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Associated Factors of Care Continuity among Addicts to Psychoactive Substances at the "La Vie" Center and Jamot Hospital in Yaounde

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Abstract

Purpose: The main objective of this study was to determine the associated factors of care continuity among addicts to psychoactive substances at the "La Vie" Center and Jamot hospital in Yaounde.

Problem: The management of addictions is a public health challenge. Addictions to psychoactive substances (APS) cause multiple consequences in the world, particularly in the African context. In fact, they are risk factors for depression, high blood pressure, heart failure, stroke, seizures, cirrhosis, malnutrition, cancers and for traumas at different medico-psychosocial levels. Although these facts are alarming, there are many irregularities in the treatment of this phenomenon, especially in the process of adequate continuity of care.

Methods: To tackle this issue, a correlational descriptive methodological approach was used. Through a convenience sampling procedure, we recruited 120 participants aged 15 to 51 years old. Data were collected using a pre-designed questionnaire, a continuity of care scale, a self-esteem scale, a stigma of illicit drug use scale, and a social support scale. Statistical test of ANOVA, Student's t-test; Person correlation analysis and linear regression were used to examine the relationships between the different variables.

Conclusions: The results showed that the average age of the participants was 25 ± 8 years, and they prefer to use cannabis 4 or more times a week. Although most participants reported having quick access to the doctor and members of the care team at any time, 76.7% of them had an average level of continuity of care.

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There was a significant association between living environment, socio-economic level, type of substance used and level of continuity of care. Significant correlations were found between continuity of care, self-esteem, and social support. Also, we had a significant correlation in the opposite direction between stigma of illicit drug use and social support. Continuity of care was significantly associated with self-esteem (β1= 0.213 P= 0.016) and social support (β2= 0.283 P= 0.002) according to the regression analysis.

Significance: To improve care continuity among addicts to psychoactive substances, they must be encouraged to have a better self-esteem, awareness must be raised to avoid stigmatizing drug addicts, their social support must be our priority and finally, their care protocol must be contextualized and should take into account the type of substances consumed and their socio-economic context.

Keywords: associated factors; care continuity; addicts; psychoactive Substances; Cameroon.

1. Introduction

Addiction is a major public health problem with multiple sanitary, medical and social impacts. Addiction to a legal (tobacco, alcohol, psychotropic drugs) or illegal (cannabis, cocaine, amphetamines, etc.) psychoactive substance or to a behaviour (sex, gambling, social networks, video games, etc.) is defined as a disorder characterised by a recurrent process, including a phenomenon of repeated consumption at a variable intensity followed by a progressive establishment of a physiological dependence accompanied by signs of tolerance and/or withdrawal, craving (irrepressible desire to consume), loss of control, denial and the search for product(s)/behaviour(s) despite the medical, psychological, psychiatric and social risks incurred and known [1]. On average, 35 million people worldwide suffer from APS-related disorders [2]. According to the World Health Organization in 2019, data show a higher prevalence of opioid use in Africa, Asia, Europe, and North America; and of cannabis use in North America, South America, and Asia compared to 2009.

The treatment of addictions, particularly those related to psychoactive substances, is still very complex and on average only one out of seven people in the world benefit from it according to the World Health Organisation in 2019. Although according to the Cameroon National Drug Control Committee (CNLD) in 2019, almost a quarter of the population has already experienced substance use, the WHO report in the same year shows that evidence-based treatment interventions that comply with national and international human rights obligations are not as available and accessible. This demonstrates the importance of intensifying research and interventions to fill the gaps at the national and international level. Addiction studies have focused more on : the characteristics of addicted patients at the national [3] and international [4]-[6] levels, addictive factors related to adherence to treatment, factors associated with the therapeutic alliance, predictive factors of care monitoring, determinants and factors influencing APS use [7]-[11]. The study of the factors associated with continuity of care for substance abusers has not been sufficiently studied in the literature we consulted, and even so less in our national context, thus the interest of this study.

In view of these facts, the general objective of this study was to determine the factors associated with the continuity of care for addicts to psychoactive substances at the "La Vie" Center and Jamot hospital in Yaounde.

As reported in systems theory with its postulate that everything is a system where everything can be conceptualized according to a system logic, we formulated the hypothesis that personal factors, factors related to access to care and environmental factors are linked to the continuity of care among addicts to psychoactive substances. Operationally, we assumed that at the personal level, continuity of care for substance abusers was related to age, marital status, living environment, socio-economic level, behaviour of the individual, and type of substance used. In addition, we added that the continuity of care for substance abusers was related to the presence of required personnel, the availability of members of the care team. Finally, we thought that the continuity of care for substance abusers was related to the non-discrimination/stigmatisation of addicts and social support.

