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EVALUATION OF SELF-PERCEIVED FULFILMENT AMONG MEDICAL STUDENTS IN CAMEROON: A CROSS-SECTIONAL STUDY

Ananfack Nguefack Eric Gaël^{1*}, Sobguemezing Donleine¹, Njedock Sontsa Nelson¹, Djieka Enang Alain Boris², Kouotou Emmanuel Armand^{1, 3}

1, Department of Internal Medicine and Specialties, Faculty of Medicine and Biomedical Sciences, University of Yaoundé I, Cameroon

2, Département d'anesthésie-réanimation, UFR sciences médicales, Université Félix Ouphouet Boigny, Cocody-Abidjan, Côte d'Ivoire

3, The Yaoundé Central Hospital, Yaoundé, Cameroon.

Corresponding author:

*, Dr. Ananfack Nguefack Eric Gaël, Department of Internal Medicine and Specialties, Faculty of Medicine and Biomedical Sciences, , University of Yaoundé I, Yaoundé, Cameroon, Email: gaelnguef@gmail.com

Summary

Introduction: Going into University is accompanied by a great deal of changes in the life of a student. Attending medical school is thought to be an even greater source of intense stress for students.

Objective: To identify the factors associated with self-perceived fulfilment and well-being of medical students in Cameroon.

Methodology: This was a cross-sectional study conducted from September 1 to October 30, 2020. An electronic bilingual questionnaire (French / English) was sent via WhatsApp groups of students of the different faculties of medicine listed in the country. The flourishing scale was adapted and used to assess individual perceived fulfilment. Associated factors were assessed using logistic regressions. The level of significance was set at p <0.05.

GSJ: Volume 10, Issue 12, December 2022 ISSN 2320-9186

Results: Overall, 200 students participated in the study. The median age of the study participants was 22 (21-24) years. Seventeen percent of participants admitted being regularly absent from lecture halls. The median fulfilment score was 48 (42-51). A score below 48 was independently associated with irregular participation in lectures [aOR = 2.61, 95% CI = (1.17 - 6.07), p = 0.0214].

Conclusion: Medical students generally have overall fulfilment score above-average. Absenteeism was the only factor associated with a low fulfilment score. The establishment of psychological support units will make it possible to understand and manage student absenteeism and could improve their development.

Keywords: Medical students, self-fulfilment, flourishing scale, Cameroon

Introduction

Entry into university comes with a great deal of changes in the daily life of the students. While transitioning from high school to university, 60% of students leave their family homes in order to get geographically closer to their schools [1, 2]. This leads to the breakdown of affectionate friendships that provided social support in lieu of new and relatively fragile connections built around teaching and studying rather than affinities [2]. Coupled with the difficulties to adapt to new ways of teaching and learning, many end up with a feeling of loneliness and inadequate psychosocial support [3]. In addition, university newbies must adapt to the different organisational structures and working environment. These changes are reflected in particular in schedules that alternate between lecture time and free time with relatively larger amount of work do pry on [2]. Their newly obtained autonomy at this stage can be deceptive, because these students must now learn to self-regulate, self-motivate and manage their time in each area of their life, sometimes without really being prepared. Worthy of note, is the length of medical studies and the stress associated. Medical schools can thus be a source of more intense psychosocial stress for students. Physicians are expected to be available 24 hours a day, making their work-life balance very difficult to achieve [4]. Attaining self-fulfilment implies establishing a balance between family and other socioeconomic activities while limiting any stressful life phenomena, individualisation and desocialization [5, 6]. A heightened sense of fulfilment may impact the quality and skills of the doctor to be. All these, led us to investigate self-fulfilment and the well-being of students in medical schools in Cameroon and to identify any factors associated with it.

