**Subjective Well-Being of University Students Explained by Psychological and Sociodemographic Variables**

**El Bienestar Subjetivo de Estudiantes Universitarios Explicado por Variables Psicológicas y Sociodemográficas**

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The correlational study sought to establish the relationship between life satisfaction and happiness with self-esteem, extraversion, self-realisation and resentment, identifying whether the latter could predict well-being and comparing their impact on well-being with the impact of socio-demographic variables. The sample, naon-probabilistic by convenience, consisted of 392 male and female students ([[1]](#footnote-1)6 to 49 years old) from the Universidad del Valle, Palmira. The results showed that all psychological variables were related to the components of well-being. Except for extraversion, the other variables predicted life satisfaction. All four variables (self-esteem, extraversion, self-realisation and resentment) predicted happiness. Psychological variables, and especially those nurturing achievement, explained the variance of well-being much better than socio-demographic variables. The main conclusions were: (a) people construct a basic and stable way of relating to life, which contributes more to well-being than situational and socio-demographic factors; (b) subjective well-being depends on several factors, so that other relationships of well-being beyond the traditional ones (self-esteem, the Big Five) should be studied.

*Keywords:* subjective well-being, self-esteem, extraversion, self-realisation, resentment, socio-demographic variables.

El estudio correlacional buscó establecer la relación de la satisfacción vital y la felicidad con la autoestima, la extraversión, la autorrealización y el resentimiento, identificando si estas últimas podían predecir el bienestar y comparar su impacto en este, con el impacto de las variables sociodemográficas. La muestra, no probabilística por conveniencia, estuvo constituida por 392 estudiantes, hombres y mujeres (16 a 49 años), de la Universidad del Valle, sede Palmira. Los resultados mostraron que todas las variables psicológicas se relacionaron con los componentes del bienestar. Excepto la extraversión, las demás variables predijeron la satisfacción vital. Las cuatro variables (autoestima, extraversión, autorrealización y resentimiento) predijeron la felicidad. Las variables psicológicas, y especialmente aquellas que se nutren de logros, explicaron mucho mejor la varianza del bienestar que las sociodemográficas. Las principales conclusiones fueron: (a) Las personas construyen un modo básico y estable de relacionarse con la vida, que aporta más al bienestar que los factores situacionales y sociodemográficos; (b) el bienestar subjetivo depende de diversos factores, por lo que deberían estudiarse otras relaciones del bienestar más allá de las tradicionales (autoestima, los cinco grandes).

*Palabras Clave:* bienestar subjetivo, autoestima, extraversión, autorrealización, resentimiento, variables sociodemográficas.

Subjective well-being is seen as an overall positive or negative way of evaluating one's own life and emotional experiences (see Diener, 2006; for a reference definition). Subjective well-being is made up of two basic components: a cognitive one, called life satisfaction, and an emotional one, called happiness. Shin and Johnson (1978) consider life satisfaction as an overall judgement that people make of their quality of life, following their own criteria. Happiness is seen as an experience of a subjective and temporary nature, born of the balance that people make when weighing pleasant versus unpleasant situations (Triadó et al., 2005). The two components of subjective well-being differ, not only in the more rational nature of life satisfaction and the more emotional nature of happiness, but also in that the former involves a stable, long-term judgement, while the latter is affected by fluctuations over shorter periods of time (Murillo & Salazar, 2019).

Many researchers have searched for factors that help explain subjective well-being (Costa & McCrae, 1980; Diener et al., 1999; González & Marrero, 2017; Olivera, 2015). This search has shown that the impact of genetic and personality factors on well-being is very large and decisive (Costa & McCrae, 1980; Lyubomirsky & Lepper, 1999; Steel et al., 2008). Thus, it has been found that people who evaluate their life satisfactorily at one point in time do so in the same way years later (Oishi et al., 1999). This suggests that, rather than socio-demographic factors, life circumstances and environmental influences, which are changeable, the major determinants of well-being are to be found in stable factors such as personality factors. According to Steel et al. (2008) the explained variance of well-being attributable to personality traits could be between 41% and 63%. Possibly influenced by the robust empirical evidence supporting such a relationship, most studies have restricted their interest to the analysis of the connection between the so-called big five personality traits (extraversion, neuroticism, agreeableness, responsibility and openness to experience) and well-being, leaving out the relationship of the latter with more specific facets and aspects of personality or with other psychological measures (Marrero & Carballeira, 2011).

There are, however, other psychological variables of a certain stability, not sufficiently expressed in the big five personality traits, which have shown explanatory value for well-being. Self-esteem (the one that has aroused most interest outside the big five), values, optimism and achievement motivation are good examples of this (Arita et al., 2005; Diener & Diener, 2009; González & Marrero, 2017; Moyano & Ramos, 2007; Oishi et al., 1999; Sagiv & Schwartz, 2000). Advancing in the study of the relationship of subjective well-being with psychological factors beyond the Big Five, as well as in the study of the impact of classic personality traits compared to these other variables, is therefore an incomplete task. Other authors have previously pointed out this need, stating that well-being requires different psychological conditions and how none by itself is sufficient to explain it in its entirety (Larsen & Eid, 2008; Marrero & Carballeira, 2011). It has even been pointed out that even within the Big Five, there may be conceptualisation problems (Steel et al., 2008) and specific facets that explain well-being better than the global dimensions of extraversion and neuroticism, which have so far been shown to impact it most strongly (Diener et al., 2009). In the same direction, Sun et al. (2018) propose the related study of subjective well-being and eudaimonic well-being at a more specific level of personality traits, which could therefore offer more insight. For these researchers, the exclusive analysis at the level of the big five personality domains obscures important details of the relationship between personality and well-being.

