

Running Head: QUALITY OF LIFE IN MACAO

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Quality of Life in Macao: Who is Happy and Satisfied?

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## Abstract

The present study investigated the subjective well-being of Macao people. Life domains like salary, family relation and health, as well as income social comparison, were used to predict the two indicators of subjective well-being: life satisfaction and happiness. A random sample of 2,060 people was interviewed at home in person in a large scale survey commissioned by the government. Results indicated life domains like finance, family relations, mental health, housing conditions, leisure activities and relations with spouse / partner contributed to life satisfaction and happiness, and income social comparison could predict life satisfaction. Though it is suggested that socio-demographic factors may not be potent predictor variables (e.g., Myers & Diener, 1995), the present investigation suggested that age, education level, and being an immigrant significantly influenced life satisfaction and happiness.

### Quality of Life in Macao: Who is More Happy and Satisfied?

Macao is facing drastic changes, both economical and societal, after the handover in 1999. Compared to other major Chinese societies, Macao is special in at least three aspects. First, the largest sector contributing to its GDP is gambling. For instance, in the past few year, more than 30% of its GDP came from the Gambling sector directly the industry employed more than 44,743 people in the 4<sup>th</sup> Quarter of 2007 (Statistics and Census Bureau, 2008). In fact, the total receipts generated from the gambling sector were comparable to Las Vegas. Second, accompanying the growth of the gambling industry is the growth of the population. The figure rose from 437,903 in 1999, the year of handover, to 488,144 in 2005. An interesting fact is that during the period 1999 to 2005, there were more than 23,000 new immigrants (Statistics and Census Bureau, 2006). In other words, new immigrants already accounted for about half of the increment of the population. As a whole, the proportion of locally-born resident is remarkably low in Macao. On the other hand, in 2005, excluding non-resident workers, there was just about 33.4% Macao-born residents (Statistics and Census Bureau, 2006). Third, the number of non-resident workers in Macao was 39,411 in 2005, while the total employed resident population was just 237,800 (Statistics and Census Bureau, 2006). The proportion of non-resident workers to resident holder was very high.

GDP per capita in Macao rose from MOP113,067 (about US\$14,133) in 1999 to

MOP194,458 (about US\$24,397) in 2005 (Statistics and Census Bureau, 2006). Many people believe that the gambling industry-driven economic boom will benefit most residents, and it could be reflected by an improved subjective well-being. Nevertheless, some scholars began to question this assumption. For example, Cheng and Wong (2007) argued that new immigrants and less-educated people might not be benefited from economic growth. In fact, game dealers are commonly believed to be benefited most from the gambling industry-driven economic boom. However, not everyone could enter the dealer profession. The competition to join related training programs is very keen – the dealer profession is not a shelter for non-skilled labors.

On the other hand, subjective perceptions of deservingness may also affect people's subjective evaluation of their well-being. The studies of relative deprivation and social comparisons states that outcome of an individual is evaluated against the subjective outcome, or the outcome of comparable others (Thibaut & Walker, 1975). In other words, people may base their judgments on relative rather than absolute terms (Lind & Tyler, 1988). Associated with drastic political and economic changes, the societal value expectation may exceed the value capabilities, triggering discontent or sense of unfairness; thus, undermining the improvement in subjective well-being. All in all, there are sufficient reasons to suspect that the level of subjective well-being may differ among sub-groups, especially between immigrants and the Macao-born, and

between people with different education attainments.

### *Subjective Well-being*

Subjective well-being has long been a research focus in social psychology (Diener, 1984; Diener & Diener, 1995; Diener & Suh, 1997; Diener, Suh, Lucas, & Smith, 1999). Researchers in the area are yet to have a consensus on the definition and measurement tools of this concept (Veenhoven, 1999). For instance, subjective theories on well-being (e.g., desire fulfillment theories) suggest that our evaluations of well-being are related to the possession of objects we desire, whereas objective theories on well-being (e.g., objective list theories) content that we could have a list of objects (e.g., friendship) that are objectively good to have, regardless of what a person thinks (See Brülde, 2007 for a review). In this research, we adopted the subjective approach to measure well-being, one of the main approaches in psychological research of well-being.

