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The Life Satisfaction of Immigrants in Canada: Does Time Since Arrival Matter more than Income?

Laura Monteiro[1] · Michael Haan[1]

Abstract

The subjective life satisfaction of individuals reveals valuable information about the overall well-being of a society. Furthermore, large international migration flows have led to the importance of studying the life satisfaction of immigrants within host countries, including Canada. This study uses secondary data from the 2013 Canadian General Social Survey, Cycle 27, to assess the life satisfaction of immigrants in Canada compared to Canadian-born individuals, and to determine the overall impact of immigrants' year of arrival. Using bivariate and multivariate statistical models, the results reveal that the life satisfaction of immigrants does not significantly differ from the Canadian-born population, and that year of arrival has no significant effect. Income, however, seems to be a more important determinant of immigrants' life satisfaction in Canada.

Keywords Life satisfaction · Immigrants · Immigration · Year of arrival · Income

Introduction

The study of life satisfaction is of growing interest within academic and policy discussions, as it can be used to measure societal and national-level well-being (Bartram, 2011; Bonikowska et al., 2014; Diener & Diener, 1995; Diener et al., 2013; Helliwell et al., 2018). Furthermore, the prominence of international migration has led to an important merging of immigration and life satisfaction research in recent years (Angelini et al., 2015; Bartram, 2011; Frank et al., 2014; Kogan et al., 2018). Consistent throughout existing research, life satisfaction is typically defined as an individual's evaluation of their life as a whole (Diener, 2009; Fors & Kulin, 2016; Helliwell, 2003). Overall, the dedication to understanding immigrants' life

✉ Michael Haan
   Mhaan2@uwo.ca

   Laura Monteiro
   lmonteir@uwo.ca

[1] Department of Sociology, Western University, London, ON, Canada

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satisfaction within host-countries has yielded valuable information surrounding their ability to integrate both socially and economically (Arpino & de Valk, 2018; Sapeha, 2015).

Despite the growth in this area of research, gaps remain, and this study works to fill one such gap. Using the 2013 Canadian General Social Survey (GSS), we answer the following research questions: (1) Is the life satisfaction of immigrants in Canada similar to that of the Canadian-born? (2) To what extent do individual-level factors affect life satisfaction for immigrants and non-immigrants in Canada? (3) Does length of time since arrival impact the life satisfaction of immigrants in Canada? And, (4) Does adjusting for annual personal income differences reduce or strengthen the effect between life satisfaction and immigrants' duration in Canada?

Answering these questions is important for several reasons. First, a more comprehensive understanding of immigrant life satisfaction holds significance due to the fact that they comprise a large and growing segment of Canadian society (Berry & Hou, 2016). Additionally, assessing life satisfaction provides a deeper understanding of immigrants' own assessments of their lives in Canada, which reveals important information about their ability to integrate in, and contribute to, Canadian society (Angelini et al., 2015; Kogan et al., 2018; Sapeha, 2015). Third, in an era of anti-Asian sentiment, BlackLivesMatter, and Islamophobia, we believe that it is important to deepen our understanding of the factors that boost life satisfaction and mitigate against discontent. Finally, assessing immigrant life satisfaction as it relates to length of time spent in Canada has not been a focus in existing literature. Thus, we assess year of arrival as a central aspect of life satisfaction and seek to provide insight into the potential association between these two factors. We also advance existing Canadian literature by determining if income strengthens or reduces the potential association between immigrants' year of arrival and their life satisfaction.

Literature Review

There are many factors that can potentially impact immigrants' life satisfaction within a host-country, but existing research reveals inconsistent findings. A number of existing studies have been conducted in Israel (Amit & Riss, 2014; Kushnirovich & Sherman, 2017), the United States (Bartram, 2016), and various European countries (Calvo & Cheung, 2018; Kogen et al., 2018; Obućina, 2013; Safi, 2010). In this section, we review this literature as well as findings around the factors that explain differences in life satisfaction between immigrants' and native-born populations.

Understanding Life Satisfaction

Consistent throughout existing literature, the terms life satisfaction, well-being, and happiness are used interchangeably. Most often, immigrant well-being has been analyzed through objective measures, including labour market participation, education, and language acquisition (Bloemraad et al., 2008; Calvo & Cheung, 2018), as well as social integration (Arpino & de Valk, 2018), citizenship, and security of legal or

residential status (Bartram, 2016; Kirmanoğlu & Başlevent, 2014). Previous studies have found that immigrants' life satisfaction has implications on their ability to successfully integrate within host countries (Angelini et al., 2015; Kogan et al., 2018). Inversely, this may also be affected by an immigrants' lack of ability to successfully integrate. Therefore, subjective factors have been increasingly studied to assess immigrants' life satisfaction within host-countries (Amit, 2010; Bonini, 2008; Chu et al., 2018).

It is important to note that the majority of research on subjective well-being and life satisfaction is based on self-report assessments collected through surveys (Bonikowska et al., 2014; Diener, 2009). Additionally, scholars focused in this area claim that life satisfaction may predict future behaviours of individuals in social settings, which works to demonstrate its relevance to policy-making in a variety of arenas (Diener et al., 2013; Easterlin & Switek, 2014).

As countries strive to increase societal well-being (Bonikowska et al., 2014; Bonini, 2008; Dolan & Metcalfe, 2012), it becomes important to compare the significance of objective versus subjective determinants. Objective indicators include tangible factors, such as income, education, and presence of children and/or a spouse, whereas subjective indicators focus on the ascribed significance of these and other factors (Arpino & de Valk, 2018). Further, individuals may report their life satisfaction differently based on their unique expectations, values, and previous experiences (Diener et al., 1999), rather than their material conditions.

