

Life Satisfaction of Non-Luxembourgish and Native Luxembourgish Postgraduate Students

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I. BACKGROUND

Abstract—It is not only the economic determinants that impact on life conditions, but maintaining a good level of life satisfaction (LS) may also be an important challenge currently. In Luxembourg, university students receive financial aid from the government. They are then registered at the Centre for Documentation and Information on Higher Education (CEDIES). Luxembourg is built on migration with almost half its population consisting of foreigners. It is upon this basis that our research aims to analyze the associations with mental health factors (health satisfaction, psychological quality of life, worry), perceived financial situation, career attitudes (adaptability, optimism, knowledge, planning) and LS, for non-Luxembourgish and native postgraduate students. Between 2012 and 2013, postgraduates registered at CEDIES were contacted by post and asked to participate in an online survey with either the option of English or French. The study population comprised of 644 respondents. Our statistical analysis excluded: those born abroad who had Luxembourgish citizenship, or those born in Luxembourg who did not have citizenship. Two groups were formed one consisting 147 non-Luxembourgish and the other 284 natives. A single item measured LS (1=not at all satisfied to 10=very satisfied). Bivariate tests, correlations and multiple linear regression models were used in which only significant relationships ($p < 0.05$) were integrated. Among the two groups no differences were found between LS indicators (7.8/10 non-Luxembourgish; 8.0/10 natives) as both were higher than the European indicator of 7.2/10 (for 25-34 years). In the case of non-Luxembourgish students, they were older than natives (29.3 years vs. 26.3 years) perceived their financial situation as more difficult, and a higher percentage of their parents had an education level higher than a Bachelor's degree (father 59.2% vs 44.6% for natives; mother 51.4% vs 33.7% for natives). In addition, the father's education was related to the LS of postgraduates and the higher was the score, the greater was the contribution to LS. Whereas for native students, when their scores of health satisfaction and career optimism were higher, their LS' score was higher. For both groups their LS was linked to mental health-related factors, perception of their financial situation, career optimism, adaptability and planning. The higher the psychological quality of life score was, the greater the LS of postgraduates' was. Good health and positive attitudes related to the job market enhanced their LS indicator.

Keywords—Career attitudes, fathers' education level, life satisfaction, mental health.

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THE proportion of foreign nationals living in Luxembourg is increasing and stood at 45.9% of the Grand Duchy's total population in January 2015 [1]. This brings another aspect of higher education to attention: migrant participation. Many European Institutions of higher learning provide accessible higher education for all; therefore, migrants constitute a portion of the students [2]. In the last annual report of the university, it is reported that in Luxembourg, more than 50% of the university students are non-Luxembourgish [3]. If the composition of the university's international population reflects the composition of the population of the Grand Duchy and the labor market of the country, it makes findings significant. This population comprised of foreign students who are residents, had earlier education in Luxembourg add to students coming from other Member states of the European Union as well as students from developing countries who arrive in Luxembourg with student visas [4]. Migration does not represent a threat to the postgraduates' mental health. However, circumstances, social context and conditions under which the migration takes places counts [5].

The Luxembourgish government provides financial aid to all university students regardless of their socio-economic status. This is done through the Centre for Documentation and Information on Higher Education (CEDIES). Foreign students can obtain financial aid if they meet certain criteria, one of which is the beneficiary should have a permanent residence card, have a parent or a life/romantic partner who must have been working in Luxembourg for a minimum of 5 years. This initiative is intended to ensure all students have sufficient finances to comfortably pursue and complete their studies, subsequently enhancing career prospects and contribute to the development of society. Luxembourg is the smallest country in Europe (562 958 population, 2 600 km²) and also one of the most multilingual and culturally diverse of Nation States (with over 170 different nationalities) managing to create a powerful, multilingual and competitive university.

II. INTRODUCTION

Satisfaction with Life is a potential key to social progress, contributes to individual functioning [6] and has been identified as a distinct construct representing cognitive evaluation [7]. Life satisfaction is also related to positive mental health outcomes as people who are satisfied with their lives report lower levels of distress which is predictive of future psychological behaviors [8], [9]. In the same line,

perceived health status has been indicated as the most notable predictor of life satisfaction [6].

