Early onset of drug and polysubstance use: is there a personality profile related to them?

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INTRODUCTION

Studies consistently show that polysubstance abusers have particularly high levels of impulsivity and sensation seeking (Conway, Kane et al. 2003). Early onset of alcohol, tobacco or marijuana has also been associated with early onset of one of the other two substances (Strunin, Diaz-Martinez et al. 2017) and could be an indicator of potential later adulthood problems such as alcohol abuse and dependence or other drug dependence (Trenz, Scherer et al. 2012). Moreover, early onset of substances use disorders (SUD) has been related to some personality characteristics and a higher prevalence of social, psychiatric and organic problems.

OBJECTIVES

To describe the different characteristics between the patients who are polysubstances disordered patients (PD; affected by two or more SUD) compared to those who misuse from only one substance (MD) in a group patients with comorbid substance use disorders.

MATERIAL AND METHODS

We assessed all patients admitted into a dual diagnosis unit along 1,5 years by collecting sociodemographic and clinical characteristics. We grouped into two categories based on whether they were PD or not according DSM-V criteria. Comparisons between groups were carried out using chi-square and Fisher Exact tests for categorical variables and T-test for continuous variables. Statistical significance was established at 0.05 level.

RESULTS

In the studied period, 975 patients (71,7% males; mean age 39,2±9,9 years) were admitted.
Regarding to substance use, it was observed that main substance of abuse was Alcohol (40,4%) followed by Cocaine (31,8%), Cannabis (13,8%) and Heroine (4,8%).
Distribution of psychiatric disorders were as follows: psychotic disorders (41,64%), personality disorders (29,7%), depressive disorders (8,3%), bipolar disorders (6,15%) and adjustment disorders (4,62%).
PD subjects showed worse employment status and legal background, higher prevalence of family background of psychiatric disorders and substance use disorders, and higher use of psychostimulant substances. However, the length of admission were lower and there were no differences on severity scores both at admission and at discharge of the hospitalization (tables 1, 2, and 3).
Interestingly, PD patients had an earlier first contact and earlier age of problematic consumption with cocaine, opioid, cannabis, alcohol, sedatives, and nicotine (figure 1 and figure 2).
Referring to personality profile we found that PD group was mainly characterized by higher novelty seeking and reward dependence (table 4).

Table 1. Demographic characteristics of both groups.

		PD (N=513; 53%)		MD (N=462; 47%)		P value
Sex, %	Male	73,3%		69,9%		0,24
Age, years	Mean (SD)	37,5	(8,70)	41,2	(10,81)	<0,001*
Marital status, %	Single	55,4%		53,0%		0,48
	Married/Defacto	19,7%		18,6%		
	Divorced/Separated/Widow	19,7%		28,4%		
Level of education, %	No high school diploma	2,1%		2,4%		0,06
	High school diploma	53,0%		45,5%		
	Some college	44,8%		52,2%		
Employment, %		11,3%		18,8%		<0,001*
Legal background, %		26,7%		14,3%		<0,001*
Parental substance abuse background		53,0%		35,9%		<0,001*
Parental mental illness background		47,8%		39,6%		0,01

*. The chi-square statistic is significant at level 0.05.

Table 2. Clinical and functional variables at admission in both groups.

		PD (N=513; 53%)		MD (N=462; 47%)		P value
Length of admission	Mean (SD)	18,5	(21,7)	19,7	(15,2)	0,32
Clinical presentation	Hallucinations / delusions	34,1%		35,5%		0,87
	Autolytic attempt / rumination	19,3%		19,5%		
	Other	46,6%		45,0%		
Personality disorder		39,2%		24,0%		<0,001*
Main drug of abuse	Stimulants	45,0%		22,3%		<0,001*
	Sedatives	55,0%		77,7%		
Cocaine SUD		72,5%		21,0%		<0,001*
Cannabis SUD		50,7%		16,2%		<0,001*
Alcohol SUD		56,1%		55,2%		0,77
Opioid SUD		35,3%		3,5%		<0,001*
Sedatives SUD		30,0%		3,0%		<0,001*
Amphetamines SUD		12,3%		0,6%		<0,001*
Hallucinogens SUD		3,1%		0,4%		<0,05
Volatil SUD		1,9%		0,0%		<0,001*

*. The chi-square statistic is significant at level 05.

