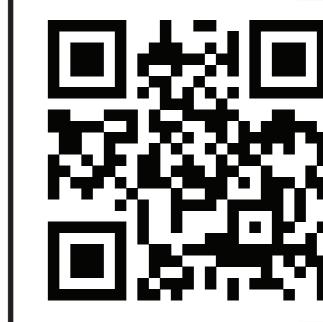
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STRESS LEVELS IN PSYCHOSIS: A COMPARISON BETWEEN STABILIZED PSYCHOTIC PATIENTS AND A CONTROL GROUP FROM THE COMMUNITY.

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PATIENTS

Recovery Period 2 (2')



CONTROLS

Pre-Stress period (2')

Psychological stress - Math Test (5')

Recovery period 1 (2')

Physical stress - Cold Pressor Test (CPT)(1')

CC: L=85 M=15 H=0 - BP = 130 /85 - HR = 84

Recovery Period 2 (2')

(x'): duration of each phase in minutes; CC: cardiac coherence; L: low; M: medium; H: high;

BP: blood pressure (mmHg); HR: heart rate (beats per minute).

Figure 1. CARDIAC COHERENCE (CC), BLOOD PRESSURE (BP) and HEART

RATE (HR)

C: L=13 M=26 H=61 - BP = 103/70 - HR = 69 CC: L=66 M=26 H=8 - BP = 132/89 - HR = 86

BACKGROUND: The conceptual model of vulnerability-stress-protective factors proposes that stress plays a key role in schizophrenia and has been the basis for psychiatric rehabilitation of people with severe mental illness (SMI) [1, 2, 3].

METHODS: The psychophysiological coherence model of Cardiac Coherence (CC) [4] -in which different emotions are reflected in state-specific patterns in the heart's rhythms- allows having a measure of stress and shows the autonomic system balance [5] (Figure 1). Higher CC reflects increased parasympathetic coherence and less stress, while lower CC depends on sympathetic activity and shows more stress [5]. In this study, we compared the CC in a group of 22 stabilized patients with SMI living in a halfway house and participating in a Psychiatric Rehabilitation Program with the CC in a group of 31 non-psychotic outpatients and people from the community (Tables 1 and 2). The Clinical Global Impression Scale (CGI) and its Severity -CGIs- and Change -CGIc- subscales were taken to assure the psychotic condition. 8 AM Morning blood cortisol was performed to assess biological stress; Trier Social Stress Test (TSST) and Cold-Pressor Test were used to provoke psychological and physical stresses, respectively [6, 7], and to measure cardiac coherence (Table 3).

RESULTS (Table 3): Average morning blood cortisol was higher in controls than in patients (18.00 µg/dl vs.16.89 µg/dl, respectively), showing lower morning level stress in the latter. Patients showed higher reaction to and better recovery from the physical than the psychological stress challenges. Controls showed higher reaction to psychological stress challenge and the same rate of recovery from physical and psychological stress challenges. Cardiac coherence in patients showed better recovery from physical than from psychological stress challenges. Controls showed no differences (Fig. 1). There were significant statistically differences (p>0.05) between patients and controls in low and medium cardiac coherence during the psychological stress challenge, and in systolic blood pressure, both in basal line and after the psychological stress challenge. There were also statistically significant differences, both in systolic and diastolic pressure, between patients and controls after the psychological stress challenge. These differences also repeated after the physical stress challenge, with differences in heart rates. There were also differences in diastolic blood pressure during the physical stress challenge (Table 3).

CONCLUSIONS: We have not found higher sensitivity to stress in psychotic patients *versus* controls in this sample. Instead, it was the opposite. Even that this sample is too small to give definitely conclusions, it shows that it is possible to build institutions and programs with environments and treatments that allow having stress factors under control for people suffering from SMI during long periods of time [8, 9, 10, 11] and achieve better outcomes in this population.