2. Materials and methods

2.1. Presentation and Justification of the study site

The study took place in the two public hospitals of Yaounde, specialised in addiction treatment, namely the Center of Care, Support and Prevention of Addictions (CSAPA) at the Central Hospital (La Vie Center) and the CSAPA of Jamot Hospital (Psychiatry Department A). All these centers are under the supervision of the treatment sub-committee of the CNLD. They were set up in a 2nd and 3rd category health facilities, with a view of bringing out a common programme for the treatment and prevention of addictions. The Central Hospital is a second-class health facility located in the heart of Yaoundé, in the Mfoundi department. It has several specialised units, including “La Vie center”, which is located on the ground floor of the building housing the blood bank. “La Vie center” is a specialised unit for addiction treatment and working there allowed us to have the desired sample population. Jamot Hospital is in the Mballa II district of Yaoundé and is a 2nd category health facility. The hospital has several specialised units, including Psychiatric department A, which is also a unit for the treatment of addictions. In order to achieve the objectives of the study, data collection was also carried out there.

The main reasons for the choice of the research location could be summarised as follows: the observation that we made during the exercise of our profession and our internships in relation to the frequent dropout of patients addicted to APSs from the care network and the rarity of patients normally following their care in the CSAPA; the two CSAPA are located in reference hospitals where this research theme could be well explored; the CSAPA are more accessible for the seekers of care in addictology.

2.2. Type of study

The clinical method was chosen as the research method and, more specifically, it is a quantitative, correlational, descriptive study with prospective recruitment.

2.3. Duration of the study

The study ran from December 2020 to December 2021.

2.4. Operationalisation of the variables

The variables of the study, their nature, their modalities and the different dimensions assigned to each of these modalities have been defined. They are presented in the following table:

Type of variable	Variables	Dimensions	Nature	Terms
Dependent	**Continuity of Care**	System Access Interpersonal aspects How the care team works	Numerique	Very low Low Moderate High Very high
Independent	**Related Factors**	Self Esteem	Numerique	Very low Low Moderate High Very high
		Illicit Drug Use Stigmatisation	Numerique	Discrimination Alienation Perceived devaluation
		Social Support	Numerique	Number of people Degree of satisfaction

2.5. Target population

The study was carried out among APS addicts seeking care at the "La Vie Center" and Jamot Hospital (psychiatric ward A) who were followed up during the study period.

2.6. Sampling

We performed a convenience sampling procedure and the sample size was obtained by statistical calculation while using the Cochrane formula:

$$n = \frac{Z^2 P(1-P)}{d^2}$$

Where

n = minimum sample size;

Z = 95% confidence level (1.96);

P = 21%, prevalence of addictions nationwide in 2018 according to Cameroon National Public Health Observatory (NPHO) in 2019[12];

d = margin of error at 5% (0.05);

After computing, the minimum sample size was 255 individuals. However, considering the projected number of annual care seekers in the two CSAPAs in 2016 and 2017[12], the collection time which was 4 months, the adjusted sample size calculated according to the formula below:

nadj= **n**/(1+[(n-1)/population])

Where

n = minimum population size

Population = projection of the monthly population over 4 months in the two CSAPAs considering data from NPHO (2019) revealing that in 2016, 184 care seekers were registered annually in the two CSAPAs and 225 in 2017[12].

After calculation, the adjusted sample size was 54 care seekers. To absorb the losses associated with the field surveys, we maximised the sample size to 10% which rose the sample size at n= 59 individuals. The 59 individuals constituted our minimum size of care seekers. Nevertheless, we collected and retained 120 care seekers in the two CSAPAs.

2.7. Inclusion and Exclusion criteria

All APS-addicts, regardless of gender, who agreed to participate in the study and who were followed up at the study sites were included. Those who incorrectly filled out forms were excluded.

2.8. Data collection tools

The collection tools used were: a continuity of care scale developed by Durbin and his colleagues (2004), Rosenberg's self-esteem scale (1965), Ahern, Stuber and Galea's stigma of illicit drug use scale (2007), Sarason and his colleagues social support scale, abridged version (1987) and a pre-established questionnaire. These scales were used to measure the phenomenon under study. A reverse translation was carried out.

The translated scale was compared with the initial scale by health professionals specialised in addictions, psychologists and nurses specialised in mental health to ensure similarity and ecological validity.

2.9. Data collection procedure

The collection tools were administered individually in the hospital or in their home, if the participant wished to do so. For participants with reading difficulties, the questions were read to them and the answers were recorded on the forms.

