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Research Article

STUDY OF THE DETERMINANTS OF RESILIENCE AMONG PEOPLE LIVING WITH HIV/AIDS IN CAMEROON

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ABSTRACT

Objective: The objective of the present study is to verify whether personal and societal determinants increase resilience among People Living with HIV (PLHIV) consulting the Support Units (UPEC) in the city of Yaoundé in Cameroon. **Issue:** Patients have always considered HIV to be a very serious condition, withdrawn into themselves, they face guilt, remorse, questioning, which is responsible for the deterioration of their mental health. This consideration of illness gave rise to stress, emotional isolation and extreme depression involving low levels of resilience. Based on an empirical observation in UPEC, we were able to observe that some patients exuded good humor when talking about themselves, the illness and the treatment, while others remained in morbid denial. With altered mood. This reality would therefore be likely to contribute to therapeutic non-compliance or the development of denial of the disease, explaining the states of unhappiness among PLHIV. We then estimated that patients presenting well-being despite the illness developed resilience to the illness and strengthened their self-esteem. It is certainly true that in terms of medical care, the scientific world has made very considerable progress. However, these people remain prey to psychological damage and most often present with denial disorders, justifying non-compliance with therapy and referral to new routes other than the hospital.
Method: The present study was carried out among 141 (45 men and 96 women) PLHIV regularly consulting in hospital structures in Yaoundé. The survey was carried out using the purposive sampling technique and we administered a questionnaire in which personal and social determinants constituted the independent variable. Resilience was the dependent variable. The data collected was the subject of a double analysis: descriptive and inferential.
Results and interpretation: The results from the correlation analysis show that personal and social determinants have a statistically significant and positive relationship with resilience. Thus, personal determinants have a statistically significant and positive relationship with resilience ($r= 0.54$; $p<0.001$). Also, it turns out that social determinants have a statistically significant and positive relationship with resilience ($r= 0.39$; $p<0.001$). These results clearly indicate that people who have self-esteem, a good social support network, as well as a good social safety net, are more likely to remain healthy and resilient. Many members of the study populations affected by HIV demonstrate high resilience in this study.

Keywords: Determinants, resilience, person living with HIV AIDS.

INTRODUCTION

Throughout the world, HIV/AIDS continues to wreak havoc with numerous deaths, despite the strategies implemented to stop the spread of the infection. With nearly 650,000 deaths in 2021, HIV remains a major global public health problem. The same year, there were 38.4 million people living with HIV (PLHIV), of whom 28.7 million were on antiretroviral treatment [1]. Around 84.2 million people have been infected with HIV since the start of the epidemic and 1.5 million people have been newly infected in 2021. Indeed, since the early 1980s, the incidence of HIV/AIDS has continued to increase. And represents a chronic disease with a high rate of morbidity in Cameroon. The first cases of HIV disease were diagnosed in Cameroon in 1985. At that time, the number of reported cases was approximately 21 people. This figure followed a meteoric rise, it very quickly rose to 604 individuals in 1991 to reach 1761 in 1994 and then 3950 individuals in 1997. The prevalence rate estimated at 0.5% in 1987 rose from 7.2% in 1999, then to 11% in 2000. In 2005, the official national seroprevalence rate was estimated at 12% and 5.5% [2]. These known declining figures in terms of contamination are the result of intense awareness-raising activity. However, HIV/AIDS infection still constitutes a real public health problem in Cameroon where it represents a significant cause of mortality with a negative impact on the economic and social development of the country. The seroprevalence estimated through a surveillance system among women in consultation increased from 0.5% in 1987 to 10.8% in 2000. UNAIDS (2004) estimated the seroprevalence at 7% in 2001 and 6.9% in 2003. In 2018, in Cameroon 540,000 people were living with HIV/AIDS with an incidence of 1.02% for all age groups combined and an HIV prevalence of 3.6% among adults (between 15 and 49 years old). 2,023 new contaminations were recorded, 18,000 people died from AIDS-related illnesses in the same year [3]. The trend in the number of deaths linked to AIDS seems to be in positive decline. We went from 22,000 in 2010 to 18,000 in 2018, a drop of 19%. The number of infections also increased during this period from 36,000 to 23,000 (UNAIDS, 2020) [3]. According to 2021 figures from the National Committee for the Fight against HIV/AIDS (CNLS) in