Immigration and Life Satisfaction

In recent years, literature surrounding immigration and life satisfaction has become increasingly linked. At the subjective level, many studies demonstrate that an individual's life satisfaction generally remains stable over time, but can be sensitive to major life events, including immigration (Bartram, 2011; Diener, 2009). A common topic of exploration among immigration studies is whether migrants experience an increase or decrease in life satisfaction as a result of immigrating (Bartram, 2011; Kogan et al., 2018; Kushnirovich & Sherman, 2017; Olgiati et al., 2013). Some scholars suggest that, upon arrival, immigrants are exposed to adverse experiences within their host-country and are, therefore, at a greater risk of experiencing poor well-being and low-life satisfaction compared to native-born individuals (Cobb et al., 2019; Simpson, 2013).

Other studies comparatively find that recent immigrants report higher levels of life satisfaction (Obućina, 2013). Therefore, findings are not consistent across studies or host countries. For instance, Safi (2010) found that immigrants are generally less satisfied with their lives compared to native-born Europeans, and this disparity does not diminish with time or across generations. Similarly, Arpino and de Valk (2018) revealed that although differences did diminish over generations, the life satisfaction of immigrants remained lower than the European-born population overall. In the American context, Bartram (2011) found that immigrants in the United States reported lower levels of life satisfaction, and that immigrants from less developed countries often report even lower levels than those from more developed countries.

Further, in Canada, Frank et al. (2014) analyzed the life satisfaction of 43 immigrant groups and found that 32 of the 43 did not differ significantly from the Canadian-born population. Another Canadian study revealed that some immigrant groups experience significantly different levels of life satisfaction compared to others (Kim & Noh, 2015).

Individual Versus External Factors

Previous research consistently reveals that both individual-level factors and external conditions strongly influence life satisfaction (Bonini, 2008; Frank et al., 2014; Kushnirovich & Sherman, 2017; Luhmann et al., 2015). While some studies focus on individual-level factors, others employ a supra-individual approach. For instance, using the European Social Survey, Kogan et al. (2018) analyzed host-country characteristics to assess their influence on immigrants' life satisfaction and found that positive social settings and high levels of human development resulted in positive impacts. Additionally, other scholars focus on the prevalence of host-country discrimination towards immigrants and the effects that discriminatory experiences may have on life satisfaction (Angelini et al., 2015; Chow, 2007; Safi, 2010; Vohra & Adair, 2000).

Moreover, one Canadian study assessed whether economic integration, social integration, or human-capital factors have the largest impact on immigrants' satisfaction with their settlement experiences (Sapeha, 2015). These factors are important to consider given their potential to represent aspects of external and individual-level factors that likely influence immigrant life satisfaction. Other variables that have been explored more specifically as personal factors include guilt over leaving source-country, perception of social support, lack of ethnic networks in host-country, and personal motivating factors to migrate (Chow, 2007; Kim & Noh, 2015; Vohra & Adair, 2000). Furthermore, one cross-national study revealed that roughly 81% of the variation in life satisfaction is due to individual factors, including age, gender, income, education, and marital status, while 19% is due to country-specific external factors, such as Gross Domestic Product and human development levels (Bonini, 2008).

The Importance of Subjective Factors

There are several individual-level factors that are widely known to affect life satisfaction, such as age, gender, marital status, family structure, educational attainment, and income. Regarding age, it is clear that there is a non-linear relationship representing its effects on overall well-being—life satisfaction is typically high in young adulthood, lower throughout middle-aged years, and higher again at retirement (Bartram, 2011; Helliwell, 2003; Kirmanoğlu & Başlevent, 2014).

Research analyzing gender differences in life satisfaction are somewhat mixed, although studies generally find that women are more satisfied with life than are men (Graham & Chattopadhyay, 2012; Obućina, 2013; Statistics Canada, 2019a). Gender differences in life satisfaction among immigrant populations are less explored,

however, several studies reveal that immigrant women integrate better than immigrant men, and that this may have a positive impact on their life satisfaction (Portela-Maseda et al., 2012). Additionally, one study revealed that settlement in Canada led to an increase in autonomy for married women from particular ethnic backgrounds, and increased autonomy was positively related to higher levels of life satisfaction (Jibeen & Hynie, 2012).

Marital status also shapes life satisfaction, with married individuals reporting higher levels (Bartram, 2011; Helliwell, 2003; Kushnirovich & Sherman, 2017). Family structures and family relationships are also major drivers of life satisfaction, with parents being more satisfied than those without children (Diener, 2009). Further, higher levels of educational attainment are typically associated with higher levels of life satisfaction, and this finding holds true for both immigrant and non-immigrant populations (Amit & Litwin, 2010; Diener, 2009). Thus, we expect to find that women, married individuals, those with children, and the highly educated will report higher levels of life satisfaction, consistent with existing literature.

Income and Life Satisfaction

A common consideration throughout life satisfaction literature is the role of income (Bartram, 2016; Diener, 2009; Olgiati et al., 2013). International migrants typically experience an increase in material well-being upon migrating to nations with higher average annual incomes. However, when looking at subjective life satisfaction following migration, many immigrants are dissatisfied with their lives (Bartram, 2011; Calvo & Cheung, 2018; Safi, 2010; Stillman et al., 2013). This finding is difficult to explain, suggesting that the relationship between income and life satisfaction is not as straightforward as previously thought (Clark et al., 2008; Easterlin et al., 2010; Ferrer-i-Carbonell, 2013). It is possible that immigrants' perception of their integration success may impact their life satisfaction, but the conflicting discourse surrounding "successful integration" and whether it is associated with economic or social elements leads to immigrant dissatisfaction (Li, 2003).

Even when there is a linkage found between immigrants' life satisfaction and increases in income, the effects are often small (Calvo & Cheung, 2018), or even negative, as Olgiati et al. (2013) found among immigrants in the United States, France, and Finland. They conclude by stating that income may only be positively associated with life satisfaction until the point at which non-monetary factors associated with length of stay—employment outcomes, residential neighbourhood, language acquisition, etc.—become dominant (Olgiati et al., 2013). An alternative explanation for this trend is that immigrants tend to become more like the native population as their length of time in the host-country increases (Arpino & de Valk, 2018), which suggests that the differences between immigrants and the native-born stem from a diminution of difference. We therefore test for the potential relationship between immigrants' length of stay in the host-country, their income, and their life satisfaction, but have no direction from previous research as to what the relationship will look like in Canada.