The strengthening of students' life satisfaction has been considered an important mission of education [10]. Education favorably impacts on the perception of life satisfaction as holders of university degrees have rated it higher than those with secondary education [11]. Foreign and local students perceive different problems throughout their academic studies [12]. Immigrants have lower life satisfaction as compared to natives due to cultural, demographic, academic, and social factors [13], [14]. In the academic journey students are confronted with challenges such as adjusting to new learning regimes, finding and thriving at a good internship, exposure to the social issues of their environment and handling finances [15], [16]. In addition to cultural aspects [17] the university period may be an anxious experience for students causing emotional instability and worries about their future in particular should their mental health be affected [18]. Indeed, the reinforcement of their mental health in order to help manage life circumstances by promoting positive changes through coping skills must be developed [19]. Mental health represents a growing public health issue [20]. For the students being psychologically healthy allows them to get the most out of their education and move confidently into employment [16]. All these pose challenges towards maintaining an acceptable level of life satisfaction. We therefore opted for a general approach to life satisfaction using global measurement (i.e. evaluation of life in general) in the belief that mental health factors, career behaviors and socioeconomic conditions are all related to the LS of postgraduates.

Previous study of Master's students and graduates has shown that positive career attitudes are related to students' life satisfaction and those with greater career adaptability are better able to handle life events by planning their careers [21]. Career adaptability can be understood as an individual's capacity to anticipate a possible novel situation and prepare in advance for change by acquiring new abilities and strengthening their ability to make a series of successful transitions when the labor market is constantly changing [22].

The fact that destination countries could benefit from the social and economic contribution of immigrants, crucially depends on the full integration of the foreign-born population in the host society [17]. Indeed, in a country like Luxembourg where migration characterizes the local population in the past as well as in the present and where postgraduate students represent part of the future labor market, life satisfaction must be examined, as it has been shown in previous studies to help students develop positive attitudes to overcoming challenges in their academic lives. Our scientific questions were: (1) Does LS differ between non-Luxembourgish and native Luxembourgish students? (2) How do mental health-related factors, career attitudes, and socio-economic characteristics relate to LS? (3) What are the associations between mental health factors (health satisfaction, psychological quality of life, worry), perceived financial situation, career attitudes (adaptability, optimism, knowledge, planning) and LS?

III. METHODS

A. Population

Between the years 2012 and 2013, all postgraduate students who received financial aid from the government were registered in the database of the Centre of Documentation and Information on Higher Education (Centre de Documentation et d'Information sur l'Enseignement Supérieur - CEDIES) and were contacted by post to participate in our survey.

B. Method and Data Collection

Postgraduates were invited by mail to participate in an online survey. The invitation contained the aims of the study, instructions on completing the self-administered questionnaire and the web address of the survey's link. The questionnaire was available in English and French.

From the respondents (N=644), two groups were compared: non-Luxembourgish postgraduates settled in Luxembourg (not born in Luxembourg and without Luxembourgish citizenship, N=147); and native Luxembourgish students (born in Luxembourg and with nationality, N=284). Respondents born in Luxembourg but without citizenship or citizens not born in Luxembourg were excluded from the statistical analysis.

C. Measurement Instrument

Life Satisfaction (LS) is the dependent variable and was estimated with a single-item (how would you rate your life satisfaction? 1 = not at all satisfied to 10 = very satisfied) [6].