Methodology

Study design / participants

This was a cross-sectional study conducted using an online survey designed on Google Forms. Included were all self-selected medical students of all genders residing in Cameroon at the time of the survey. Sampling was consecutive and exhaustive. The questionnaire designed in English and French was disseminated through the WhatsApp groups of students from the various medical faculties in the country. The questionnaire was anonymous and comprised closed-ended questions and questions with a Likert scale. The questionnaire had a total of 20 questions related to socio-demographic data, namely: age, sex, place of residence, faculty of origin,

GSJ: Volume 10, Issue 12, December 2022 ISSN 2320-9186

level of study, alcohol or tobacco consumption, regularity at lectures and posting sites. The flourishing scale questionnaire comprising 8 questions rated from 1 to 7 each, for a total of 56 points was also included in the questionnaire allowing them to choose whether they "Strongly disagreed"(1) to whether they "Strongly agreed" (7)[7]. The higher the total score, the stronger the feeling of self-fulfilment. To improve the participation rate, the messages were sent a first time when the survey was started on September 1, 2020 reminder messages were subsequently sent every week. The data was collected through September to October 30, 2020.

Statistical analysis

The data was saved on Microsoft Excel 2010 and analysed with R version 4.1.3. Qualitative variables were expressed in terms of numbers and percentages; quantitative variables were expressed as means or medians. The Chi-square test, the Wilcoxon test and logistic regression models were used to assess associations. The level of statistical significance was set at a p-value ≤ 0.05 .

Results

Socio-demographic characteristics

In all, 200 students participated in the study, 61.5% of whom were female. The median age of the study participants was 22(21-24) years, with a median age of 23(21-25) years for male and 22(21-23) years for females (p=0.0251). Eighty-five percent of participants attended private institutions of medical training. A good number of students consumed alcohol (43%), comprising 59.7% of the males and 32.5% of the females (p =0.0002). Seventeen percent of participants admitted not being regular for lectures. Table I summarizes the general characteristics of the participants.

Facteurs	Males (n=77)	Females (n=123) Total (N=200)		P-Values	
Age	23(21-25)	22(21-23)	22(21-24)	0,0251	
Private institutions	28(36,4)	57(46,3)	85(42,5)	0,1648	
Prec-linical years	22(28,6)	35(28,5)	57(28,5)	0,9858	
Living in a family home	27(35,1)	59(48,0)	86(43,0)	0,0729	
Alcohol Consumption	46(59,7)	40(32,5)	86(43,0)	0,0002	
Tobacco Consumption	1(1,3)	2(1,6)	3(1,5)	0,8530	
Regular at lecture halls	60(77,9)	106(86,2)	166(83,0)	0,1304	

Table I: General characteristics of the population

GSJ: Volume 10, Issue 12, December 2022 ISSN 2320-9186					
Had begun a Clinical posting curiclum	60(77,9)	103(83,7)	163(81,5)	0,3025	
Regular at clinical postings	57(74,0)	97(78,9)	154(77,0)	0,4290	

Self-perceived fulfilment

Our population had a non-Gaussian distribution, with a median perceived fulfilmentment score of 48 (42-51) (Figure 1). One hundred and one students (50.5%) agreed that they were leading a life that had purpose and meaning. Similarly, 30% of students strongly agreed they were involved and interested in their daily activities. Table II and Figure 1 refer to the different responses of the student Flourishing scale.

Table II: Responses to the Student Flourishing Scale

Item	1. Strongly disagree	2. Disagree	3. Somewhat disagree	4. Neither agree not disagree	5. Somewhat agree	6. Agree	7. Strongly agree	Moyenne ± SD
I live a life that has purpose and meaning.	3(1,5)	4(2,0)	7(3,5)	24(12,0)	19(9,5)	42 (21,0)	101(50,5)	5,91 ±1,4
My social relationships are supportive and Beneficial for me.	3(1,5)	11(5,5)	8(4,0)	24(12,0)	38(19,0)	51(25,5)	65(32,5)	5,48 ±1,5
I am involved and interested in my daily activities.	3(1,5)	6(3,0)	11(5,5)	32(16,0)	39(19,5)	49(24,5)	60(30,0)	5,43 ±1,4
I actively contribute to the happiness and well-being of others.	2(1,0)	6(3,0)	7(3,5)	18(9,0)	43(21,5)	58(29,0)	66(33,0)	5,66 ±1,3
I am competent and diligent in activities that are important	2(1,0)	4(2,0)	8(4,0)	14(7,0)	40(20,0)	58(29,0)	74(37,0)	5,78 ±1,3
for me. I am a ''good'' person and I live a ''great'' life.	1 (0,5)	2(1,0)	4(2,0)	24(12,0)	46(23,0)	66(33,0)	57(28,5)	5,69 ±1,1