Social Comparison Theory

To further assess the subjective factors that may affect life satisfaction for immigrants specifically (i.e. length of time since arrival and income), we situate them in social comparison theory. Comparing oneself to others is a common human practice (Buunk & Mussweiler, 2001), and there is substantial evidence that social comparisons affect life satisfaction (Frank et al., 2014; Perez-Asenjo, 2011; Stillman et al., 2013).

Social comparison theory is a set of hypotheses that attempt to explain the process by which people evaluate themselves and their standing relative to others (Rogelberg, 2017), and that life satisfaction depends on one's condition compared to those around them (Davis & Wu, 2014). Social comparisons may have positive or negative effects on an individual depending on their reference group, which refers to the group an individual is comparing themselves to (Mussweiler et al., 2004; Perez-Asenjo, 2011). One study on social comparisons and life satisfaction found that racial, geographical, occupational, and social segregation has an influence on an individual's reference group (Davis & Wu, 2014).

It is therefore important to consider how individuals determine their reference group (Buunk & Mussweiler, 2001). If an immigrant changes their social context upon migrating, their reference group is likely to change as well (Frank et al., 2014; Vohra & Adair, 2000). Additionally, immigrants' appraisals of their host-country as more favourable than their origin country may be due to the comparisons they make and the reference group they choose (Cobb et al., 2019). For instance, immigrants from poor, developing nations typically retain their country of origin as their reference group and often show higher levels of life satisfaction compared to immigrants whose reference group is the native-born population within the host-country (Clark et al., 2008). Thus, existing literature demonstrates that the reference group against which immigrants choose to compare themselves is critical to their life satisfaction (Bartram, 2011; Cobb et al., 2017; Vohra & Adair, 2000).

The findings of this study will likely provide more insight into the chosen reference groups of immigrants in Canada. Based on the literature, should this study's findings reveal that immigrants are significantly more satisfied with life, the assumption may be that immigrants are retaining those in their origin countries or co-ethnics as their reference group (Clark et al., 2008). Or, if immigrants report lower levels of life satisfaction compared to the Canadian-born population, it may be indicative of a shift wherein immigrants use the Canadian-born as their reference group (Knight & Gunatilaka, 2012; Stillman et al., 2013).

The Current Study

Overall, the lack of consistent findings regarding immigrants' life satisfaction warrants further analysis. In the Canadian context, it remains unclear whether immigrants are more or less satisfied than their Canadian-born counterparts (Berry & Hou, 2016; Frank et al., 2014).

Our study will contribute to existing literature by examining the life satisfaction of immigrants in a Canadian context while focusing on how this compares to the native-born population. We also seek to determine if length of time since arrival impacts the life satisfaction of immigrants, or if the primary predictor is more likely to be income.

The study of life satisfaction as a measure of societal well-being has influenced policymaking in many countries, including Canada (Bonikowska et al., 2014). The findings yielded from our study will reveal the subjective factors that influence the life satisfaction of immigrants in Canada. Since current Canadian immigration policies are structured around the selectivity of immigrants who are expected to make the greatest contributions to Canadian society (Bonikowska et al., 2015), this is an increasingly important area of research. This is especially important given that existing literature speculates that immigrants with low life satisfaction will experience difficulty integrating in, and contributing to, their host-societies (Angelini et al., 2015; Kogan et al., 2018).

Methodology

Data

Our study uses the 2013 Canadian General Social Survey (GSS), a nationally representative household survey that provides data on the well-being and living conditions of Canadians (Statistics Canada, 2015). The GSS targets a sample of non-institutionalized Canadians, aged fifteen years and older, living in one of the ten Canadian provinces. Each GSS contains a standard set of sociodemographic questions that are consistent across all cycles, as well as a set of questions that focus on specific social issues and policy considerations (Statistics Canada, 2015). Here, we used data from the public-use microdata file of the 2013 Social Identity Survey (Cycle 27), which was conducted between 2013 and 2014. Respondents were asked a variety of questions regarding their social networks and engagement, as well as their overall well-being (Statistics Canada, 2015).

The survey was conducted through telephone sampling, in which both cellular and land-line telephone numbers were accessed from Statistics Canada sources, as well as electronic versions distributed via the Internet (Statistics Canada, 2015). Participants had the option to respond to the survey in either English or French. In some cases, the survey was conducted in a third language if an interviewer was proficient in the same language as the respondent (Statistics Canada, 2015). The best practice of seeking interviewers who speak a third language is an important aspect of the GSS, particularly for immigrants, as the availability of this option for respondents improves the reliability of this data. Additionally, immigrants and youth were over-sampled to allow for accurate analyses of these populations (Berry & Hou, 2016; Statistics Canada, 2015). The overall sample consisted of 27,534 respondents, and the response rate was 48.1%. Survey weights were designed and applied to adjust for non-response (Statistics Canada, 2015).

The dependent, independent, and control variables were recoded, and all missing values for each of these variables were dropped from the sample. Overall, the analytic sample contained 19,297 observations—12,455 non-immigrants and 6,842 immigrants. Although the 2013 GSS includes a question asking immigrant respondents to report their continent of origin, this variable was not included due to issues with collinearity within the logistic regression models. Additionally, immigrants' source-region was not a necessary consideration, as the heterogeneity of the immigrant population in Canada was not a central feature of this study.

Measures

In Table 1, we provide the details of our variables.

Dependent Variable

The dependent variable for this study was self-reported life satisfaction. The GSS asks respondents to rate their life satisfaction using the following question: "On a scale from 0 to 10, where 0 means 'very dissatisfied' and 10 means 'very satisfied,' how do you feel about your life as a whole right now?" (Statistics Canada, 2015). The above question is consistently used across Canadian surveys and is widely applied throughout subjective well-being and life satisfaction literature (Bonikowska et al., 2014). Further, previous studies have found that the use of self-reported measures of life satisfaction show both adequate reliability and validity (Bonikowska et al., 2014; Diener, 2009).