2.10. Description of data analysis

The data were integrated and analysed using SPSS 20 software with a previously created database, and Microsoft Excel 2013 software was used to produce the figures and tables. The normality of the distributions was investigated for age and social support score. This was done to ensure a uniform distribution from the sample to the total population. The significance level was reached at a P-value <0.05. The association of variables and continuity of care was done using the Odds Ratio expressed with its 95% confidence interval. ANOVA and Student's t-test were used to test the variability of the phenomenon in relation to socio-demographic, clinical and access to care data, which shed light on the first two research objectives concerning the personal factors and those related to access to the care system associated with the continuity of care in addictions. Person correlation analysis was used to describe the relationships between the study variables. The linear regression test was used to demonstrate the prediction of the relationship between continuity of care, self-esteem, social support and stigma of illicit drug use. The final research objective regarding environmental factors associated with the continuity of care in addiction was achieved by conducting a test of linear regression.

2.11. Difficulties encountered

The difficulties encountered were due to the documentation on addictology which was not easy to find, particularly concerning care modalities. It was noted that some patients refused to participate because of their instability and aggressiveness. The low attendance at CSAPAs made it difficult to increase the sample size.

2.12. Limitations of the study

Despite the fact the study was thoroughly designed, it is important to note some of its limitations. Essentially, the quantitative approach used in this study limits to some extent the collection of information influencing the process of addiction treatment, and the fact that the study took place in a single city limits to some extent the generalisation of the results obtained.

3. Results

3.1. Socio-demographic characteristics of participants

In the course of the study, 150 addicts to APS were identified and interviewed in the two public CSAPA of Yaounde on the factors associated with continuity of care in addictology. We excluded 30 for incorrectly filling out the forms and therefore making 120 addict care seekers eligible. The average age among participants were 25.54± 8.046 with a maximum of 51 years old and a minimum of 15 years old. Half of the respondents was 23 years old and this was the most represented age of the sample.

The participants were more male (91.7% of cases) than female (8.3% of cases), giving a sex ratio (M/F) of 11.05.

In terms of education level, the majority of participants had a secondary education (62.5% of cases) and only 5% were illiterate. As regards to the marital status, the proportion of single people was quite remarkable, at 77.5%, while that of married people was 6.7%. The other categories (engaged, in couple) were represented at 15.9%. Also, almost 80% of those seeking addiction treatment live with their family. However, it should be noted that 20% of them live alone or with friends. Table 2 gives a representation of these results.

Although 52.5% of the participants stated taking psychoactive substances when they were students or pupils, 22.5% were unemployed and 13.3% worked on their own. Almost 75.8% had an average socio-economic level. The most used substance among the APS-addicts of this study was cannabis with 42.5% cases, followed by tramol at 19.2%. Cocaine use was not uncommon either while occurring in 11.7% of cases. The frequency of use was even higher (4 times or more per week) for most of the participants (36.7%). Only 13.3% of the participants had a decrease in consumption to once a month. Most of the participants, at 82.5%, stated that they had rapid access to the doctor and 79.2% of them had access to all the members of the care team at all times. Medical prescriptions depended on the clinical presentation of each participant and their level in the stages of behavioural change. In view of this, almost 80% of the participants had no regular medical prescription from their doctor during the data collection period. The mot prescribed drugs were: Artane, which is an antiparkinsonian belonging to the anticholinergic family, Melex, which is a benzodiazepine anxiolytic. Tegretol which is an anti-epileptic with sedative and mood regulating properties, and Haldol which is an antipsychotic. About 76.7% of the participants had an average continuity of care. It should also be noted that the number of claimants with low continuity is not negligible, at almost 12.5% of cases.

3.2. Validation of the scales

The instruments used were the continuity of care scales developed by Durbin and his colleagues (2004), Rosenberg's self-esteem scale (1965), the stigma of illicit drug use scale of Ahern, Stuber and Galea (2007), and the social support scale by Sarason and his colleagues abridged version (1987). The validation of these instruments consists of a study of the reliability of the different scales.

Table 1: scale reliability analysis

Type of scale	Number of elements	Alpha de Cronbach	**Scale statistics**		
			Mean	Variance	Standard deviation
continuity of care scales	43	0,8	133,03	252,352	15,886
self-esteem scale	10	0,32	29,06	13,702	3,702
stigma of illicit drug use scale	10	0,72	14,53	5,243	2,29
social support scale	6	0,95	26 ;65	64,99	8,06

The reliability analysis was used to investigate the properties of the continuity of care scale. A Cronbach's alpha is a measure of the internal consistency or reliability of the scale, with a minimum value of 0.65 to 0.8, and values below 0.5 are usually unacceptable. Since Table 1 shows that it was above 0.7 we could say that it was acceptable. Statistical data of the whole Continuity of Care Scale show through the Cronbach's alpha higher than 0.7 that the different items of the Continuity of Care Scale were perfectly correlated while measuring the same competence or characteristic.

Data related to the internal consistency analysis of the self-esteem scale and its dimensions are also represented in Table 1. Thus, the reliability analyses revealed a rather low Cronbach's alpha ($\alpha = 0.32$) for the total scale and for its dimensions.