Table 1. DEMOGRAFIC DATA.											
GROUP	SEX		TOTAL	AGE (ys.)							
	F	М		20-29	30-39	40-49	50-59	60-69			
CONTROLS	20	11	31	6	2	7	11	5			
PATIENTS	12	10	22	0	3	10	6	3			
TOTAL	32	21	53	6	5	17	17	8			

Table 2. GROUPS.									
GROUP	CHARACTERISTICS	TREATMENT							
	Persistent psychotic	Antipsychotic medication, sedatives, and							
PATIENTS	symptoms.	other psychiatric medications.							
	Live altogether in a	Psychiatric rehabilitation program.							
	half-way house.								
	Non-psychotic outpatients	None of them on antipsychotic							
CONTROLS	and people from the	medication.							
	community								

																		0 Minister Object Object State Object State State	20
Table 3. PRO	TOC	OL AI				RNING	BI OOI	O CORTI	SOL (8	00ΔΜ)	(ua/d	1)						Pre-Stress period (2') CC: L=32 M=48 H=20 - BP = 99/69 - HR	t =71
			PATIEN [*]				<u> </u>		002 (0		(49,41	CONTRO	OLS					PenNoveendo File Edit View Run Help See HRV HRV Help Company HRV HRV	Bosson Dute: 4/5/201 Challen
16.89 μg/dl (male: 16.14; female: 17.64)									18.00 μg/dl (male: 17.56; female: 18.45)										Start Till 628 p. n 628 p. n 628 p. n 623 p. n 624 p. n 625 p. n 6
					Т	RIER SO	CIAL STI	RESS TEST	(TSST)										John Street J
PHASE Pre- stress (PS) (2 m)		•	Psychological Stress: Re Math Test			Rec	covery Period 1		Physical Stress: Cold-Pressor Test (CPT)			Recovery Period 2 (2 ^m)			od 2	Psychological stress - Math Test (5 CC: L=13	ea (*)		
			ım High	(5 ^m) Low Medium High						(1 ^m) Low Medium High			Low Medium High			High	File Edit View Run Help Spend	Session Date: 04/08/2016 Challenge I Low Start Time: 7:12 p.m. End Time:	
ardiac coherence (CC)	LOW	ivieuiu	IIII HIGH	Low	ivieululli	півіі	Low	Medium	High	Low	ivie	ululli	High	Low	iviec	IIUIII	півіі	80 — V V V V V V V V V V V V V V V V V V	7:15 p.m. Duration: 02:15 Average C 0.6 Achievem 16 Device: em/Wawe2
ATIENTS	43.3			40.7	27.2	32.1	35.6	20.3	44.1	48.6		3.6		24.8		23.5 51.8		Scare Accumulated Score Coherence Ratio Low Med H	Journal Create
ONTROLS	49.3	-28	.4 22.3	56.0	18.8	25.3	38.6	20.2 JRE (BP) n	41.0	54.5	2	3.1	22.3	38.4	20).5	41.1	0 Minusec 101:00 102:00 64 8 2	8
						DLOOL	/ FILESSE	JIL (DI) II	iiiiiig									Recovery period 1 (2')	
	Systo	lic D	iastolic	Systol	c Dia:	stolic	Systoli	ic Dia	stolic	Systo	olic	Diasto	olic	Systo	olic	Dias	tolic	CC: L=4 M=25 H=71 - BP = 100 /68 - H *********************************	R =
ATIENTS	119		77	119	7	77	117		75	11:	113 76		111	L	75			0.00 4/3 10 10 10 10 10 10 10 10 10 10 10 10 10	
ONTROLS	106.	0	71.3	110.2		4.5 102.6		6 69.5		106.1		69.7		99.4		65.9		Mended Score Source Conference Ratio Score Source S	Journal Journal Market Printer
					ŀ	HEART F	RATE (HF	R) beats /	minute									1—1—1—1—1—1—1—1—1—1—1—1—1—1—1—1—1—1—1—	12
ATIENTS		75			76			74	74 71					72				Physical stress - Cold Pressor Test (CP	PT)(1
ONTROLS		79.5		81.2					7.5						7	79.4		CC: L=70 M=18 H=12 - BP = 100 /71 - H	, ,
																		File Edit Vicer Ran Help	Session Date: 4/1/20th Chatten; Low

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