There is little consensus about how life satisfaction scales should be coded, but scholars emphasize that the coding should direct the methodological approach (Bonikowska et al., 2014; Diener et al., 2013; Obućina, 2013). For our analysis, the self-reported life satisfaction scale was recoded into a binary variable so that it could be included in logistic regression models. Previous studies assessing this scale reveal that the median life satisfaction score consistently comes in at eight out of ten. Bonikowska et al. (2014) conducted a comprehensive assessment of life satisfaction responses on a number of Canadian surveys, and found that, consistently, 2% or less of respondents rate their overall life satisfaction at or below 2, and 5% or less at or below a score of 5.

Therefore, the binary life satisfaction variable was coded so that those reporting their life satisfaction to be between 0 and 5 were considered "dissatisfied," and those reporting their life satisfaction to be between 6 and 10 were considered "satisfied." A much larger proportion of respondents rate their satisfaction with life above a score of 5, meaning that the majority of the analytic sample was included within the "satisfied" category (Bonikowska et al., 2014).

Independent Variables

The first focal independent variable was birthplace of the respondent. In the public-use version of the GSS, birthplace is measured simply by asking respondents

Table 1 Regression coding for control variables (2013 GSS analytic sample)

Variable	Coding
Gender	
Male (reference group)	0
Female	1
Age	
15–24 (reference group)	0
25–34	1
35–44	2
45–54	3
55–64	4
65–74	5
75+	6
Marital status	
Not married (reference group—includes single, divorced, and widowed)	0
Common-law	1
Married	2
Education	
High school (reference group)	0
Post-secondary education (includes trades certificates, college diplomas, and university degrees)	1
Employment status	
Unemployed (reference group)	0
Employed	1
Visible minority	
Not a visible minority (reference group)	0
Visible minority	1
Household ownership	
Renting (reference group)	0
Owning	1
Living arrangement	
Living alone (reference group)	0
Living with others	1
Children in household	
None (reference group)	0
One or more children	1
Population centre indicator	
Rural (reference group)	0
Urban	1
Self-rated health	
Poor (reference group)	0
Good	1
Religion	
Not important (reference group)	0
Important	1

Table 1 (continued)

Variable	Coding
Sense of belonging (SBL) to Canada	
Weak SBL (reference group)	0
Strong SBL	1
Experienced discrimination in last 5 years	
No (reference group)	0
Yes	1

whether or not they were born in Canada. In our study, the binary variable for birthplace was coded as zero if a respondent was born in Canada, and one if they were not. We also included a second focal independent variable specific to immigrant respondents, which is the range of years within which they first came to Canada. In the GSS, the range of years since the respondent arrived is measured as a categorical variable, with a question asking respondents to report the time period during which they first arrived, ranging from before 1946 up to 2013. Most variable categories within this question increase in increments of four years, with the exception of the first and final categories.

To capture non-linearities, the year of arrival variable was coded from a categorical variable into seven binary variables. Respondents who reported that they arrived before 1946 were excluded from the analytic sample, as the number of immigrants who arrived during this time was too small to have enough statistical power.

Further, personal annual income represented a third focal independent variable in our study, as previous literature reveals mixed findings regarding the effect of income on life satisfaction. Within this study, income was included in some models but excluded from others (reasons for exclusion are explained in detail in the following sections). In the GSS, the personal annual income group variable is an ordinal categorical variable with 12 categories. Here, income was collapsed to include four categories. These categories were labelled in the following way—"no income," respondents making $5,000-$29,000 labelled "low income," respondents making $30,000-$59,000 labelled "medium income," and those making $60,000 or more comprising the "high income" group. This was done to measure if the respondent's income group impacts their life satisfaction. Moreover, including each of the original income categories was not critical to the analysis or interpretation of our study.

Control Variables

Along with the above focal independent variables, we also adjusted for several other characteristics, including sex, age, educational attainment, marital status, and employment status. These individual-level control variables were included to compare the sociodemographic characteristics between immigrants and the Canadian-born population (Frank et al., 2014). Additional individual-level control variables were also included in most regression models, including visible minority status,

home ownership, living arrangements, population centre indicator, self-rated health, importance of religious beliefs, sense of belonging to Canada, and experiences of discrimination. The majority of the control variables included in our study were coded as binary variables to provide ease in analysis and interpretation.

Methods

We first generated descriptive statistics to provide a detailed depiction of our study sample, as well as to analyze sociodemographic differences between the immigrant and non-immigrant groups. Further associations were analyzed using various bivariate and multivariate statistical models.

Model 1 included standard sociodemographic variables to assess life satisfaction differences between immigrants and non-immigrants, and to determine which individual-level factors are more likely to have a greater impact. Model 2 introduced the year of arrival binary variables, as well as the remaining control variables. This model, however, excluded income to determine if there was an association between immigrants' year of arrival and their life satisfaction when income was not included in the regression. Model 3 was nearly identical to Model 2, but included income to assess whether this had a substantial impact on the potential association between immigrants' life satisfaction and their length of time in Canada. Finally, Model 4 included an interaction term between income and birthplace to provide a better measure of the potential association between immigrants' income group and their life satisfaction.

Results

Descriptive Statistics and Bivariate Results

As mentioned, the study sample included both immigrants (35%) and non-immigrants (65%) to allow for basic life satisfaction comparisons. Prior to assessing the life satisfaction differences of these sub-samples, Table 2 provides information about the demographic characteristics of each of these sample groups.

Regarding overall life satisfaction, immigrants (9.1) had a higher mean score than non-immigrants (8.9). Interestingly, 10.08% of non-immigrants reported being dissatisfied with life, as compared to 9.61% of immigrants. Additionally, 89.92% of non-immigrants and 90.39% of immigrants reported being satisfied. These numbers revealed that there was a slightly larger proportion of immigrants who reported being satisfied with life, and a slightly larger proportion of non-immigrants who reported being dissatisfied with life overall.