Table 1 represents analysis of the reliability of the stigma of illicit drug use scale and indicates an acceptable Cronbach's alpha (above 0.7). An analysis of the reliability of the whole scale indicates an acceptable Cronbach's alpha between 0.65 and 0.8, i.e. the different items of the stigma of illicit drug use scale were perfectly correlated while measuring the same characteristic.

Analysis of the reliability of the social support scale, as shown in table 1, indicates a Cronbach's alpha greater than 0.7. This analysis of the reliability of the entire social support scale across the different satisfactory items indicates they measured the same characteristic and were uniformly correlated.

Table 2: Correlation Matrix between the différent scales (N=120)

	2	3	4
1.Total of continuity of care scale	,263**	,327**	-0,086
2.Total of self-esteem scale	1	0,176	-0,012
3.Total of social support scale		1	-,191*
4.Total of stigma of illicit drug use scale			1

Table 2 shows the correlation matrix of the different scales. It shows that there was a significant correlation between the level of continuity of care, self-esteem and social support. In addition, there was a significant correlation between social support and the level of continuity of care. There was a significant inverse correlation between social support and the stigma of illicit drug use. Indeed, when the level of social support was high, the level of stigma of illicit drug use was low.

3.3. Personal factors associated with continuity of care for substance abusers

The analysis of the variability of the phenomenon related to: age, living environment, marital status, socio-

economic level, type of the most used substance was carried out. There was a significant link between the level of continuity of care and the level of self-esteem, which was a personal factor among the participants (see table 5).

Table 3: Variability of continuity of care according to age and living environment

Variables		Population	Variability of continuity of care IC : 95%					
Name	Modality	N	Mean	Standard deviation	Minimum	Maximum	F	P
Age class	Minor	36	135,61	16,047	95	184	0,919	0,402
	young adult	67	132,54	16,767	79	195		
	Adult	17	129,53	11,175	111	150		
Living environment	Alone	19	122,16	12,928	87	146	5,752	0,004
	With family	96	135,18	15,966	79	195		
	With friends	5	133,20	5,357	126	138		

An analysis of the variability of continuity of care by age group was performed. The Levene's test was not significant, highlighting the homogeneity of the variance (F (2,117) =0.573; P=0.56). The results of the ANOVA test showed non-significant differences between the means of the continuity of care scores in the groups (F (2,117) = 0.919; P= 0.402). These results are presented in Table 3.

An analysis of the variability of continuity according to the living environment was also performed. The Levene's test was not significant, highlighting the homogeneity of the variance (F (2,117) = 1.108, P= 0.334). The results of the ANOVA test showed differences between at least 2 means of the continuity of care scores in the groups (F (2,117) = 5.752; P= 0.004). The comparison of means with the Bonferroni test showed that addiction care seekers living with a family had higher levels of continuity than those living alone (P=0.003). The other paired comparisons were not significantly different. Table 3 represents these results.

Table 4 presents an analysis of the variability of continuity of care according to marital status. The Levene's test was not significant, highlighting the homogeneity of the variance (F (3,116) =0.435; P=0.728). The results of the ANOVA test showed non-significant differences between the means of the continuity of care scores in the groups (F (3,116) = 2.540; P= 0.06).

An analysis of the variability of continuity of care according to socioeconomic level was also performed. The Levene's test was not significant, highlighting the homogeneity of the variance (F (2,117) = 0.229, P= 0.742). The results of the ANOVA test showed differences between at least 2 means of the continuity of care scores in

the groups (F (2,117) = 3.601; P= 0.03). The comparison of means with the Bonferroni test showed that APS-addicts with an average socioeconomic level had a higher level of continuity of care than poor addicts (P=0.026). The other paired comparisons were not significantly different. Table 4 presents these results.

Table 4: Variability of continuity of care according to marital status, socioeconomic level and type of drug used

Variables		Population	Variability of continuity of care IC : 95%					
Name	Modality	N	Moy	Ecart-type	Min	Max	F	P
Marital status	Married	8	126,88	14,961	109	150	2,54	0,06
	Fiance	5	119,4	19,347	87	138		
	single	93	133,3	15,871	79	195		
	In a relationship	14	139,64	12,22	117	170		
Socio-economic level	Poor	24	125,54	15,814	79	149	3,601	0,03
	Average level	91	135,09	15,179	108	195		
	Rich	5	131,60	21,220	95	150		
Most consumed substance	Alcool	7	147,86	26,391	122	195	4,130	0,002
	Tabac	23	138,04	15,700	117	184		
	Cannabis	51	129,22	13,969	87	155		
	Tramol	23	135,13	11,051	109	155		
	Héroïne	2	152,50	9,192	146	159		
	Cocaïne	14	125,07	15,920	79	142		

In addition, an analysis of the variability of continuity of care according to the most consumed type of psychoactive substance was performed. The Levene's test was not significant, highlighting the homogeneity of the variance (F (5,114) = 1.716, P= 0.137). The results of the ANOVA test showed differences between at least 2 means of the continuity of care scores in the groups (F (2,114) = 4.130; P= 0.02). The comparison of means with the Bonferroni test showed that addiction treatment seekers with alcohol as the most consumed APS had a higher level of continuity of care than those with cannabis as the most consumed APS (P=0.037) and those with cocaine as the most consumed APS (P=0.02). The other paired comparisons were not significantly different. Table 4 illustrates these results.