	GSJ: Volume 10, Issue 12, December 2022 ISSN 2320-9186							1412
I am optimistic about my future.	5(2,5)	4(2,0)	11(5,5)	12(6,0)	25(12,5)	42(21,0)	101(50,5)	5,89 ±1,5
People respect me.	1(0,5)	1(0,5)	7(3,5)	23(11,5)	40(20,0)	61(30,5)	67(33,5)	5,76 ±1,2

1412

Numbers represent frequencies (proportions) and means ± standard deviations (SD)

Our analysis also showed that there was a statistically significant difference between the median perceived fulfilment score for men 49.0(45.0-53.0) and that of women 46.0(40.5-51.0) (p = 0.035). Students who were regular for lectures at lecture halls had a higher median perceived fulfilment score than those who were not 48.0 (42.3-51.0) and 43.0 (36.3-50.5), p = 0.021. Among all the parameters tested, having an overall score below the median was associated with irregular participation in lecture halls, [OR = 2.17, 95% CI = (1.02 - 4.80), p-value = 0.0475]. This association persisted after adjusting for sociodemographic parameters in multivariable analysis [aOR = 2.61, 95% CI = (1.17 - 6.07), p= 0.0214].

Discussion

This study is first of its kind to evaluate self-perceived fulfilment among medical students in Cameroon. We highlight here in the impact of self-perceived fulfilment on school attendance with its potential impact on the immediate and long term outcome of medical training.

Our study population shows a female preponderance. Contrary to the 2018 UNESCO Institute of Statistics survey, in Cameroon, university enrolment tends to favour males rather than females [8]. The female predominance in this series can be explained by the fact that girls spend much more time on smartphones than boys as demonstrated by a study done by the Ewha Womans University in Seoul, South Korea [9]. They could therefore be more inclined to completing online questionnaires. Nevertheless, this results are similar to that observed in South Africa in a study that assessed stress among medical students, where the authors found 61% of girls among the population studied [10]. The feminization of the medical profession is a phenomenon present in almost all countries, though it may differ in rates and proportions in various social contexts. According to some authors, the lesser attraction of medical studies on young men largely explains this professional feminization [11]. Despite not having published statistics, our local experience in Cameroon also depicts a similar progressive feminisation of the profession with reasons that probably go beyond the female predominance of our society. This female predominance was also observed in two American studies on burnout and well-being on medical students [12,13]. Our results, however differ from the results of a study on depression in cameroon medical students [14] that reported 53.7% predominance in males while in a Nigeria, another study on stress reported a 57.6% male predominance [15].

Forty-three percent of our population consumed alcohol, 59.7% of whom were males (p=0.0002). Ngasa et al., reported similar findings with 38.8% of medical students consuming alcohol. This result is however are higher than that reported by Mbanga et al., who in a study on the prevalence and predictors of recreational drug use among medical and nursing students found a 29.14% alcohol consumption in their study population[16]. Ntone et al. and Kamgang found respectively in their studies an alcohol consumption rate of 87.93% among students of three

GSJ: Volume 10, Issue 12, December 2022 ISSN 2320-9186

universities in the West Cameroun and 91.80% among students of the University of Yaoundé I [17-18]. This wide difference could be explained by the fact that our study was specific to medical students who are probably more informed about the ills and harms of alcohol and would therefore consume less than others, or by the higher burden of intellectual activity required from medical students that makes them less exposed to drinking opportunities.

Of the study participants, 166 (83%) regularly attended lectures with a self-reported regular absenteeism rate of 17%. Though a positive correlation exists between attendance at lectures and success [19], school absenteeism is a persisting challenge to all actors of the education system. The student's personal contribution to his or her success also lies in his or her commitment.