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Cameroon, the HIV/AIDS prevalence rate is approximately 2.9%. It is still higher among women with 4.03% compared to 1.89% among men. But it remains true that despite the impressive progress in slowing the spread of the AIDS pandemic over the past decade, HIV/AIDS remains among the world's most pressing development problems. Nowadays, HIV has never been removed from the priorities of health policies.

As of December 1, 2021, Cameroon recorded 15,038 new infections. Despite numerous initiatives which have made it possible to very considerably reduce the impact of the disease within the population, the country still remains in a situation of mixed epidemic, indicates the CNLS [4]. Furthermore, Cameroon has not achieved the 90-90-90 objectives. These predicted that in 2021, 90% of people living with HIV would know their serological status, that 90% of these people would be on treatment, but also that 90% of people on treatment would have an undetectable viral load [4]. Failure to achieve this objective is a source of motivation for researchers with the aim of strengthening HIV care policies. Based on an empirical observation in UPEC, we were able to observe that some patients exuded good humor when talking about themselves, the illness and the treatment, while others remained in morbid denial. with an alteration of mood, this reality would be likely to contribute to therapeutic non-compliance or to the development of a depressive syndrome explaining the states of unhappiness among PLHIV.

We then estimated that patients exhibiting well-being despite the illness developed resilience to the illness. It is certainly true that in terms of medical care, the scientific world has made very considerable progress. However, these people remain prey to psychological damage and most often present with denial disorders, justifying non-compliance with therapy and referral to new routes other than the hospital. The problem here is that patients have always considered HIV to be a very serious condition, leaving room for stigma and/or discrimination. It can lead to stress, emotional isolation and extreme depression involving low levels of resilience.

Resilience is the ability of a person or a group to develop well, to continue to plan for the future despite destabilizing events, difficult living conditions and sometimes severe trauma [5]. As for the term determinants, these are the factors which influence positively or negatively in the establishment of an ability. According to Anaut (2005), resilience in the humanities can be considered as a dynamic process involving positive adaptation in the context of significant adversity [6]. In other words, resilience among PLHIV/AIDS is their ability to cope with the disease while maintaining an optimal quality of life and always showing themselves to be in control of their lives.

General hypothesis

Personal and societal determinants increase the level of resilience of PLHIV consulting in UPECs in the city of Yaoundé.

Specific hypotheses

- **H1**: Personal determinants increase the level of resilience of PLHIV consulting in UPECs in the city of Yaoundé.
- **H2**: Societal determinants increase the level of resilience of PLHIV consulting in UPECs in the city of Yaoundé.

METHODOLOGY

Site and participants

The present study took place in hospital structures in the city of Yaoundé. As part of this study, we carried out a survey of 141 (45 men and 96 women) people suffering from HIV/AIDS consulting regularly in hospital structures in Yaoundé 2e. Overall, the average age of participants ranges between 35 and 40 years old. They are mostly married, i.e. 43.3% of the sample. The majority of them hold a Baccalaureate (56.7%). These participants were selected using the non-probability convenience sampling technique. Only HIV/AIDS positive patients who are followed in hospital structures who signed the consent form and who spoke in French or English were included in the study.

Material

The process which led to the collection of data was primarily based on the administration of a questionnaire composed of measuring instruments assessing resilience and personal and social determinants. A section devoted to information on the sociodemographic characteristics of the participants was also presented. Participants were asked to express their degree of agreement with each item using a 5-point scale: 1: “disagree at all” 2 “rarely”, 3: “sometimes”, 4 “often”; 5 “almost all the time”. The reliability analysis carried out on each of the modalities of the study variables reveals that the items contained in this questionnaire are coherent and understandable. Thus, for personal determinants the reliability value is (ώ=0.81). Regarding social determinants, the reliability value is (ώ=0.72). Finally, for resilience, the reliability value is (ώ=0.76). This psychometric precaution allowed us to use the questionnaire without problem.