3.4. Access to care factors associated with continuity of care for substance abusers

A Student's t-test analysis was performed to describe the variability of continuity of care as a function of access to all members of the care team and prompt access to the doctor upon arrival at the hospital. Levene's test showed a non-significant difference in the variance of the means of data for access to all members of the care

team and prompt access to the doctor on arrival at the hospital.

3.5. Environmental factors associated with continuity of care for substance abusers

The objective here was to describe the relationship between continuity of care, self-esteem, stigma of illicit drug use and social support using linear regression analysis.

Table 5: Analysis of the relationship between self-esteem, stigma of illicit drug use and social support in the predictive model of continuity of care

Predictive variation		Δ of R-2	Durbin-Watson	Non-standardized coefficient	Statistiques de colinéarité VIF
Stage 1	Total of self-esteem scale	0,15	1,91	0,914***	1,03
Stage 2	Total of stigma of illicit drug use scale			-0,25 (ns)	1,03
Stage 3	Total of social support scale			0,559***	1,070

ns : not significant

*** : significant in terms of 0,0001

As showed in Table 5, it emerged from the linear regression analysis between the different factors that the collinearity statistic of the valence inflation factor was less than 10 (VIF=1.03), the Durbin-walson was between 1 and 3 (value =1.9) and the diagnostic of the criterion observations (i.e. 0.95 were greater than 3 in absolute value) showed suitable data for multiple regression analysis. Self-esteem and social support were significantly associated with continuity of care. We could say self-esteem and social support had a 15% influence on the continuity of care of the participants in the study.

4. Discussion

4.1. Sociodemographic and clinical characteristics of substance abusers

Comparing the distribution of socio-demographic information with the results of other studies, and with the population distribution of this research, it was clear that the results converge. With regard to age, the average of 25.54± 8.046 years is close to the results obtained from a study carried out not only in Cameroon [3], but also in Western countries such as France and Australia [6, 11].

In terms of gender, males predominated the sample. This result is similar to those obtained in a study carried out in 2012 at the Jamot Hospital in Yaounde [3], and the one carried out in 2015 at the CSAPA of Nancy in France

[3,13]. This could be explained by the fact that for women, psychiatric disorders such as depression, panic disorder and post-traumatic stress disorder would most likely precede the onset of an APS use disorder, while for men, depression at least would be more likely to be a consequence of substance use, especially cocaine and alcohol [14]. The majority of participants were single (77.5% of cases), lived with their families (80% of cases) and had a secondary education (62.5% of cases). These results converge with those of a study carried out in France [15], which could be explained by the fact that adolescents and young adults are very concerned by this problem of APS consumption [2]. About 22.5% of the treatment seekers in this study were unemployed and 75.8% of the cases had an average socio-economic level, which is similar to the results obtained from a study conducted to determine the profiles and evolution at six months of patients in an outpatient addiction treatment centre [15].

Moreover, for 82.5% of cases, we had rapid access to the doctor on arrival at the hospital and for 79.2% of cases there had access to all members of the care team at any time. This could explain the fact that 76.7% of the participants have an average level of continuity of care. These results are in line with those of a study carried out in France to determine the addictive factors linked to the adherence to monitor patients treated in an outpatient alcohol treatment centre [11]. They are also in line with a study conducted to determine the factors associated with the therapeutic alliance in drug addiction, taking into account the moderating effects of judicialization and severe mental health disorders [9]. Nearly 80% of the participants had no regular drug prescription from their doctor, this could be justified by the fact that one of the pillars of addiction treatment is psychotherapy but unfortunately it is very rare to have adequate follow-up in the world according to UNODC (2019), i.e. one among seven people [2].

4.2. Validation of scales

An analysis of the reliability of the measurement instruments used in this work was carried out. Specifically, an analysis of the reliability of the continuity of care, self-esteem, stigma of illicit drug use and social support scales was conducted. The previous studies provided support for the various results obtained.

4.2.1. Validation of the Continuity of Care Scale

The Continuity of Care Scale developed by Durbin and his colleagues in 2004 was used to measure continuity of care among addiction treatment seekers. A study of the internal consistency of the scale was conducted. The scale has three main components. The first component represents factors related to access to the care system, the second interpersonal aspects and the last the functioning of the care team. An initial study of the scale was done to examine the structure, availability and measurement validity among users of community programmes and the findings were positive. Furthermore, in the present work, the study of the reliability of this scale showed a high homogeneity of the items, with strong correlations between the items and the total scale on one hand and inter-items on another hand. The reliability coefficients varied between 0.66 and 0.92, which showed a high consistency between the items of the scale.