Subjective well-being is one of the two major ways to assess subjective quality of life; the other way is to measure objective population domains, like social indicators (Headey & Wearing, 1992). Researchers do not yet have a consensus on the measurement of social indicator aspect of quality of life. Its content and evaluation criteria still vary across studies – from physical and mental health, family, social relations, and work to living environment (Campbell, Converse, & Rogers, 1976; Campbell, 1981; Veenhoven, 1999).

*Income Social Comparison*

In addition to life domains, researchers are yet to arrive at a firm conclusion on the effectiveness of social comparison in predicting subjective well-being. The relativistic approach to subjective well-being suggested that happiness depended on one's relative standing in a group (Diener, Diener & Diener, 1995). It is consistent with the research tradition of relative deprivation and social comparison. The outcome of the comparable others will influence one's subjective evaluation of her or his outcome (Thibaut and Walker, 1975). Income or wealth is usually considered an important standard reflecting one's relative standings. For example, Smith, Diener, and Wedell (1989) demonstrated that people would be happier if they had an income higher than a reference standard, while in another study, Diener, et al. (1995) found that income comparison had low or inconsistent relations with subjective well-being at the nation level. For instance, people surrounded by wealthy neighboring countries were happier. Empirical studies in different settings are necessary to clarify the relationship between income comparison and subjective well-being.

Perception of one's quality of life is not just a reflection of an immediate effect or a mental state, but also a reflection of the social environment surrounding the person. Recent view suggests that this perception contains at least two aspects: cognitive and affective. The cognitive aspect of one's subjective well-being is commonly

conceptualized as *life satisfaction* – a cognitive appraisal of the quality of one's life circumstance or the global evaluation of quality of one's life (Pavot, Diener, Colvin, & Sandvik, 1991; Veenhoven, 1996). The affective aspect of one's subjective well-being could be partially captured by *happiness* – an indicator of emotion and mood (Veenhoven, 1989). Studies taking into account domains like finances would be more related to the cognitive aspect of well-being – life satisfaction, while domains like health has a larger effect on the affective component, like happiness (e.g., Abbott & Sapsford, 2006).

#### *The Present Study*

The present study reported part of the data collected from the Quality of Life Household Survey. The survey was conducted in summer 2005 and it is the first systematic study on subjective well-being in Macao. We explored the relation between subject well-being and its relations with various life domains, as well as sub-group differences of these relations. We took a bottom-up model, assuming that the life domains could predict people's perceived well-being. A comprehensive set of objective indicators were yet to be developed in Macao and the study was exploratory. In this study, though we were taking a more sociological orientation (e.g., Allardt, 1976; Lau, Lee, Wan, & Wong, 2005), the life domains we used were also similar to those in Campbell's (1981) studies of sense of well-being in America and in social indicator

studies conducted in Hong Kong (e.g., Lau et al., 2005). To be precise, we were interested in the relation of several life domains with subjective well-being, namely finances (salary and living cost), housing, social relations (with family and friends), health, recreation, transportation, religion, employment and education. We expect that these variables could predict life satisfaction and happiness. Past studies usually demonstrated a small relation between income level and subjective well-being (e.g., Diener, Sandvik, Seidlitz, & Diener, 1993). However, it may be argued that the development of the gambling industry might have shifted people's values on money income, and material possessions, making the relation between their subjective well-being and money income more apparent. Without past data to guide our predictions, we would like to take the opportunity to explore this relation.

In addition, we were also interested in the effect of income social comparison. Following the theory of relative deprivation (e.g., Thibaut and Walker, 1975), we expect people to exhibit less life satisfaction if they believe that comparable others earned more, regardless of their actual income levels, vice versa. Past studies suggested an inconsistent impact of social comparison on subjective well-being (Diener et al., 1995) and we hope that our exploration could add useful information to the research literature.

In Macao, a large portion of citizens was born outside Macao. It would be interesting to make comparison between immigrants and those who were locally born.



Particularly, we would like to explore the subgroup differences on perceived life satisfaction, happiness, and the life domain predictors of these two aspects of subjective well-being.

## Method

### *Participants*

Respondents aged 18 or above, living in Macao with an identity card, were interviewed in person at home by interviewers. Using multi-stage sampling, 3,500 living quarters were drawn randomly from a total of 144,430 living quarters, with the help of the Macao Census and Statistics Bureau. Kish Grid was used to select household and respondents within a living quarter. Being non-residential address, 585 addresses were excluded from the sample leaving a total of 2,915 living quarters. All completed questionnaires were verified by team leaders by phone. The response rate of the survey was 70.7% (2,060 cases).