Regarding the gender distribution of the sample, there were more males in both the immigrant (50.98%) and non-immigrant (51.81%) groups, however, gender appeared to be quite equally distributed. Regarding age, there were more non-immigrants concentrated in the 15–24 age group, while the 35–44 and 45–54 age groups contained higher numbers of immigrants. Additionally, a larger proportion of

Table 2 Sociodemographic characteristics of the immigrant and non-immigrant sub-samples (%) (N = 19,297)

Sociodemographic variables	Canadian-born (65%)	Immigrants (35%)	Chi-square	p value
Mean life satisfaction	8.9	9.1		
Dissatisfied				
Satisfied	10.08	9.61	0.83	0.49
	89.92	90.39		
Gender				
Male	51.81	50.98	0.95	0.48
Female	48.19	49.02		
Age				
15–24	18.30	9.61		
25–34	18.09	18.57		
35–44	15.67	20.47		
45–54	17.96	20.06	219.58	<0.001
55–64	15.44	15.36		
65–74	8.89	10.36		
75+	5.65	5.57		
Marital status				
Not married	41.72	31.40	501.85	<0.001
Common-law	13.13	5.28		
Married	45.14	63.32		
Education				
High school only	42.99	29.00	276.13	<0.001
Post-secondary	57.01	71.00		
Employment status				
Unemployed	35.21	36.18	1.37	0.38
Employed	64.79	63.82		
Income				
No income	8.22	10.63		
<$5,000—$29,000	31.87	30.96	31.82	<0.001
$30,000—$59,000	31.27	32.28		
$60,000 or more	28.64	26.14		
Self-rated health				
Good	89.51	90.05	1.07	0.42
Poor	10.49	9.95		
Visible minority				
No	94.91	43.95	6328.65	<0.001
Yes	5.09	56.05		
Home ownership				
Renter	19.96	26.67		
Owner	80.04	73.33	90.25	<0.001
Living arrangement				
Living alone	12.88	10.23	22.13	<0.001

Table 2 (continued)

Sociodemographic variables	Canadian-born (65%)	Immigrants (35%)	Chi-square	p value
Living with others	87.12	89.77		
Religious				
No	38.91	24.59	301.82	< 0.001
Yes	61.09	75.41		
Population indicator				
Rural	19.02	5.08	492.16	< 0.001
Urban	80.98	94.92		
Sense of belonging				
Weak	8.01	4.50	62.24	< 0.001
Strong	91.99	95.50		
Exp. discrimination				
No	69.83	4.49	44.79	< 0.001
Yes	30.17	35.51		

Source 2013 Canadian General Social Survey

immigrants reported being married and having some sort of post-secondary education in comparison to the Canadian-born population, while a slightly larger proportion of immigrants reported being unemployed. In the way of income, there were more immigrants who reported having no income compared to non-immigrants, however, there were also more immigrants concentrated in the medium income group ($30,000-$59,000 annually). As well, slightly more immigrants rated their general health as "good." In comparison to non-immigrants, a larger proportion of immigrants reported belonging to a visible minority group, valuing religious and spiritual beliefs, residing in urban population centers, having a strong sense of belonging to Canada, and having experienced discrimination in the last five years. On the other hand, more non-immigrants reported owning their home as opposed to renting and were more likely to live alone compared to immigrants. Most sociodemographic differences between the immigrant and non-immigrant samples within this study were significant, aside from life satisfaction, gender, employment status, and self-rated general health.

Moreover, a focus throughout this study was the extent to which subjective factors impact individuals' life satisfaction. Table 3 below displays the results of cross-tabulation tables of each sociodemographic control variable and whether respondents in each of these categories reported being "satisfied" or "dissatisfied" with their life overall. The distribution of life satisfaction coincided with other studies, with 89.74% of respondents reporting that they are satisfied, and only 10.26% reporting that they are dissatisfied. Importantly, differences in life satisfaction between immigrants and non-immigrants were highlighted in Table 2 and will be further analyzed in Tables 3 and 4.

As shown in Table 3, males appeared to be slightly more satisfied than females. Respondents in the younger age groups, married, highly educated, and employed all

Table 3 Life satisfaction differences among sociodemographic characteristics (%) ($N = 19{,}297$)

Sociodemographic variables	Satisfied (89.74%)	Dissatisfied (10.26%)	Chi-Squared	p value
Non-immigrant	89.92	10.08	0.83	0.49
Immigrant	90.39	9.61		
Gender				
Male	90.08	9.92	0.065	0.85
Female	89.97	10.03		
Age				
15–24	90.86	9.13		
25–34	90.77	9.22		
35–44	90.58	9.41		
45–54	89.26	10.74	12.78	0.32
55–64	89.01	10.99		
65–74	89.86	10.14		
75+	89.01	10.99		
Marital status				
Not married	85.63	14.37		
Common-law	91.4	8.59	276.16	<0.001
Married	93.22	6.78		
Education				
High school only	87.56	12.44	86.20	<0.001
Post-secondary	91.65	8.35		
Employment status				
Unemployed	86.57	13.43	140.12	<0.001
Employed	91.91	8.08		
Income				
No income	88.22	11.78		
<$5,000—$29,000	85.74	14.26	239.78	<0.001
$30,000—$59,000	91.22	8.78		
$60,000 or more	94.08	5.92		
Self-rated health				
Good	68.41	31.59	1160.77	<0.001
Poor	92.52	7.48		
Visible minority				
No	90.03	9.96	0.009	0.95
Yes	89.97	10.03		
Home ownership				
Renter	84.76	15.24	162.63	<0.001
Owner	91.46	8.53		
Living arrangement				
Living alone	83.80	16.20	116.52	<0.001
Living with others	90.89	9.11		
Religious				
No	89.16	10.84	8.83	0.035

Table 3 (continued)

Sociodemographic variables	Satisfied (89.74%)	Dissatisfied (10.26%)	Chi-Squared	p value
Yes	90.50	9.50		
Population indicator				
Rural	91.37	8.63	7.31	0.026
Urban	89.77	10.23		
Sense of belonging				
Weak	80.84	19.16	140.87	<0.001
Strong	90.74	9.26		
Exp. discrimination				
No	92.53	7.46	296.57	<0.001
Yes	84.53	15.47		

Source: 2013 Canadian General Social Survey

reported higher life satisfaction as well. Additionally, those with an annual income of $60,000 and over were the most satisfied out of all income categories. Further, individuals with good self-rated health were much more likely to report being satisfied with life. Finally, respondents who own their home, live with others, have a strong sense of belonging to Canada, and no experiences of discrimination in the last five years reported significantly higher levels of life satisfaction.