4.2.2. Validation of the self-esteem scale

Rosenberg's 1965 Self-Esteem Scale is the most widely used test for measuring overall levels of self-esteem [16,17]. It has proven validity and gives an accurate reading of self-esteem. Self-esteem can be equated with assertiveness. The questionnaire included 10 items, 5 of which assessed positive self-esteem and the 5 others assessed negative self-esteem. The study of the reliability of this scale showed a weak homogeneity of the items, with weak correlations between the items and the total scale on one hand and the inter-items on another hand. Also, the reliability coefficient was lower than 0.6, which showed a lower consistency between the items of the scale. Nevertheless, according to Rosenberg in 1965, the test-retest reliability was between 0.82 and 0.88; and the alpha of Cronbach which indicates internal consistency was between 0.76 and 0.88.

4.2.3. Validation of the illicit drug use stigma scale

The Stigma of Illicit Drug Use Scale by Ahern, Stuber and Galea in 2007 is a 10-item scale that assesses the domains of perceived devaluation, alienation, discrimination and responses to discrimination and stigma. A study of the internal consistency of the scale was carried out and showed a high homogeneity of the items, with strong correlations between the items and the total scale on the one hand and inter-items on the other. And the reliability coefficients varied between 0.65 and 0.8 which showed a high consistency between the items of the scale.

4.2.4. Validation of the social support scale

The social support scale of Sarason and his colleagues abbreviated version in 1987, allowed for the joint evaluation of the social network and perceived social support. There were two complementary aspects both involved in physical and psychological health. The degree of loneliness was assessed using the Jong Gierverld loneliness scale. It provided an estimate of network availability and support satisfaction on a Likert scale from 1 to 6. An analysis of the reliability of the illicit drug use stigma scale indicated an acceptable Cronbach's alpha (above 0.7). This showed a high homogeneity of the items, with strong correlations between the items and the total scale on one hand and the inter-items on another hand.

4.3. Personal factors associated with continuity of care for substance abusers

An analysis of the variability of continuity of care as a function of age was carried out and showed that age did not influence the level of continuity of care among addict care seekers. This result differs from that of the CSAPA alcohol of Nancy in France, where the older group of patients had a higher probability of being adherent at one and a half years of follow-up [11]. This result could be explained by the fact that older patients may be more likely to attend planned visits due to the nature of their chronic health problem and its long duration. They are more attentive to their health and have enough free time compared to young adults [3].

The results showed that the living environment was significantly related to the continuity of addiction care ($F(2,117) = 5.752$; $P= 0.004$). Furthermore, addiction care seekers living with their families had higher levels of continuity than those living alone ($P=0.003$). These results are quite similar to those obtained from a study focusing on current knowledge about environmental, family and, more specifically, protective, risk and adaptive factors of the family environment in relation to the use of APS in adolescence [18]. This could be explained by

the fact that satisfactory parental supervision would be more represented in families organised according to a clear set of rules and with a low level of family conflict. All of these elements would have a positive impact on the adolescent; he would be subject to less stress, thus reducing his involvement in risky behaviours such as experimentation or the use of psychoactive substances.

The level of continuity of care for addiction care seekers in this study was influenced by their socioeconomic level ($F(2,117) = 3.601$; $P = 0.03$). In addition, participants with an average socioeconomic level had a higher level of continuity of care than the poor ($P=0.026$). This could be justified by the fact that participants from the middle level had more possibility to continuously pay for their care than the poor.

In addition, the type of most consumed psychoactive substance significantly influenced the level of continuity of care in addictology ($F(2,114) = 4.130$; $P = 0,02$).

Addiction care seekers with alcohol as their most frequently used substance had a higher level of continuity of care than those with cannabis as their most frequently used substance ($P=0.037$) and those with cocaine as their most frequently used substance ($P=0.02$). These results are consistent with those of a study in Australia which found that individuals were more likely to drop out of treatment after 3 months if their main APS at admission was a drug other than alcohol [8]. Also, other previous studies had found that cannabis appeared to be a risk factor for treatment discontinuation, cocaine/amphetamine use was negatively associated with the overall therapeutic alliance and in particular; the client's ability to reach consensus with the therapist regarding working strategies and cannabis use was associated with less engagement in therapy [6,8,9,11].