### *Questionnaire*

The questionnaire was adapted from the Hong Kong Social Indicator Survey and it contained 208 questions in 18 areas, including demographics, education, work, family and social network, health, income and expenditure, retirement, recreation, communication media, living conditions, transportation, public security, social participation, social stratification, living standard, subjective welfare, social quality and

cross-broader activity.

For the purpose of the present investigation, 13 questions resembling 11 of the Campbell's (1981) domains were selected: (1) Finances (two questions: "household financial conditions", and "balance between household income and living cost"), (2) Family ("satisfaction with family relation"), (3) Partner living together / Spouse (two questions: "relationship with spouse", and "partner living together"), (4) Health ("to what extend you were physically healthy in the last 6 months", and "to what extend you were mentally healthy in the last 6 months"), (5) Housing ("satisfaction with housing conditions"), (6) Leisure activities ("satisfaction with leisure activities"), (7) Friends ("satisfaction with relationship with friends"), (8) Paid Job ("salary level"), (9) Transportation ("satisfaction with the transportation conditions"), (10) Evaluation on Education ("satisfaction with education attainment"), (11) Religion ("with a religion or not"). All questions employed a 5-point scale except salary, which was continuous, and religion, which was dichotomous. People's perceptions of their income, relative to others people in Macao, was measured using a 5-point scale (from "much below" to "much higher"). Similarly, Life satisfaction (from "very satisfy to very dissatisfy) and Happiness (from "very happy" to "very unhappy") were also measured by a 5-point scale.

## Results

### *Demographic*

A total of 2,060 people were interviewed. The number of male and female were 959 (46.6%) and 1,101 (54.4%) respectively. Details of the sample characteristics were shown in Table 1. The characteristics of our sample were similar to the official statistics of the Macao population as a whole (Statistics and Census Bureau, 2006).

### *Life Satisfaction and Happiness*

Life-satisfaction and happiness were significantly correlated,  $r = .54$ ,  $p < .01$ . The mean score for life-satisfaction and happiness were 3.33 ( $s = .87$ ) and 3.47 ( $s = .86$ ) respectively. The means and standard deviations with respect to sex, age group and education level were shown in Table 2.

We tested the effects of sex, age (18-29, 30-54, and 55 or above), education (tertiary or above, secondary, and primary or below) and place of birth (Macao vs. immigrant) against life-satisfaction by an ANOVA. Results indicated that age, education, and place of birth could predict life-satisfaction,  $F(2, 2017) = 10.66$ ,  $p < .01$ , partial eta-squared = .010, and  $F(2, 2017) = 6.41$ ,  $p < .01$ , partial eta-squared = .006,  $F(1, 2017) = 17.77$ ,  $p < .01$ , partial eta-squared = .009 respectively. Interaction effects were non-significant. Macao-born people were more satisfied than immigrants. Post-hoc comparison (Scheffé) suggested that young people (18-29) was more satisfied than the middle age people (30-54). People with tertiary education were more satisfied than

people with secondary school education. People with tertiary and secondary education were more satisfied than people with primary education.

ANOVA was performed to test the impacts of sex, age, education and place of birth on happiness. Results indicated that age and place of birth could predict happiness,  $F(2, 2013) = 6.27, p < .01$ , partial eta-squared = .006 and  $F(1, 2013) = 9.00, p < .01$ , partial eta-squared = .004. Again, there was no significant interaction effect.

Macao-born people were happier than immigrants. Post-hoc comparison (Scheffé) suggested that elderly (55 or above) was more satisfied than the middle age people (30-54). People with tertiary and secondary education were more satisfied than people with primary education

To explore whether education has any effect on life satisfaction, independent from actual income, we perform an ANOVA using education as the independent variable, life satisfaction as the dependent variable, controlling for income. Results indicated that education still predicted life satisfaction,  $F(2, 1383) = 17.87, p < .05$ , partial eta-squared = .025. Controlling actual income, life satisfaction means for tertiary education, secondary education and primary education were 3.56, 3.38 and 3.16 respectively.

Similarly, we performed an ANOVA on happiness using education as the predictor, controlling for actual income. Likewise, education could predict happiness,  $F(2, 1381) = 6.25, p < .01$ , partial eta-squared = .009. Controlling for actual income, happiness

means for tertiary education, secondary education and primary education were 3.60, 3.52 and 3.38 respectively.