Other variables assessed:

- i. *Mental health-related factors*: Self-rated health satisfaction was assessed with a single-item (are you satisfied with your health? 1 to 5 = very satisfied) [6].
Psychological quality of life, is a subscale (6 items) (1 to 5 = extremely) of the Whoqol-bref tool [23], measuring negative feelings, positive feelings, self-esteem, spirituality, thinking, and bodily image.
Worry, (3 items) is obtained from the scale of [24] (many situations make me worry; 1 to 5 = very typical of me).
- ii. *Career attitudes*: It comprised 4 domains exploring career adaptability (4 items), optimism (4 items), knowledge (2 items) and planning (3 items), (1 to 5 = strongly agree) adapted by [25]
- iii. *Socioeconomic characteristics*: Data collected were: age, sex, parents' education level (lower/equal-higher than a bachelor degree), type of household (living alone/not alone) and perceived financial situation (1 to 6 = very good).

D. Statistical Analysis

All scores were calculated on a range from 1 to 10. To explore the associations between life satisfaction and sociodemographic, mental health factors and career attitudes determinants, students' t-tests and bivariate correlations were used. Then a multiple logistic regression was applied for each group, but only significant variables ($p < 0.05$) were introduced into the regression models. The analyses were performed with SPSS 22.0 software.

IV. RESULTS

Sociodemographic, Mental Health-Related Factors and Career Attitudes (Table I)

Non-Luxembourgish students were older than the natives, had a lower perception of their financial situation and in a majority, both parents had completed tertiary education. Among native postgraduates, less than half of their fathers and a third of their mothers had a university degree.

Relationships between Life Satisfaction and Sociodemographic, Mental Health, Career Attitudes and Financial Situation (Table II)

For the non-Luxembourgish students, only the father's level of education was linked to LS score; LS was higher when their fathers had completed tertiary education. Mental health-related factors, career adaptability, optimism, planning and perceived financial situation were related to life satisfaction in both groups.

TABLE I
SOCIODEMOGRAPHIC, MENTAL HEALTH AND CAREER ATTITUDES FOR NON-LUXEMBOURGISH AND NATIVE POSTGRADUATES

		Non-Luxembourgish postgraduates	Native postgraduates	p-value ¹
		% or Mean (SD) ²	% or Mean (SD) ²	
Life Satisfaction [1-10]		7.8 (1.57)	8.0 (1.56)	0.124
Age		29.3 (8.5)	26.3 (4.0)	<0.001***
Sex	Male	45.2	47.8	0.682
	Female	54.8	52.2	
Type of household	Living alone	26.9	34.1	0.152
Parents' education level (≥Bachelor)	Father	59.2	44.6	0.004**
	Mother	51.4	33.7	0.001**
Perceived financial situation [1-10]		6.3 (2.40)	7.0 (2.11)	0.004**
Mental health factors	Health satisfaction [1-10]	7.3 (2.31)	7.5 (2.13)	0.508
	Qol-Psychological [1-10]	7.2 (1.53)	7.2 (1.44)	0.797
	Worry [1-10]	5.7 (2.52)	6.1 (2.40)	0.153
Career attitudes	Adaptability [1-10]	7.7 (1.41)	7.5 (1.47)	0.108
	Optimism [1-10]	6.9 (1.85)	6.8 (1.50)	0.449
	Knowledge [1-10]	6.2 (1.97)	6.2 (2.04)	0.842
	Planning [1-10]	6.2 (2.34)	6.0 (2.60)	0.518

¹ Significant p-value: *p < 0.05; **p < 0.01; ***p < 0.001; ²SD = Standard deviation

TABLE II
RELATIONSHIPS BETWEEN LIFE SATISFACTION AND SOCIODEMOGRAPHIC, MENTAL HEALTH, CAREER ATTITUDES AND FINANCIAL SITUATION