4.4. Access to care factors associated with continuity of care for substance abusers

A Student's t-test analysis to describe the variability of continuity of care as a function of access to all members of the care team and prompt access to the doctor on arrival at the hospital was performed. Levene's test showed a non-significant difference in the variance of the means of the data for access to all members of the care team and prompt access to the doctor on arrival at the hospital. These results differ from those of a study conducted in France which postulated that the more satisfied users were with the services they received, the better the quality of the therapeutic alliance was developed with their therapist [8]. More specifically, the more satisfied users were more engaged in individual therapy, had an easier time establishing a consensus about working strategies and considered the therapist as more understanding and involved. This difference in results could be explained by the fact that the study took into account the therapeutic alliance, which was measured differently from continuity of care. Also, although according to WHO, access to care is the ability of people to receive care when it is needed and in the right place; it has several components that are handled differently within instruments used in research.

4.5. Environmental factors associated with continuity of care for substance abusers

Addiction care varies according to the psychoactive substance used. The treatment of substance use disorders is still quite complex and includes several elements ranging from acute detoxification, prevention and management of withdrawal, cessation (or rarely reduction of use), maintenance of abstinence. The different phases of

treatment are managed by drugs and/or advice, and support, but several intrinsic or environmental barriers among addiction care seekers can influence the process of care's follow-up [19]. Although many studies have analysed the predictive factors of following up with addiction treatment, the relationship with the variables of self-esteem, stigma, and social support is not well understood. Although many studies have analysed predictors of aftercare in addiction, adherence or therapeutic alliance factors in addiction, the relationship with the variables of self-esteem, stigma of illicit drug use and social support is not always clear and does not measure all components of the continuity of care process. In this study, correlational and then hierarchical linear regression analysis was used to show the relationship between the level of continuity of care, self-esteem, stigma of illicit drug use and social support. It was found that the level of self-esteem and social support influenced the participants' level of continuity of care. Furthermore, there was an inverse relationship between social support and stigma of illicit drug use; when the level of social support was high, the level of stigma of illicit drug use was low. Previous studies showed that 59% of the counsellors had anxiety disorders, 28% of them had depressive symptoms and there was an association between having personally tried to stop using cannabis (P= 0.04) and follow-up care [7]. Similarly, patients with both anxiety and depression were twice as likely to discontinue care as other patients with alcohol use disorders [19]. The existence of a psychiatric history was a risk factor for premature discontinuation of treatment [20] and several family factors influenced alcohol consumption and treatment in addiction medicine [18].

The discrepancy in the results obtained could be due to the fact that the studies conducted had limitations in the psychometric data set and the measurement instruments. These limitations would affect the results obtained. Thus, health care workers could use an approach that allows for the assessment of the level of self-esteem and the level of perceived social support satisfaction which was also influenced by the level of non-stigmatisation of illicit drug users.

5. Conclusion

To summarize, the objective of this research was to study the factors associated with the continuity of care among addicts to psychoactive substances at the "La Vie" Center and Jamot hospital in Yaounde. This objective was formulated conforming the hypothesis that continuity of care could be associated to personal factors, factors related to access to care and environmental factors. The first operational hypothesis, according to which continuity of care in addiction was associated with age, marital status, living environment, socio-economic level, individual behaviour (self-esteem) and the type of substances consumed, was verified. Indeed, after validation of the scales used on a sample population of 120 participants, the hypothesis was confirmed in terms of living environment, socio-economic level, type of most used substance and self-esteem. The second operational hypothesis, which proposed that continuity of care in addiction was linked to rapid access to the doctor and access to all members of the care team at all times, was rejected. The third operational hypothesis that continuity of addiction care was associated with stigma/discrimination and social support of the participants was confirmed in terms of social support and an inverse correlation between the level of social support and the level of stigma of illicit drug use was found. This was possible by using ANOVA and Student's t-test to study the variability and the correlation between the variables respectively. A link was found between the level of continuity of care, the level of self-esteem and the level of social support. These results were obtained by

performing a linear regression test. Thus, the results of this study indicated that the orientation of an addictology care protocol taking into consideration the living environment, the type of substance that was most consumed, the reinforcement of self-esteem; the sensibilisation to the importance about satisfaction concerning care seekers, the reinforcement of social support and the non-discrimination of illicit drug users would favour a good level of continuity of care in the CSAPA. Therefore, to improve care continuity among addicts to psychoactive substances, they must be encouraged to have a better self-esteem, awareness must be raised to avoid stigmatizing drug addicts, their social support must be our priority and finally, their care protocol must be contextualized and should take into account the type of substances consumed and their socio-economic context. Despite the limitations of this study, it was one of the few to have adapted tools for measuring continuity of care in addictology in Cameroon, based on our literature review from Google scholar and PubMed databases.

References

[1] L. Karila and A. Benyamina, "Addictions," *Rev. Mal. Respir.*, vol. 36, no. 2, pp. 233–240, 2019.