To explore the impact of education on income social comparison, we performed an ANOVA using education as the independent variable, income social comparison as the dependent variable, and income level as the covariate. The effect of education was significant,  $F(2, 1373) = 80.34, p < .01$ , partial eta-squared = .105. Controlling for actual income, the means for tertiary education, secondary education and primary education were 3.11, 2.58 and 2.17 respectively.

#### *Domains Contributing to Life Satisfaction and Happiness*

Respondents were asked spontaneously with an open-end question to indicate the most important thing that would influence their well-being. The most popular response was “being healthy” (16.6%), which was followed by “being wealthy” (11.0%), and “family harmony” (9.4%). All other responses were expressed by fewer than 5% of the respondents. People’s preferences were generally consistent across sub-groups. For instance, “Being Healthy” was the most frequently cited domain, by both female and male, by people at different ages, by local people and immigrants, and by people with different education levels. Despite all, slight differences were also noticed for the frequency of “being wealthy” and “family harmony.” For example, female, locally-born people, and people with higher education level mentioned “family harmony” (10.5%,

10.2% and 7.8% respectively) more often than “being wealthy” (8.4%, 9.0%, and 6.4% respectively). Nevertheless, the three life domains mentioned spontaneously by respondents were consistent with the life domains included in the survey.

A hierarchical regression was performed against life satisfaction. Demographic variables like sex, age, education and place of birth were entered in the first block. The 11 life domains were entered in the second block. Income social comparison was entered in the third block. The result was shown in Table 3. The adjusted  $R^2$  was .59,  $F(19, 895) = 68.87, p < .01$ . Education, age (55 or above), and place of birth were significant predictors but sex was not. The  $F$  change for the second block was significant, indicating that the variables as a whole accounted for extra variance of life satisfaction,  $F(13, 896) = 87.25, p < .01$ . In particular, significant predictors included finances, family relation, partner living together, mental health, housing conditions and leisure activities. The  $F$  change for the third block was significant,  $F(1, 895) = 10.41, p < .01$ . It indicated that income social comparison could predict life satisfaction, which was independent from one’s income (a predictor in the second block). As expected, people who considered themselves to be better off reported a higher level of life satisfaction.

Likewise, a hierarchical regression was performed against happiness. Demographic variables like sex, age, education and place of birth were entered in the first block. The

11 life domains were entered in the second block. Income social comparison was entered in the third block. Results were shown in Table 4. The adjusted  $R^2$  was .32,  $F(19, 894) = 23.34, p < .01$ . Consistently, education, age, and place of birth were significant predictors but sex was not. The  $F$  change for the second block was significant, indicating that they accounted for extra variance of happiness,  $F(13, 895) = 30.30, p < .01$ . Similar to the regression on life satisfaction, significant predictors included finances, family relation, partner living together, mental health, housing conditions and leisure activities. The  $F$  change for the third block was non-significant,  $F(1, 894) = 1.68, ns$ . Unlike life satisfaction, income social comparison could not reliably predict happiness.

#### *Immigrants versus Non-immigrants*

To find out what were the potential factors making Macao-born people more satisfied and happier than immigrants. We compared the differences between immigrants and people born locally on the 11 life domains. MANOVA showed that they were different over these life domains,  $F(13, 908) = 3999.16, p < .01$ , partial eta-squared = .983. In particular, immigrants received lower income,  $F(1, 920) = 3.93, p < .05$ , partial eta-squared = .004, less satisfied with the partner,  $F(1, 920) = 4.28, p < .05$ , partial eta-squared = .005, less satisfied with family relations,  $F(1, 920) = 36.58, p < .01$ , partial eta-squared = .038, less satisfied with household financial conditions,  $F(1, 920)$

= 36.02,  $p < .01$ , partial eta-squared = .038, had poorer housing conditions,  $F(1, 920) = 10.39$ ,  $p < .01$ , partial eta-squared = .011, less satisfied with education attainment,  $F(1, 920) = 11.30$ ,  $p < .01$ , partial eta-squared = .012, less satisfied with leisure,  $F(1, 920) = 15.26$ ,  $p < .01$ , partial eta-squared = .016, and less satisfied with the balance between household income and living cost,  $F(1, 920) = 44.99$ ,  $p < .01$ , partial eta-squared = .047. For other domains (mental health, physical health, relations with friends, satisfaction with transportation, and having a religion or not), no difference was found. To sum up, immigrants seemed to be at disadvantage in most of the life domains.