		Life satisfaction [1-10]			
		Non-Luxembourgish		Native postgraduates	
		Mean (SE) ¹	p-value ²	Mean (SE) ¹	p-value ²
Sex	Male	7.89 (0.173)	0.380	7.92 (0.139)	0.291
	Female	7.66 (0.192)		8.12 (0.130)	
Type of household	Living alone	7.72 (0.267)	0.827	7.77 (0.179)	0.059
Parents' education level	Doesn't live alone	7.78 (0.151)		8.14 (0.109)	
	Father (≥Bachelor)	8.07 (0.151)	0.005**	8.18 (0.094)	0.084
	(<Bachelor)	7.33 (0.221)		7.89 (0.129)	
	Mother (≥Bachelor)	7.91 (0.162)	0.226	7.99 (0.175)	0.914
	(<Bachelor)	7.59 (0.204)		8.01 (0.113)	
		Correlation coefficient ³	p-value ²	Correlation coefficient ³	p-value ²
Age		-0.063	0.447	0.036	0.542
Perceived financial situation [1-10]		0.243	0.003**	0.125	0.040*
Mental health factors	Health satisfaction [1-10]	0.414	<0.001***	0.425	<0.001***
	Qol - Psychological [1-10]	0.703	<0.001***	0.742	<0.001***
	Worry [1-10]	0.383	<0.001***	0.437	<0.001***
Career attitudes	Adaptability [1-10]	0.280	0.001**	0.272	<0.001***
	Optimism [1-10]	0.406	<0.001***	0.359	<0.001***
	Knowledge [1-10]	0.159	0.056	0.059	0.326
	Planning [1-10]	0.299	<0.001***	0.133	0.026*

¹SE = Standard error; ²Significant p-value: *p < 0.05; **p < 0.01; ***p < 0.001; ³Pearson's correlation

Associations between Mental Health, Career Attitudes and Financial Situation and Students' Life Satisfaction (Table III)

Our linear regression models explained about the same

variance of LS for both groups (53% for non-Luxembourgish vs. 59% for natives). For the non-Luxembourgish postgraduate students, two factors intervened in the LS score. Higher were

the difficulty of the financial situation and the psychological quality of life scores, greater was the LS score. Whereas for the native students, higher were health satisfaction,

psychological quality of life and career optimism scores, greater was the students' LS score.

TABLE III
ASSOCIATIONS BETWEEN MENTAL HEALTH, CAREER ATTITUDES AND FINANCIAL SITUATION AND STUDENTS' LIFE SATISFACTION

		Life satisfaction [1-10]				
		b ¹	SE ²	L95 ³	U95 ⁴	p ⁵
<i>Non-Luxembourgish postgraduates</i>						
Intercepts		1.381	0.673	0.049	2.712	0.042
Father's education	< Bachelor	-0.154	0.209	-0.567	0.260	0.464
	≥ Bachelor	0				
Perceived financial situation	[0-10]	0.125	0.041	0.043	0.207	0.003**
Mental health factors	Health satisfaction	0.039	0.049	-0.059	0.137	0.430
	Qol - Psychological	0.636	0.096	0.447	0.825	<0.001***
	Worry	-0.006	0.047	-0.098	0.086	0.894
Career attitudes	Adaptability	0.068	0.073	-0.077	0.213	0.354
	Optimism	-0.029	0.096	-0.218	0.160	0.763
	Planning	0.080	0.049	-0.016	0.176	0.103
<i>Native postgraduates</i>						
Intercepts		1.281	0.477	0.340	2.221	0.008
Father's education	< Bachelor	-0.181	0.126	-0.430	0.067	0.152
	≥ Bachelor	0				
Perceived financial situation	[0-10]	0.043	0.030	-0.017	0.103	0.160
Mental health factors	Health satisfaction	0.113	0.032	0.049	0.177	0.001***
	Qol-Psychological	0.705	0.057	0.593	0.817	<0.001***
	Worry	0.011	0.031	-0.050	0.072	0.718
Career attitudes	Adaptability	-0.023	0.049	-0.119	0.073	0.637
	Optimism	0.110	0.053	0.005	0.215	0.040*
	Planning	-0.011	0.028	-0.066	0.044	0.688

¹b = Parameter estimate; ²SE = Standard error; ³L95 = Lower limit of the 95% confidence interval; ⁴U95 = Upper limit of the 95% confidence interval; ⁵p-value = Significance level of the t-test *p < 0.05; **p < 0.01; ***p < 0.001.

V. DISCUSSION

The aim of our study was to analyze the associations between mental health factors, financial situation and career attitudes and LS among non-Luxembourgish and native Luxembourgish postgraduates.

