to deal with emotional consequences, which can be a key factor in suicidal behaviour.⁵ The interpretation of facial expressions seems to be congruent with mood, since it has been proven that in patients diagnosed with depression there is a tendency to value positive, ambiguous or neutral facial expressions in a more negative way.⁶ More specifically, patients with a personal history of suicide attempt tend to commit significantly more errors in emotional recognition compared to healthy controls,⁷ and specifically display particular difficulty in evaluating emotional expressions of anger.⁸

The main aim of this study was to determine whether there are impairments in emotional recognition that are specifically associated with suicidal behaviour. To that end, a sample of 98 people was studied, grouped as follows: patients with a DSM-5 diagnosis of major depression (MD), and a history of a previous suicide attempt (SA), $n = 47$, group 1 (mean age [SD] = 50.91 [9.81]; females: 63.8%), patients with MD with no previous SA, $n = 31$, group 2 (mean age [SD] = 54.35 [11.61]; females: 51.6%) and a healthy control group, $n = 19$, group 3 (mean age [SD] = 47.55 [10.47]; females: 55.0%). All the participants were assessed using the Hamilton Rating Scale for Depression (HRSD),⁹ and the “reading the mind in the eyes” test (RMET).¹⁰ Both groups of patients diagnosed with depression were similar in terms of severity (HRSD group 1 = 20.82 [4.36] vs. HRSD group 2 = 21.32 [3.67], $t = -.519$, $p = .605$). Table 1 shows the sociodemographic characteristics of the sample. The results obtained using the RMET are shown in Table 2. As can be observed from Table 2, after the appropriate ANOVA test was carried out, the patients of groups 1 and 2 differed significantly from group 3 (healthy controls) in both total score and the recognition of positive, negative or neutral emotions. However, no statistically significant differences were found in any case between groups 1 and 2.

It is important to note that, in contrast to Richard-Devantoy et al.,¹¹ the patients with a history of a previous SA did not perform less well in the emotional recognition of negative emotions (disgust) when compared to patients with similar clinical characteristics, but without a history of SA. However, our results are consistent with those that suggest that patients with a history of SA perform this task less well than the corresponding healthy controls.^{5,7}

The present study adds to previous knowledge on the subject by demonstrating that emotional recognition impairments are not specifically associated with suicidal behaviour, at least in MD. Due to this study's sample size and the possibility of type II error, our results must be considered with appropriate caution.

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Table 1 Sociodemographic characteristics of the sample.

	Total <i>n</i> = 98	MD with SA <i>n</i> = 47	MD without SA <i>n</i> = 31	Healthy controls <i>n</i> = 20	χ^2 (gl)/ <i>F</i> (gl) ^a	<i>p</i> value
Sex, <i>n</i> (%)						
Males	41 (41.8)	17 (36.2)	15 (48.4)	9 (45.0)	1249 (2)	.143
Females	57 (58.2)	30 (63.8)	16 (51.6)	11 (55.0)		
Age, mean (<i>SD</i>)	51.32 (10.47)	50.91 (9.81)	54.35 (11.61)	47.55 (10.47)	2728 (97) ^a	.070
Civil status, <i>n</i> (%)						
Single	5 (5.1)	1 (2.1)	1 (3.2)	3 (15.0)	13,231 (6)	.040
Married/partner	66 (67.3)	27 (57.4)	25 (80.6)	14 (70.0)		
Separated/divorced	22 (22.4)	16 (34.0)	3 (9.7)	3 (15.0)		
Widowed	5 (5.1)	3 (6.4)	2 (6.5)	0 (.0)		
Household, <i>n</i> (%)						
Parents	8 (8.2)	3 (6.4)	2 (6.5)	3 (15.0)	11,384 (6)	.077
Children	23 (23.5)	13 (27.7)	2 (6.5)	8 (40.0)		
Partner	56 (57.1)	26 (55.3)	23 (74.2)	7 (35.0)		
Alone	11 (11.2)	5 (10.6)	4 (12.9)	2 (10.0)		
Level of education, <i>n</i> (%)						
Primary	57 (58.2)	22 (46.8)	20 (64.5)	15 (75.0)	5334 (2)	.069
Secondary/university	41 (41.8)	25 (53.2)	11 (35.5)	5 (25.0)		
Employment situation, <i>n</i> (%)						
Working	25 (25.5)	5 (10.6)	4 (12.9)	16 (80.0)	39,313 (2)	.000
Not working	73 (74.5)	42 (89.4)	27 (87.1)	4 (20.0)		
Religion, <i>n</i> (%)						
Yes	45 (45.9)	19 (40.4)	15 (48.4)	11 (55.0)	1311 (2)	.519
No	53 (54.1)	28 (59.6)	16 (51.6)	9 (45.0)		

SD: standard deviation; MD: major depression; SA: suicide attempt.

^a ANOVA of one factor.**Table 2** Clinical characteristics of the sample.