#### Discussion

The findings indicated that people who were satisfied with their financial conditions, family relations, housing conditions, leisure activities, and those who perceived themselves to be mentally healthy, and to have a good relationship with spouse or partner were happier and more satisfied with life. The findings were consistent with most past studies (e.g., Campbell, 1981). In our study, the life domains strongly predicted life satisfaction (about additional 50% of variance), while they also modestly predicted happiness (about additional 20% of variance). It implied that they could adequately predict the subjective well-being of Macao people.

Despite the rapid changes of the societal and economic environment due to the booming of the gambling industry, people are more or less the same as people



elsewhere in evaluating their life. In addition, though it is argued that the booming of gambling industry may upset the value systems and making people more materialistic, the results of our study are in agreement with most past studies – the relation between actual income level and subjective well-being was small, or negligible (e.g., Diener, Sandvik, Seidlitz & Diener, 1993). In fact, the correlation between salary and satisfaction with financial conditions was low in the study. Hence, it was inconsistent with the common belief that Macao people were weighting money or material possessions heavily – a negative impact of a flourishing gambling sector. At the same time, our respondents did not put money or income as their most important life goals, either. The results are consistently with the conjecture that income effect would not be very salient unless the person is very poor (Diener, 1994).

In our study, income social comparison significantly predicted life satisfaction but it could not predict happiness. Income comparison seems to have different impacts on the cognitive aspect of subject well-being (Pavot, Diener, Colvin & Sandvik, 1991; Veenhoven, 1996) and the emotional aspect of subjective well-being (Veenhoven, 1989). One possible explanation may be: the unique contribution of income comparison to happiness was small, after taking into account other factors, though it was significantly related to happiness by itself. Its inconsistent impacts on the cognitive and emotional aspects of well-being require further investigations.

It was surprising that physical health was not related to life satisfaction or happiness. Some studies reported similar findings (e.g., Bowling & Windsor, 2001). Nevertheless, the incoherent results of mental health and physical health were not expected and we had limited knowledge on the mechanism behind. It was especially puzzling given many people reported spontaneously that “being healthy” was very important to them. One possible explanation would be: people being physically unhealthy may still be able to cope with it very well. Loewenstein and Schkade (1998) found out that people tended to overestimate their misery over bad news, say suffering a paralyzing accident. Hence, the impact of being physically unhealthy may have less impact on one’s life satisfaction and happiness than one may expect. On the contrary, people who are mentally unhealthy may not be able to cope efficiently, when facing adversity in other life domains. In Macao, accompanying the development of the gambling industry and the fast changing societal environment, people may experience more stress. For instance, the number of diagnosis and therapeutic service in hospital care in the specialty of Psychiatry rose by 23%, from 12,882 to 15,904, during 2003-2005, while in the same period, the population growth rate was just 8.34% (Statistics and Census Bureau, 2006). Given our findings, mental health could become an even more influential factor in shaping people’s subjective well-being in the near future.

Despite all, the present study could not address whether people facing the same social (e.g., satisfaction with relationships with others) and economic environments (e.g., satisfaction with financial conditions) would respond in the same way. In particular, personal factors like self-esteem (Diener & Diener, 1995) and relationship harmony (Kwan, Bond, & Singelis, 1997) were not included. Further studies in the quality of life in Macao may include these personal factors and examine their interactions with the existing predictors of subjective well-being.

#### *Who was Satisfied and Happy in Macao?*

Our results generally suggested that many socio-demographic variables, such as sex and income level, were not very useful in predicting subjective well-being like happiness (Myers & Diener, 1995). However, variables like place of birth, age and education seemed to exert their impacts on life satisfaction and happiness.

*Sex.* Sex failed to predict happiness and life satisfaction. The result was consistent with the meta-analysis conducted by Haring, Stock, and Okun (1984). Wood, Rhodes, and Whelan (1989) contended that though women were more likely than men to feel sad, they also experienced a higher intensity of positive affects. Hence, Diener et al. (1999) concluded that women experienced more intense positive and negative emotions than men, resulting in comparable level of subjective well-being as men. Our study was consistent with this hypothesis. Men and women expressed similar level of happiness.