In our series, 74% of learners felt engaged and involved in their activities. For some authors, commitment corresponds to the student's participation in different tasks and activities related to school life, and the psychological component of commitment corresponds to the feeling of belonging to the university environment [20, 21].

The majority of participants in this survey felt fulfilled while half of the participants felt they lead a resolute life and were optimistic about their future. This could be explained by the fact that the medical schools are considered prestigious and are among honorary higher institutions of learning similar to the good societal esteem given to their practicing graduates. These could naturally provide a source of pride for students and their families. Similar explanations were deducted from a study in the United States where medical students still managed to flourish despite the pressure from their work [22]. Shemaila Saleem et al., on the other hand, in a comparative study between medical students and other students, found that psychological well-being was much lower in medical students than in others [23]. Medical school, in general, appears to be stressful [24, 25]. Despite half of them feeling they have a resolute and optimistic life, medical students in this series still experience stress. This is depicted in the low rate (32.5%) of students who report having rewarding social life. Noteworthy is that, certain aspects of social life can contribute to alleviating stress to the benefit of an individual's well-being.

In this series males felt better self-fulfilled than females (p = 0.035), similarly, students who were regular at lectures had stronger feelings of self-fulfilment (p = 0.021). This could in part be explained by our socio-biological context that tends to push males to focus much more on career success while females tend to have a more divided attention, including their future family that usually comes earlier than that for males.

Among all the parameters tested, feeling less fulfilled with an overall score below the median, was independently associated with irregular participation at lectures, [aOR = 2.17, 95% CI = (1.02 - 4.80), p = 0.0475] after adjusting for socio-demographic parameters. This could be explained by the fact that students who participate in courses may not have social constraints that would impinge on their participation in classes and their overall well-being. Ngasa et al. found in 2017 that a relationship existed between the major events in the lives of students and the occurrence of depression in the latter [14]. These life events may influence students' well-being either in a positively or negatively and may be reflected in the overall well-being of a student.

Limitations

There might have been a bias in interpreting questions given that responders had no means of clarifying any doubts in their understanding of them. Also, the sample size was not sufficiently representative of total number of medical students in the country.

Conclusion

Medical students have an above-average overall self-perceived fulfilment score in Cameroon. Girls and lecture absentees feel relatively less fulfilled. Absenteeism is the only factor associated with a low perceived fulfilment score in this study. The establishment of psychosocial support units for students could help to understand the social and personal difficulties they encounter, thus allowing individualized and collective support to curb the rate of absenteeism on one hand and improve personal development on the other hand while assist those who feel non-belonging to get a proper and timely reorientation. The development of a student as an individual depends not only on his academic commitment but on several other elements of his bio-psycho-social and cultural life.

Conflict of interest

The authors declared that they have no conflicts of interest

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Authors' contribution: ANEG conceived the subject; ANEG and NSNV collected the data; ANEG and NSNV analysed the collected data; ANEG, SD and DEAB wrote the manuscript; NSNV translated the manuscript, KEA supervised; ANEG, NSNV, SD, DEAB and KEA reviewed and validated the manuscript.

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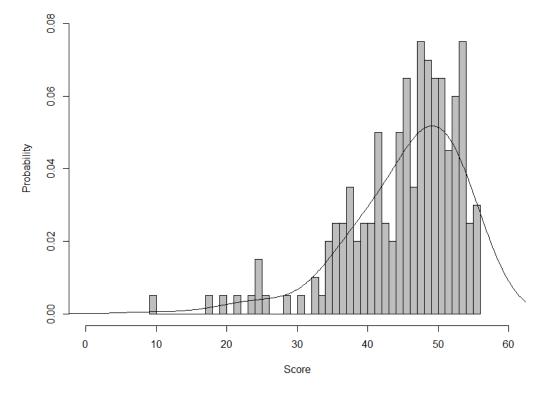


Figure1: Histogram of the overall score on the flourishing scale evaluating self-perceived fulfilment in self-selected medical students in Cameroon.