Multivariate Results

Table 4 below displays the results for four different logistic regression models measuring the odds of being satisfied with life. Model 1 included birthplace as the focal independent variable, and controlled for five standard sociodemographic control variables. Model 2 was an extension of Model 1 and introduced the year of arrival binary variables as an independent variable, as well as a number of other control variables. Model 3 was identical to Model 2, but also included income to assess differences in life satisfaction when income was added as an independent variable. Finally, Model 4 included an interaction term to determine the association between immigrant status, income, and life satisfaction.

The life satisfaction differences between immigrants and non-immigrants were consistently small and not significant. This trend was apparent in each of the models in Table 4, with some differences in the results of Model 4.

Model 1 demonstrates that the life satisfaction differences between immigrants and non-immigrants were small and not significant, with immigrants having 5% lower odds of reporting being satisfied with life. The association between age and life satisfaction revealed that individuals in the 35–44 and 45–54 age ranges had the lowest odds of being satisfied with life, while those reaching or at retirement ages had higher odds. Regardless of the age group, each age category had lower overall odds of being satisfied compared to the reference group (15–24 years). There were no significant gender differences in life satisfaction. Model 1 also demonstrates that

Table 4 Logistic regression results predicting the odds of being satisfied with life, GSS 2013 (N = 19,297)

Variables	Model 1	Model 2	Model 3	Model 4
Birthplace (ref. Canadian-born)	.95	.94	.99	2.1
Year of arrival				
1946–1959		1.1	1.1	1.2
1960–1969		.92	.86	.94
1970–1979		.90	.84	.95
1980–1989		1.3	1.2	1.3
1990–1999		1.2	1.1	1.2
2000–2009		.86	.85	.86
2010–2013		1.4	1.4	1.4
Income (ref. No income)				
<$5,000—$29,000			.93	1.1
$30,000—$59,000			1.3	1.7**
$60,000 or more			1.7**	2.2***
Immigrant × income				
<$5,000—$29,000				.43**
$30,000—$59,000				.36**
$60,000 or more				.38**
Gender (ref. males)	1.1	1.1	1.2*	1.2*
Age (ref. 15–24)				
25–34	.44***	.50***	.44***	.43***
35–44	.33***	.36***	.31***	.30***
45–54	.31***	.34***	.29***	.28***
55–64	.35***	.37***	.32***	.31***
65–74	.52***	.45***	.40***	.38***
75+	.68**	.56**	.50**	.48***
Marital status (ref. Not married)				
Common-law	2.1***	2.2***	2.1***	2.1***
Married	2.9***	2.7***	2.5***	2.5***
Post-sec education (ref. High school only)				
	1.5***	1.4***	1.3**	1.3**
Employed (ref. unemployed)	1.9***	1.5***	1.3**	1.3**
Good self-rated health (ref. Poor SR-health)		4.4***	4.2***	4.2***
Visible minority (ref. not a visible minority)		1.1	1.1	1.1
Own home (ref. renting)		1.3**	1.2**	1.2**
Living w others (ref. living alone)		.78*	.84	.84
Children in home (ref. No children in home)		.97	.94	.94
Religious (ref. does not value religion/spirituality)		1.3**	1.3**	1.3**
Urban (ref. rural)		.81*	.78**	.78**
Strong SBL (ref. Weak SBL)		1.9***	1.9***	1.9***
Discrimination (ref. no experience of discrimination)		.49***	.49***	.49***
Pseudo R-squared	0.0482	0.1248	0.1295	0.1311

Source: 2013 Canadian General Social Survey

*** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$

that individuals who are married, educated beyond high school, and employed had higher odds of satisfaction. The largest significant effect existed between marital status and life satisfaction, with those who live common-law having 2.1% higher odds of being satisfied, and those who are married having 2.9% higher odds compared to those who are not married.

The introduction of the year of arrival binary variables in Model 2 did not yield significant results. Additionally, controlling for more subjective factors in Model 2 revealed trends similar to those in Model 1. Here, the odds of immigrants being less satisfied with life becomes slightly higher, with about 6% lower odds of being satisfied compared to non-immigrants, although this difference was still not significant. There remained no significant gender differences in life satisfaction. Additionally, good self-rated health, owning a home, strong religious beliefs, and a strong sense of belonging to Canada all produced significantly greater odds of being satisfied with life. However, living in urban areas and having experienced discrimination in the last five years produced 19% and 51% lower odds of being satisfied with life, respectively.

Model 3 extended upon Model 2 by including income as an independent variable to assess whether income mediated any effect between immigrants' year of arrival and their life satisfaction. As previously stated, the results for Model 2 revealed that controlling for year of arrival did not have a significant effect on immigrants' life satisfaction, with no interval yielding significant results. Model 3 revealed similar trends, as controlling for income did not lead to statistically significant findings between life satisfaction and immigrant status or immigrants' year of arrival. Interestingly, the addition of income in Model 3 reduced differences in life satisfaction between immigrants and non-immigrants, with the former having only 1% lower odds of being satisfied with life. Regarding income specifically, there was a significant relationship between income and life satisfaction only for the high-income group, with those making $60,000 or more annually reporting 1.7% greater odds of being satisfied with life.