Statistical processing

In the present study, two types of analyzes were favored, namely: descriptive analysis and inferential analysis. This first analysis makes it possible to describe the results obtained for each of the study variables. To this end, the study presents the descriptive results (mean and standard deviation) relating to the different measurement tools. Inferential analysis was used to verify the study hypotheses. The choice of statistical processing tools used was dictated by the nature of the data collected (numerical) and according to the hypotheses of the study. To verify whether social and personal determinants contribute to patient resilience, we favored correlation analyses, simple linear regressions and modeling using structural equations.

RESULTS

a) Descriptive analytics

In the context of this study, personal and social determinants constitute the independent variable. Resilience constitutes the dependent variable.

Table 1: descriptive analysis

	PER	SOC	RES
Average	3.04	3.43	3.65
Standard deviation	0.925	0.777	0.828
Minimum	1.00	1.00	1.00
Maximum	5.00	5.00	5.00

The results of the descriptive analysis show that with regard to personal determinants, the average score of the 141 people interviewed is 3.04. This score corresponds to the theoretical average of a 5-point Likert scale. This means that the majority of those surveyed consider themselves strong in the face of life challenges related to their illness. Regarding social determinants, the average score of the 141 people questioned is 3.43. This score is higher than the theoretical average on a 5-point Likert scale. This means that the majority of those questioned consider that they have always had support from their relatives and friends in difficult times related to the illness. Finally, regarding resilience, the average score of the 141 people questioned is 3.65. This score is well above the theoretical average of a 5-point Likert scale. This means that the majority of people surveyed consider themselves to be very resilient, they control and manage their lives despite the illness.

b) Correlation Analysis

Table 2: correlation matrix

		PER	SOC	RES
PER	Spearman's rho	—		
	p-value	—		
SOC	Spearman's rho	0.602	—	
	p-value	< .001	—	
RES	Spearman's rho	0.547	0.397	—
	p-value	< .001	< .001	—

The results from the correlation analysis show that personal and social determinants have a significant and positive relationship with resilience. Thus, personal determinants have a statistically significant and positive relationship with resilience (r= 0.54; p<0.001). However, the value of the correlation coefficient remains average. Also, we observe that social determinants have a statistically significant and positive relationship with resilience (r= 0.39; p<0.001). However, the value of the correlation coefficient remains low.

c) Inferential analysis

Simple linear regression analysis gives better indications of the existing links between these variables and specifies the contribution of each modality of the independent variable to the dependent variable.

- **Results of the first operational hypothesis**

This hypothesis was formulated as follows: personal determinants increase the resilience of PLHIV.

Table 3: simple regression of personal determinants on resilience

	B	t	P	R2aj
People	0.53	7.52	0.001	0.28

The results reveal that perceived personal determinants exert a statistically significant influence on the resilience of PLHIV (β=.53; p=0.001). As expected, personal determinants with regard to the value of the regression coefficient improve resilience. The contribution of personal determinants in the explanation of resilience amounts to nearly 28% (R2aj). This observation is in line with what was predicted by our hypothesis. The hypothesis is logically confirmed.$H1$

- **Results of the second operational hypothesis**

This hypothesis was formulated as follows: social determinants increase the resilience of PLHIV.

Table 4: simple regression of social determinants on resilience

	B	t	P	R2aj
Social	0.52	7.18	0.001	0.27

The results reveal that perceived social determinants exert a statistically significant influence on the resilience of PLHIV (β=.52; p=0.001). As expected, social determinants in terms of the value of the regression coefficient improve resilience. The contribution of social determinants in the explanation of resilience amounts to nearly 27% (R2aj). This observation is in line with what was predicted by our hypothesis. The hypothesis is logically confirmed.$H2$

Overall, regression analyzes indicate that social and personal determinants increase the level of resilience of people with HIV. However, the linear regression tests implemented analyze the relationship between the determinants and resilience in isolation.