	Total <i>n</i> = 98	MD with SA <i>n</i> = 47	MD without SA <i>n</i> = 31	Healthy controls <i>n</i> = 20	χ^2 (gl)/ <i>F</i> (gl) ^d	<i>p</i> value
Somatic disease, <i>n</i> (%)						
Yes	74 (75.5)	33 (70.2)	24 (77.4)	17 (85.0)	1748 (2)	.417
No	24 (24.5)	14 (29.8)	7 (22.6)	3 (15.0)		
Smoker, <i>n</i> (%)						
Yes	48 (49.0)	27 (57.4)	15 (48.4)	14 (70.0)	4236 (2)	.120
No	50 (51.0)	20 (42.6)	16 (51.6)	6 (30.0)		
Alcohol consumption, <i>n</i> (%)						
Yes	70 (71.4)	31 (66.0)	24 (77.4)	15 (75.0)	1360 (2)	.507
No	28 (28.6)	16 (34.0)	7 (22.6)	5 (25.0)		
FH of suicide attempt, <i>n</i> (%)						
Yes	20 (20.4)	11 (23.4)	9 (29.0)	0 (.0)	6807 (2)	.033
No	78 (79.6)	36 (76.6)	22 (71.0)	20 (100.0)		
FH of completed suicide, <i>n</i> (%)						
Yes	19 (19.4)	10 (21.3)	9 (29.0)	0 (.0)	6762 (2)	.034
No	79 (80.6)	37 (78.7)	22 (71.0)	20 (100.0)		
Current suicidal ideation, <i>n</i> (%)						
Yes	21 (21.4)	18 (38.3)	3 (9.7)	0 (.0)	15,941 (2)	.000
No	77 (78.6)	29 (61.7)	28 (90.3)	20 (100.0)		

Table 2 (Continued)

	Total n = 98	MD with SA n = 47	MD without SA n = 31	Healthy controls n = 20	χ^2 (gl)/F (gl) ^d	p value
HRSD, mean (SD)	16.90 (8.95)	20.82 (4.36)	21.32 (3.67)	.85 (.93) ^a	237,295 (97) ^d	.000
Total CTQ, mean (SD)	46.91 (18.31)	53.93 (19.93)	46.77 (13.45)	30.65 (8.04) ^a	14,493 (97) ^d	.000
CTQ-emotional	8.71 (4.27)	9.44 (4.85)	8.03 (4.15)	8.05 (2.52)	1334 (97) ^d	.268
CTQ-physical	7.28 (3.86)	7.12 (24.06)	5.90 (1.77)	9.80 (4.61) ^a	7038 (97) ^d	.001
CTQ-sexual	6.52 (3.96)	7.31 (4.81)	6.06 (3.42)	5.35 (1.56)	2070 (97) ^d	.132
CTQ-emotional negligence	11.46 (5.25)	11.63 (5.48)	10.09 (5.21)	13.20 (4.37) ^b	2219 (97) ^d	.114
CTQ-physical negligence	9.08 (3.81)	8.85 (3.70)	7.74 (3.98)	11.70 (2.36) ^a	7639 (97) ^d	.001
LTE Brugha, mean (SD)	2.86 (2.26)	3.31 (2.97)	2.58 (1.11)	10.19 (5.11)	1966 (97) ^d	.146
Total BIS-11, mean (SD)	69.44 (10.76)	72.34 (10.79)	68.74 (12.22)	63.75 (4.27) ^b	4932 (97) ^d	.009
BIS-11-cognitive	20.37 (3.65)	21.23 (3.49)	21.32 (3.26)	16.90 (2.40) ^a	14,573 (97) ^d	.000
BIS-11-motor	21.50 (5.17)	23.55 (4.62)	21.00 (5.60)	17.45 (2.70) ^c	.936 (200) ^d	.000
BIS-11-planning	25.98 (6.02)	27.55 (5.99)	26.41 (6.25)	21.65 (3.24) ^a	.048 (200) ^d	.001
Total RMET, mean (SD)	20.79 (5.17)	20.00 (4.90)	19.41 (5.29)	24.80 (3.54) ^a	8896 (97) ^d	.000
Positive emotions	4.67 (1.91)	4.55 (1.88)	4.12 (1.87)	5.80 (1.67) ^a	5195 (97) ^d	.007
Negative emotions	7.05 (2.19)	6.70 (2.13)	6.87 (2.30)	8.15 (1.89) ^a	3350 (97) ^d	.039
Neutral emotions	9.07 (2.33)	8.74 (2.29)	8.41 (2.30)	10.85 (1.53) ^a	8656 (97) ^d	.000

FH: family history; BIS-11: Barratt impulsiveness scale; CTQ: childhood trauma questionnaire; SD: standard deviation; MD: major depression; HRSD: Hamilton Rating Scale for Depression; LTE: list of threatening experiences; RMET: *Reading the mind in the eyes*; SA: suicide attempt.

^a Group 3 vs. groups 1 and 2. Group 3 vs. groups 1 and 2 Duncan post hoc test.

^b Group 2 vs. groups 1 and 3. Group 2 vs. groups 1 and 3 Duncan post hoc test.

^c Group 1 vs. group 2 vs. group 3. Group 1 vs. groups 2 and 3 Duncan post hoc test.

^d ANOVA of one factor.

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