Interaction Between Birthplace and Income

Models 2 and 3 in Table 4 demonstrate that year of arrival did not have a significant effect on immigrants' life satisfaction, and that controlling for income did not impact this effect in a statistically significant way. It therefore became important to measure potential interactions between specific variables within the models. Since personal annual income is an important variable within our study, as well as the majority of existing studies on life satisfaction, an interaction term was run between birthplace and income. Model 4 in Table 4 displays the results for the interaction term that tests the relationship between life satisfaction, immigrant status, and personal annual income group.

The inclusion of the interaction term between immigrant status and income yielded significant results. As displayed in Model 4, the odds ratio of the main effect between life satisfaction and immigrant status was different from previous models, with immigrants having 2.1% higher odds of being satisfied with life compared to

non-immigrants. However, this effect was not significant. Consistent with previous models, none of the year of arrival binary variables had a significant effect on immigrants' life satisfaction. On the other hand, the medium and high-income categories produced significant main effects.

Looking specifically at the interactions between immigrant status and income, all categories were significant. The interaction, therefore, revealed that income impacted the life satisfaction of both immigrants and non-immigrants at all levels. Immigrants in the low-income category had 57% lower odds of being satisfied with life, those in the medium income group had 64% lower odds, and those in the high-income group had 62% lower odds. Interestingly, however, immigrants in the low-income category had the lowest odds of being dissatisfied, while the odds of immigrants in the medium- and high-income categories were higher.

A final consideration is in regard to the fit of each model included in Table 4, which was assessed based on the value of the pseudo R-squared. Model 1 had the lowest value of all models, as it included the lowest number of control variables. The addition of the year of arrival binary variables and further controls increased the value, with a pseudo R-squared of 0.1248 in Model 2, meaning that the variables explained 12.48% of the variations in life satisfaction. Model 4, the fullest model, provided the best explanation of life satisfaction, although it too is admittedly low at 0.1311.

Discussion

The primary goal of this study was to contribute to existing research surrounding the life satisfaction of immigrants in Canada. First, we hypothesized that immigrants would have slightly lower levels of life satisfaction compared to non-immigrants. This assumption was based on existing findings in other host-countries, as well as the limited literature in the Canadian context. Specifically, previous studies have indicated that immigrants often report lower levels of life satisfaction compared to the native-born population within the host-country, and this finding is consistent within the United States and across various European countries (Arpino & de Valk, 2018; Bartram, 2016; Safi, 2010). Results of our study indicated that immigrants within Canada report slightly higher levels of life satisfaction. This is generally consistent with two previous Canadian studies, which revealed that immigrants either report similar or slightly higher scores compared to their native-born counterparts (Berry & Hou, 2016; Frank et al., 2014).

Although immigrants reported slightly higher life satisfaction scores compared to non-immigrants (9.1 and 8.9, respectively), regression results did not reveal significant differences between immigrant status and life satisfaction. This finding indicates that being an immigrant in Canada does not significantly impact life satisfaction. The absence of a significant effect indicates that other factors associated with being an immigrant or non-immigrant are more likely to impact an individual's overall satisfaction with life.

Second, consistent with previous findings, results revealed that age impacts life satisfaction in a non-linear fashion (Bartram, 2011; Calvo, et al., 2019; Kirmanoğlu

& Başlevent, 2014). Additionally, being married, employed, attaining some sort of post-secondary education, and good self-rated health are all subjective factors that positively impact life satisfaction. Each of these findings is consistent with existing life satisfaction research (Bartram, 2011; Diener, 2009; Helliwell, 2003).

Our central focus, however, was specifically on immigrants' life satisfaction. Existing findings surrounding the association between life satisfaction and immigrants' length of stay is inconsistent across host-countries. Additionally, the potential association between these two variables remains relatively unexplored in the Canadian context. We hypothesized that year of arrival would significantly impact the life satisfaction of immigrants, with those arriving more recently reporting higher levels. According to our findings, recent immigrants who arrived at some point between 2010 and 2013 have the highest odds of being satisfied with life, supporting the hypothesis that upon arrival immigrants are likely to experience an increase in overall well-being (i.e., socially, economically, etc.) that translates into higher life satisfaction (Stillman et al., 2013). This finding is also consistent with aspects of existing studies, such as Obućina's (2013) study of immigrants in Germany and the negative association between life satisfaction and length of stay. Interestingly, however, this trend is not consistent for immigrants who arrived during the second most recent range of years (2000–2009). Additionally, the life satisfaction of immigrants who have been settled in Canada for many years is not consistent with the hypothesis that only recent immigrants will be the most satisfied. Therefore, the results support aspects of the hypothesized trends in the associations between year of arrival and life satisfaction, however, the trends are not entirely consistent.

The lack of significant associations found between length of stay and immigrants' life satisfaction is important to discuss, as this is a finding common in previous research. For example, in Kogen et al.'s 2018 study of 18 European countries, they revealed no significant associations between the variables across any of the included countries. Similarly, Bartram (2016) also revealed that year of arrival indicators were removed from the analysis due to no significant associations being found. Finally, Obućina's (2013) study in Germany found that only some year of arrival intervals significantly impacted immigrant's life satisfaction. This brings us to the present study, which consistently revealed that year of arrival does not significantly impact immigrants' life satisfaction in Canada. The reasons as to why the year of arrival variables are not significant are difficult to pinpoint. For instance, one potential answer is that year of arrival may be associated with other factors related to integration, including education, employment, home ownership, amongst others (Arpino & de Valk, 2018; Bloemraad et al., 2008; Sapeha, 2015). Although income did not impact the association between length of stay and immigrants' life satisfaction, other factors associated with length of stay better explain these changes overtime (Olgiati et al., 2013).

Without significant findings regarding year of arrival, it is difficult to know if social comparisons directly impact immigrants' life satisfaction. It is possible, however, to speculate the reason behind recent immigrants having the highest levels of satisfaction. For instance, several studies have indicated that recent immigrants may be more likely to retain individuals in their source-country as their reference group (Bartram, 2011; Cobb et al., 2019). It has been revealed that immigrants often

compare their circumstances in the host-country to their expected circumstances had they remained in their source-country. That is, if immigrants feel that they are doing better than those who remained in their source-country, they are more likely to be satisfied with life (Vohra & Adair, 2000).