To circumvent the limitations attributable to this approach, modeling by structural equations was favored. These models are very precise since they take into consideration measurement errors in all estimation procedures. As a confirmatory statistical method, modeling via structural equations makes it possible to verify whether the data collected fits the postulated theoretical model. Most often this theoretical model accounts for a causal-type explanatory mechanism between the variables studied. The structural model is a combination of all possible relationships existing between the highlighted variables and their underlying dimensions in the same model. The validity or not of a structural model is given by structuring indices (TLI, CFI, /dll, GFI, NFI, SRMR, NNFI, etc.).χ^2

- **Structural equation modeling results**

Table 5: Structural equation analysis

Indices	χ^2/dl	CFI	GFI	TLI	NFI	RMSEA
Model	1.02	0.99	0.99	0.98	0.98	0.02

The results show that the value of the /dl ratio is 1.02. When this value is less than 2, it reflects an excellent fit. This first index allows us to affirm that the proposed model offers an adequate representation of the sample data.χ^2

The comparative fit index (CFI)from the comparison between the proposed model and the null model (in which no link is postulated between the variables) reveals a good level of fit of the model to the data. Very often its value is between 0 and 1, the higher its value, the more adequate the adjustment. Indeed in this model, the CFI (0.99) respects the criterion (0.95) of an appreciable fit of the data.

The goodness-of-fit index (GFI), which is a measure of the fit between the hypothetical model and the observed covariance matrix, has a value of 0.99. This value meets the criterion of adequate data fit. Also, the Tucker index-Lewis (TLI) has a value of (0.98). This value meets the criterion of adequate data fit. The standardized fit index (NFI) has a value of 0.98 indicating an acceptable fit of the model.
The value of the root mean square of the estimate (Root Mean Square Error of Approximation; RMSEA) attests to an excellent fit of the model. This value is 0.02.

These structuring indices logically attest that the model which links personal and social determinants and resilience fits well with the data collected. Apart from this model adjustment, structural equation analysis also reveals that the relationship between the two variables is very real. The two variables move in the same direction.

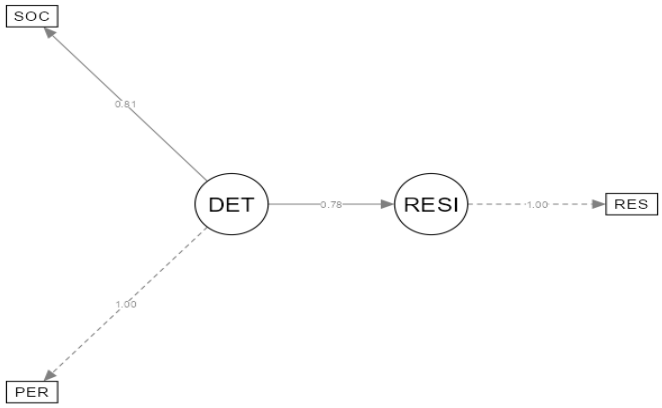
Table 6: Regression analysis between determinants and resilience

VI	VD	B	z-value	P
Determinants	resi	0.68	5.52	< .001

As expected, personal and social determinants increase the level of resilience of the PLHIV surveyed (β= 0.68; p<0.001).In accordance with initial predictions, personal and social resources can constitute a resource for increasing the level of resilience of PLHIV.

The diagram below shows the empirical relationship that exists between the two variables.

Figure 1: Modeling the relationship between determinants and resilience



DISCUSSION

As part of this study, the personal determinants of resilience were studied in its different dimensions. The descriptive analysis carried out shows that the PLHIV from the UPEC service in the city of Yaoundé in our study have the personal determinants of resilience which have sufficiently strengthened and maintained their level of resilience to the acceptance of their illness, and especially to adherence to treatment. The central tendency (mean) and dispersion (standard deviation) indices report the following values: the dimension of perceived personal determinants (mean = 3.04; SD = 0.92). It must be said that the PLHIV we interviewed developed, thanks to certain personal determinants, a level of resilience allowing them to cope with the disease. Among these determinants, we can cite: strong self-esteem, a strong capacity to accept the changes linked to the illness, a strong capacity to manage stress and above all remained optimistic about their vital prognosis linked to the state of illness.