[2] "Rapport mondial sur les drogues de 2019" *Nations Unies : Office des Nations Unies contre la drogue et le crime*. Accessed: Aug. 17, 2022. [Online]. Available: https://www.unodc.org/unodc/fr/frontpage/2019/June/world-drug-report-2019_-35-million-people-worldwide-suffer-from-drug-use-disorders-while-only-1-in-7-people-receive-treatment.html.

[3] D. M. Menick, J. L. M. Mviena, and B. Benguile, "Addictions chez l'Africain en milieu hospitalier: bilan de 39 mois à la clinique psychiatrique de l'hôpital Jamot de Yaoundé," *Perspect. Psy*, vol. 51, no. 1, pp. 54–62, 2012.

[4] J. Azuar, "Caractérisation et devenir des patients alcoolodépendants hospitalisés par les urgences en service de médecine à orientation addictologique," 2013.

[5] M. Blaise, M. Grégoire, and M. Valleur, "Addictions à l'héroïne, à la cocaïne, au cannabis et autres substances illicites," *EMC–Psychiatrie*, vol. 14, no. 4, pp. 1–18, 2017.

[6] V. Wagner and D. Acier, "Étude des départs prématurés de patients admis en addictologie," *Alcoologie Addictologie*, vol. 39, no. 4, pp. 340–349, 2017.

[7] H. Abdoul, A.-L. Le Faou, J. Bouchez, D. Touzeau, and G. Lagrue, "Facteurs prédictifs de suivi des jeunes fumeurs de cannabis consultant pour sevrage," *L'Encéphale*, vol. 38, no. 2, pp. 141–148, 2012.

[8] F. P. Deane, D. J. Wootton, C.-I. Hsu, and P. J. Kelly, "Predicting dropout in the first 3 months of 12-step residential drug and alcohol treatment in an Australian sample," *J. Stud. Alcohol Drugs*, vol. 73, no. 2, pp. 216–225, 2012.

[9] C. Patenaude, "Facteurs associés à l'alliance thérapeutique en toxicomanie: effets modérateurs de la judiciarisation et des troubles sévères de santé mentale," 2010.

[10] L. Plancke, A. Amariei, T. Danel, E. Benoît, M.-L. Chantelou, and G. Vaiva, "Les facteurs qui influencent la consommation intensive et régulière de médicaments psychotropes," *Therapies*, vol. 64, no. 6, pp. 371–381, 2009.

[11] M. Renard, "Facteurs addictologiques liés à l'adhésion au suivi, de patients pris en charge en centre de cure ambulatoire en alcoologie," PhD Thesis, Université de Lorraine, 2015.

[12] Rapport de suivi des 100 indicateurs clés en 2019.pdf. Accessed: Aug. 17, 2022. [Online]. Available:http://onsp.minsante.cm/sites/default/files/publications/217/Rapport%20de%20suivi%20des%20100%20indicateurs%20cl%C3%A9s%20en%202019.pdf.

[13] M. Renard, "Facteurs addictologiques liés à l'adhésion au suivi, de patients pris en charge en centre de cure ambulatoire en alcoologie," PhD Thesis, Université de Lorraine, 2015.

[14] M. Barrault, "Spécificités des problèmes d'utilisation de substances chez les femmes," *Psychotropes*, vol. 19, no. 3, pp. 9–34, 2013.

[15] V. Wagner, "Profils et évolutions à six mois des patients d'un centre de soins ambulatoires en addictologie. Comprendre le changement: une histoire de trajectoire (s) et de temps," *Bull. Psychol.*, no. 3, pp. 209–212, 2020.

[16] M. Delbrouck, P. Vénara, F. Goulet, and R. Ladouceur, "Annexe 14. Échelle d'estime de soi," *Oxalis*, pp. 397–398, 2011.

[17] F. Fourchard and A. Courtinat-Camps, "L'estime de soi globale et physique à l'adolescence," *Neuropsychiatr. Enfance Adolesc.*, vol.61, n°6, pp. 333–339, Sep. 2013, doi: 10.1016/j.neurenf.2013.04.005.

[18] L. Bellon-Champel and I. Varescon, "Environnement familial et consommation de substances psychoactives à l'adolescence : facteurs de vulnérabilité et d'adaptation," *Ann. Méd.-Psychol. Rev. Psychiatr.*, vol. 175, no. 4, pp. 313–319, Apr. 2017, doi: 10.1016/j.amp.2015.06.005.

[19] P. Louis, "Quels sont les facteurs prédictifs d'arrêt de suivi en alcoologie? Impact de l'anxiété et de la dépression. Etude pilote," PhD Thesis, Université de Lorraine, 2015.

[20] A. Fleury, "Profil médico-social des patients ayant consulté au centre d'addictologie de Mayotte en 2015 pour usage de nouveaux produits de synthèse, une étude rétrospective," PhD Thesis, Université de Bordeaux, 2015.