In sum, integrating the findings of past studies and the present study, sex was not a major variable determining the subjective well-being.

*Education.* Education's impact on life satisfaction and happiness was well-documented (e.g., Campbell et al., 1976; Witter, Okun, Stock, & Haring, 1984). Witter et al. (1984) suggested that education was indirectly related to subjective well-being through income and occupational status. In our study, people receiving more education were more satisfied with their life and they were also happier. Paradoxically, in our regression study, satisfaction with education attainment did not predict life satisfaction or happiness.

One possible explanation is that the effect of education was indirect – higher education led to higher income, and in turn, high income enhanced life satisfaction and happiness (e.g., Witter et al., 1984). Hence, the unique contribution of education may become small if salary is taken into account. It also implies that education is not the end but it is the means. Nevertheless, our data did not support this argument. We tested the effect of education on life satisfaction and happiness, controlling for actual income. People with tertiary education were still more satisfied and happier than those with primary education. Hence, education is not just a means to income but it is also a goal by itself.

Another possible explanation would be that people with higher education perceive

themselves to be better off, even if it is not true. Education level is a heuristics to judge the relative standing of one's achievement when we have limited information on other people. We tested the effect of education on income comparison, controlling for actual income. People with tertiary education perceived themselves to be better off even when salary was controlled, thus providing some supports to the heuristic argument.

*Age.* Our findings suggested that the middle-age people (30-54) reported the lowest subjective well-being. Their life satisfactions were lower than the young people and they were not as happy as the elderly. Our findings were different from a few studies, which suggested that age had a negligible effect on subjective well-being (e.g., Lattern, 1989; Stock et al., 1983; see Myer & Diener, 1995 for a review). A closer examination on our data revealed that in a number of life domains predicting life satisfaction and happiness, the middle-age people scored lower than other age groups. For example, they were less satisfied with their financial conditions than the young people, despite that they were not earning less. They were less satisfied with their relation with friends than the young people, and they were also less satisfied with the leisure life than all other age groups. It explained why they were less satisfied and less happy. We speculate that the middle-age group might suffer a lot in the recent changes in Macao because of the booming gambling industry. They might be less adaptive to a changing working and social environment while young people were more adaptive to, or even welcome, the

changes.

*Immigrant.* In Macao, more than half of the residents were immigrants, mainly from mainland China. Obviously, not all of them were benefited from the gambling industry-driven economic boom. Our findings showed that immigrants were in disadvantages over a number of life domains. Compared to Macao-born residents, they were less satisfied with the partner, family relations, education attainment, leisure and housing conditions. They were also financially vulnerable and received less income than Macao-born residents. The problems they faced may be related to adaptation like limited social network. For instance, it may be more difficult for immigrants to obtain help, economical or emotional, from other people because of the less-developed social network.

Because of the rapid growth of the gambling industry – building and operation of new casinos – and the low birth rate, one measure taken by the government is to allow non-residents workers to work in Macao. Macao had a lot of non-residents workers (more than 16% of the total work force in 2005). This group of people may face even bigger problems in forming social network, receiving help and joining the mainstream society than legal immigrants. It will be another interesting direction for further research.

Conclusion

The survey reported was the first quality of life survey conducted in Macao. Macao is undergoing big economic and societal changes in recent year. People have higher salary but they also have to tolerate more gambling-related problems. The amount of variance of life satisfaction being explained was impressive, compared to other similar studies. Hence, the study provided a useful empirical foundation for future explorations of the subjective well-being in Macao. Yet, we noted that given the explorative nature of the present study and there were a number of issues to be addressed, some items like income comparison will need to be refined in more rigorous tests for specific hypotheses in the future.

Past studies on subjective well-being using Chinese samples usually focused on self-esteem and human relations (e.g., Chen, Cheung, Bond, & Leung, 2006). A representative sample, minimizing problems such as range-restriction, would complement the current research literature and gave us a better assessment on the potency of socio-demographic factors on the multi-faceted concept of life quality (c.f., Myers & Diener, 1995). The present study did suggest that socio-demographic variables like place of birth, age and education could be important determinants of life satisfaction and happiness. Instruments that combined the objective socio-economic factors, subjective evaluations on those factors, and personal factors, like self-esteem, would likely to give us a better understanding of the full picture of subjective

well-being.

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