We observe that one of the first components of personal determinants is the acceptance of the status of PLHIV which attributes great benefits such as an increase in self-esteem and increases the level of resilience. This is in line with [7] who thinks that “good self-esteem is the basis of good self-confidence”, that is to say: believing in one's own skills and good self-affirmation and having a good relationship with others while being consistent with oneself [7]. By having a better representation and a positive idea about their life and their illness, the PLHIV will develop attitudes aimed at improving their quality of life on a daily basis despite the illness. Thus, he will be able to find ways to cope with his illness, live while maintaining his well-being as much as possible and continue to realize his potential in the society to which he belongs. In short, the study shows that personal determinants (self-esteem, self-confidence, acceptance of one's status) increase the resilience of PLHIV. The results of our study demonstrated the extent to which PLHIV must themselves develop strategies to cope with their illness. They must therefore continually trust themselves, maintain good self-esteem, and remain optimistic.

Furthermore, the descriptive analysis carried out shows that the PLHIV interviewed can count on relatives and friends as support. This means that the majority of PLHIV met consider, for example, that they have at least one close and secure relationship which supports them in coping with the stress linked to the illness, they have not felt rejected by their own and have always played important roles which have sufficiently strengthened and maintained their level of resilience in accepting their illness and especially in adhering to treatment. HIV being a chronic disease, having in the past claimed victims linked to poor perceptions and representations, has made sufferers ashamed to openly declare their status, thus fearing marginalization or even stigmatization. Indeed, several chronic illnesses are known to be disabling and destabilizing of social bonds. [8] state in this sense that: “being affected by a chronic illness constitutes a difference often translated in terms of disability, and of meaning which affect social relations”. Instead of living in these words, the PLHIV surveyed in our study say they benefit from psychosocial support allowing them to mobilize resources to cope with the disease, hence their acceptance of taking treatment and maintaining personal hygiene. life that their status as PLHIV requires [8]. To strengthen social ties, it has been noted in certain UPEC, PLHIV have created associations in order to support each other. The function of peer groups is to help people experiencing the same problems to support each other by sharing experiences, but also and above all these groups remain and remain forums for mutual listening.

Our results show that the second hypothesis according to which social determinants increase the resilience of PLHIV is also confirmed. Direct support for the illness is most often limited to the medical relationship, even more so the latter often open themselves to prayer. Regarding resilience, it is very high among those surveyed. We can therefore say that if we opt for a policy of assisted resilience among PLHIV, the 90-90-90 objective set by UNAIDS in 2016 can improve, because many PLHIV will develop new adaptation strategies to cope with illness. This contribution of our study is still at the center of the problems linked to HIV, the promotion of the mental health of people affected by this disease. The results of this study show that our sample of PLHIV monitored has always maintained a very good level of resilience. In fact, this population showed no resistance to telling us about their illness, proof that they bounced back, we felt they were quite clear and fulfilled.

Given its significant social significance, resilience is recognized in the scientific literature as a buffer variable producing a protective effect against stress, thus preventing the development of symptoms in people experiencing a traumatic situation [9]. The conditions of HIV seropositivity in Cameroon impose a penalty on PLHIV consulting the HDCV. In addition to the stigmatization they experience, the social environment of PLHIV deprives them of certain enjoyments such as self-esteem, freedom of expression about their illness, the right to non-discrimination, equality and stability. Faced with this, several avenues of solutions aimed at protecting their integrity must be explored to promote the resilience of PLHIV. Our public authorities have not remained silent, we now face one of the pillars of the 17 Sustainable Development Goals and the AIDS response, which is to

leave no one behind. It is impossible to end the epidemic without addressing health and vulnerability factors, and without responding to the needs of those affected and living with HIV. The AIDS response promotes the right to health, gender equality, fundamental rights, employment and social protection [10].

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