Our major finding was that the better the psychological quality of life, the higher the LS for both groups. Similarly, having a good psychological quality of life is associated with acquisition of skills that increase employability [26]. Better education provides more opportunities for personal development and a better quality of life [11].

For the two groups in our study, the determinants of LS were identical. Firstly, the relationships of mental health-related factors with LS, suggested that perceived health, psychological quality of life and worries influence a postgraduates' LS, which in turn helps them adopt behaviors helpful to career planning and prospects. Secondly, LS was also related to career optimism, adaptability, and planning, which have been identified as responsible for positive career outcomes [27]-[30]. Career optimism is linked to a health-related adjustment [31] and a positive attitude toward self and one's life in general [32]. Thirdly, the perception of students' financial situation was linked with LS. Our results are in line with Sam's [13], who pointed out that satisfaction with one's financial situation is an important factor in predicting subjective well-being for university students. More precisely, it significantly affected their LS. Another finding was that

among non-Luxembourgish respondents, the father's education was positively correlated to the student's LS. The higher the achieved level of education, the greater the contribution to LS. The idea that parental education may, as an indicator of family socio-economic status, moderate the relationship between academic achievement and LS is supported by Bourdieu's theory of class distinction [33]. More highly educated parents may better foster students' motivation to succeed academically [34] and have higher educational aspirations for their children [35], [36]. Other studies [37], [38] have shown that the mother's level of education is associated with children's academic achievement and their LS, as mothers' interactions with their children are more frequent than interactions with fathers and eventually more important for key aspects of the children's subjective well-being. However, our results showed that the father plays a more significant role than the mother in their children's LS where education is concerned. One explanation of our finding may be that traditionally, fathers have been the role models in the family and children try to either achieve the same level of career success or respond to their father's expectations. When fathers perceive their children as capable of succeeding academically and professionally, the children develop positive perceptions of their own abilities, leading to high LS. In addition to that, as education is considered to be the cornerstone of social integration, especially for young non-EU migrants, reaching high levels of educational attainment leads

to a greater potential for the employment and social inclusion of individuals, since they acquire basic skills and share the common values of the society they live in [11]. Whereas for native postgraduates, the better was their health satisfaction and career optimism, the higher was their LS. These findings are in accordance with the last Quality of Life report [6], which demonstrates that health is the most important predictor of LS. Moreover, having a positive career attitude implies of being more ambitious when developing a career plan and setting goals in order to take socioeconomic advantages.

An interesting finding was that no matter if you are a non-Luxembourgish or a native postgraduate, their LS was higher than the national indicator of LS for the age group 18-24 (7.8/10) and for those 25-34 years (7.7/10) in 2013 [11]. In reference [6], it is shown that young people in training or education have the higher rates of LS. This brings us to the conclusion that postgraduate students in Luxembourg have in general good life conditions, which accrue them high LS. This may be explained as a result of the activities and efforts of the Luxembourgish government to implement policies and programs in the municipalities, schools, and public services, in order to help with the assimilation of the foreign population residing in the country.

Contextualizing our findings, the differences in socioeconomic characteristics are discussed. Non-Luxembourgish students were older than natives, had a lower perception of their financial situation, and majority of their parents had completed tertiary education. Foreign students need an adaptation or orientation period in the hosted country, as for many of them the education system in their home country differed from the one in Luxembourg. It is therefore reasonable that they enter in their Master studies at an older age than the natives, especially in a country like Luxembourg, where multilingualism is developed and required. Another explanation could also be that foreign students might have had a professional experience before starting their postgraduate studies. The perception of the financial situation as being more difficult for the non-Luxembourgish can be explained by the fact that for them, the sustainable financial situation is not always given. Their familial and professional situations might presumably be regularized as one of their parents has been working for at least five years in the country, but this does not guarantee them financial security. Universities should provide support services adapted to foreign and international students and develop mental health promotional programs, which would permit the realization of the equilibrium of academic achievement and enhancement of students' life satisfaction.

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