Table 3. Severity scores in both groups

		PD (N=513; 53%)		MD (N=462; 47%)		P value
GAF score at admission	*Mean (SD)*	43,61	(11,19)	44,21	(11,58)	0,46
GAF score at discharge	*Mean (SD)*	60,94	(11,25)	61,89	(11,46)	0,24

*. The chi-square statistic is significant at level 05.

Figure 1. Starting Age of Consumption

Figure 2. Problem age of consumption

Table 4. Personality traits according to TCI-R results.

		PD Mean	PD SD	MD Mean	MD SD	p
Temperament						
Novelty seeking		58,8	10,6	54,4	10,1	<0,001*
	Exploratory excitability	50,1	10,1	47,2	10,9	0,04
	Impulsiveness	56,5	11,3	54,3	11,1	0,16
	Extravagance	61,4	12,8	58,9	11,3	0,14
	Disorderliness	56,5	11,5	52,1	10,4	<0,001*
Harm avoidance		58,3	10,9	58,3	14,3	1,00
	Anticipatory worry	60,8	12,0	59,9	13,4	0,60
	Fear of uncertainty	49,0	11,4	49,8	12,4	0,60
	Shyness	54,6	10,4	54,7	11,7	0,95
	Fatigability	58,5	11,2	57,4	14,2	0,50
Reward dependence		49,4	10,1	46,8	9,8	<0,05*
	Sentimentality	55,2	8,6	52,2	12,2	<0,05*
	Openness to warm communication	50,5	10,6	46,8	10,5	0,01*
	Attachment	46,6	11,3	44,5	10,6	0,16
	Dependence	45,5	10,1	46,6	10,8	0,46
Persistence		49,0	12,3	49,5	13,3	0,78
	Eagerness of effort	50,1	9,3	49,5	12,2	0,67
	Work hardened	46,5	13,3	46,6	14,0	0,96
	Ambitious	52,9	10,1	51,5	12,5	0,34
	Perfectionist	47,3	11,3	49,9	12,0	0,11
Character						
Self-directedness		35,2	10,7	37,1	11,3	0,20
						0,38
	Responsibility	34,7	12,2	36,0	13,2	0,47
	Purposeful	39,4	14,7	38,9	15,5	0,83
	Resourcefulness	41,9	11,2	41,4	13,7	0,76
	Self-acceptance	43,6	9,5	47,0	9,1	0,01
	Enlightened second nature	35,2	10,3	37,5	11,1	0,12
Cooperativeness		40,6	11,3	43,0	10,9	0,12
	Social acceptance	44,2	11,1	45,0	11,4	0,58
	Empathy	46,7	9,9	48,1	10,7	0,34
	Helpfulness	42,9	10,9	44,2	8,8	0,32
	Compassion	43,0	14,2	46,6	14,5	0,07
	Pure-hearted conscience	41,2	10,1	42,6	10,4	0,30
Self-transcendence		56,7	11,6	56,0	12,4	0,67
	Self-forgetful	57,1	11,7	55,6	12,2	0,38
	Transpersonal identification	54,1	11,5	53,3	11,2	0,61
	Spiritual acceptance	54,7	11,0	55,2	12,4	0,76

*. The chi-square statistic is significant at level 05.

CONCLUSIONS

According to previous works, we observed polydrug users were associated with early onset of substances use, higher scores of sensation seeking and reward dependence, as well as a worse social adjustment in relation to those who misuses only one substance. On the other hand, no differences on severity scores were observed between both groups.

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