Thus, the trends across the year of arrival ranges show that social comparisons have the potential to be an underlying factor that influences changes in immigrants' life satisfaction. As highlighted throughout existing literature and evident in the results of this study, as immigrants' length of time in Canada increases, they may be more likely to begin using the Canadian-born as their reference group, which could potentially result in lower levels of life satisfaction (Knight & Gunatilaka, 2012; Stillman et al., 2013). However, given this study's finding that immigrants are generally more satisfied than the Canadian-born population, one assumption supported by previous research is that immigrants in Canada may be using co-ethnics with similar outcomes as their reference group, thereby leading to comparisons that increase life satisfaction overall (Bartram, 2010, 2011; Cobb et al., 2017).

The final focus of this study was to determine if personal annual income impacts the association between immigrants' length of stay in the host-country and their life satisfaction. We hypothesized that income would significantly impact immigrants' life satisfaction, and that including income would reduce the associations between the year of arrival and life satisfaction variables. Our results revealed that income does not act as a mediator in this relationship. The significance of the interaction effect between immigrant status and income indicates that the latter is a factor that impacts immigrants' life satisfaction more than their length of time in Canada. Further, existing literature consistently reveals a complicated association between income and life satisfaction (Clark et al., 2008; Easterlin et al., 2010; Ferrer-i-Carbonell, 2013), which seems to be heightened when looking at this connection for immigrants specifically. This may be due to the unique factors experienced by immigrants as they navigate life in a new country (Chow, 2007; Cobb et al., 2019; Olgiati et al., 2013).

The results of the interaction term in our study demonstrated that the impact of income on immigrants' life satisfaction remains complicated. The finding that immigrants in the medium income group have the highest odds of being dissatisfied with life is interesting, as we expected those results of the low-income group. There are various factors that can explain this trend. Although immigrants typically experience increases in income alongside their length of stay, most do not exceed an annual income of over $40,000 even after living in Canada for up to 10 years (Statistics Canada/IMDB, 2019b). Furthermore, recent immigrants are more likely to be concentrated in lower income categories (Picot, 2008). Thus, with descriptive statistics showing that most immigrants in our sample are concentrated in the medium- and low-income categories, the fact that immigrants at the low end were shown to have the lowest odds of being dissatisfied with life is not all that surprising. This finding is also supported by Olgiati et al., 2013 study. In assessing the associations between economic migration, income, and life satisfaction, they speculated that there may be a "subsistence effect" among more recent immigrants, in that income improves well-being until the point at which other factors associated with duration of stay become more dominant (Olgiati et al., 2013). Therefore, the finding that immigrants in the

low-income category have the lowest odds of being dissatisfied may be related to the trend of recent immigrants valuing the initial income increases they experience upon arrival. Future research should further explore the factors contributing to the interesting interactions between immigrants' income group and their level of life satisfaction.

Limitations

Although this study filled existing research gaps surrounding the factors that impact immigrants' life satisfaction in Canada, as with any study, there were limitations. The first limitation was the inability to analyze differences in immigrants' life satisfaction based on their source-countries. The public-use file of the 2013 GSS does not ask immigrants to report their source-country, and problems with collinearity prevented the inclusion of birth-region. Ideally, we would have been able to access the master file available in Research Data Centres (RDCs) across the country. Unfortunately, COVID-19 and the subsequent closure of RDCs made this impossible.

Furthermore, the absence of longitudinal data meant that the life satisfaction of specific immigrants within Canada could not be tracked over time. The year of arrival binary variables were only able to assess immigrants' life satisfaction at one particular point in time. Future research studying the association between immigrants' life satisfaction and their length of time spent in Canada should seek to include longitudinal data that tracks the same sample of immigrants as their length of time in Canada increases. Another limitation of this study rests in the inability to pinpoint immigrants' reference groups. While many existing studies—including ours—tend to use social comparisons as a theoretical orientation, future research should attempt to include a mechanism whereby reference groups can be better analyzed.

A final limitation of this study lies in the subjectivity of the dependent variable, life satisfaction. Although the study of life satisfaction using quantitative scales is widely viewed as valid and reliable (Diener, 2009; Diener et al., 2013; Helliwell, 2003), it is possible that a qualitative component to this study would have yielded further explanations of the factors behind the lack of significant associations between immigrants' length of stay and their life satisfaction. That is, the inclusion of immigrants' personal narratives and experiences has the potential to fill remaining gaps, perhaps by allowing for a better understanding of the specific factors that contribute to changes in life satisfaction over time. Qualitative research could also shed further light on the reasons for differences in life satisfaction across individuals and groups. This is a potentially fruitful area for future research.

Conclusion

Regardless of limitations, this study contributes to existing literature surrounding the life satisfaction of immigrants in Canada by revealing that it is slightly higher than Canadian-born individuals, and that year of arrival does not have a direct effect.

Rather, other subjective factors, such as income, are more important determinants in this area of research. The results of this study also provide evidence surrounding the issue of selectivity when assessing immigrants' life satisfaction. The finding that immigrants are generally more satisfied than the Canadian-born population may indicate that immigrants are simply satisfied with their lives in Canada, and that those who are not, are more likely to relocate or return to their source-country (Frank et al., 2014; Massey & Akresh, 2006). It is possible that this trend results in an over-representation of immigrants in Canada who are highly satisfied with life. Future research should seek to determine additional underlying factors associated with length of stay that have the potential to increase or decrease immigrants' life satisfaction in Canada.

Overall, analyzing and understanding the life satisfaction of immigrants in their host-countries is critical, as it reveals valuable information about immigrants' assessments of their lives, as well as their prospects for successful integration. Future research should attempt to uncover the specific aspects associated with income (i.e., higher levels of job satisfaction, personal validation through credential recognition, etc.) that create connections between immigrants' financial standing and their life satisfaction. Immigration policies and settlement programs and services could then be tailored towards addressing these aspects and, in turn, create economic outcomes that promote increased immigrant life satisfaction.

Declarations

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