Based on the above considerations, this research includes psychological variables traditionally little studied empirically in their relationship with subjective well-being, such as resentment and self-realisation and compares them with two recurrently analysed predictor variables, such as extraversion (one of the big five traits) and self-esteem (perhaps the most interesting outside the big five). Comparing their impact on well-being may be one of the contributions of this study, as it could provide empirical evidence that supports the approach of well-being as a multi-determined and complex phenomenon (Diener et al., 1999; Marrero & Carballeira, 2011) and about which there is still much to be known. The literature review indicates the following:

## Self-Esteem and its Relationship to Subjective Well-being

Self-esteem, defined as a person's overall evaluation of him/herself and the feelings that accompany this evaluation (Verkuiten & Nekuee, 2001), has been systematically associated with components of subjective well-being, but especially with the cognitive component. Previous work that has found a significant relationship between self-esteem and life satisfaction in different cultural contexts includes studies by Ayyash-Abdo and Alamuddin (2007), Gutierrez and Gongalvez (2013), Murillo and Molero (2012), and Murillo and Salazar (2019). A literature review by Cajiao et al. (2013) revealed that the positive effect of self-esteem on life satisfaction is a constant in multiple empirical works. The self-esteem-happiness relationship, although less convincing, also has empirical support. Among the researchers who support this are: Cheng and Furnham (2003), Murillo and Salazar (2019), Olivera (2015) and González and Marrero (2017).

The high levels of correlation and/or prediction found between self-esteem, the two components of well-being, and the fact that these data come from different cultures, allow us to affirm that self-esteem is one of the most important predictors of subjective well-being, and have even given rise to the suggestion that the former is a component of the latter (Cheng & Furnham, 2003; De Neve & Cooper, 1998). However, as Marrero and Carballeira (2011) point out, the shared variance found between self-esteem and well-being is not so high as to affirm that they are the same construct. Additionally, in self-esteem the evaluation is about oneself, which differs conceptually from the cognitive judgement about life (life satisfaction) and the emotional balance of one's own experiences (happiness). They are therefore different, but closely related, constructs. Since most of the literature on the self-esteem-wellbeing relationship comes from individualistic cultures and it has been established that this relationship is stronger in such cultures (Diener & Diener, 2009), more empirical evidence from collectivist societies is needed.

## Extraversion and its relation to Subjective Well-being

Extraversion is one of the personality traits that has been most frequently related to subjective well-being in the literature. Unlike self-esteem, which is most closely related to life satisfaction, extraversion has been found to have a stronger impact on happiness. It is, together with neuroticism and according to the literature, the major personality trait that best predicts well-being (Costa & McCrae, 1980; DeNeve & Cooper, 1998).

Extraversion facilitates developing social activity, seeking human companionship and expressing positive emotions, increasing communication with other people (see Eysenck, 1967). Positive relationships of extraversion with happiness have been reported in studies by González and Marrero (2017), Hills and Argyle (2001) and Murillo and Salazar (2019) and with positive affect (Puente-Díaz & Cavazos, 2019). Likewise, Olivera (2015) confirmed that extraversion predicted affect balance and Diener et al. (1992) found that extraverts were happier, regardless of whether they lived in company, worked or not, or lived in cities or in rural areas. Among the explanations that have been offered for this close relationship, it is argued that it is due to the carefree, spontaneous, optimistic and relationally open nature of the extraverted person (Zelenski, et al., 2012) or to the fact that extraverts spend more time with other people and that this supports subjective well-being (Siedlecki et al., 2014). Extraversion is considered to be a better predictor of positive emotions. However, most of the studies that confirm this have been done in individualistic societies, so it is relevant to provide more empirical evidence of their behaviors in collectivist and tropical societies in which well-being is particularly supported by social relationships and where their members tend, as is the case in Colombia, to consider themselves more expressive and spontaneous. It is also necessary to study their behaviors with respect to well-being, compared with that of variables that have been little studied.

## Self-realisation and Subjective Well-being

Self-realisation is an important concept within the eudaimonic tradition of well-being, one of the two great traditions in psychology, along with the hedonic tradition (Maslow, 1970; Rogers, 1977; Ryff, 1989; Venhoutte, 2014). Despite this, it is a construct with very little empirical development. Unlike the hedonic conception that studies subjective well-being, the eudaimonic tradition studies psychological well-being, proposing that this is found in the optimal development, the search for meaning and the fulfilment of people (Barrantes & Ureña-Bonilla, 2015; Ryan & Deci, 2001). In other words, how fulfilled a person feels and how much he or she has fulfilled his or her life goals.

In this paper, self-realisation is defined as the subjective experience of self-improvement associated with the development of one's own capabilities and potential, as well as the feeling of self-satisfaction that arises as a result of the achievement of goals and objectives that give meaning to one's own life.

Self-realisation and eudaimonic well-being therefore point in the same direction: the development of capabilities, human potential and personal growth (Merino et al., 2015), which is why they are conceptually different from subjective well-being.

Keyes et al. (2002) consider subjective well-being and psychological well-being to be related but empirically distinct concepts. They state that while the former involves global evaluations of affect and quality of life, the latter examines perceived development in purpose, meaning, goals and personal growth. As can be seen, the achievement of purposeful goals that give meaning to life is essential for psychological well-being but could also be important for subjective well-being if one takes into account that achievement motivation has been identified as a factor impacting on it (Arita et al., 2005; Moyano & Ramos, 2007; Sun et al., 2018). Self-realisation should therefore be a concept that bridges the two traditions of well-being. Interestingly, however, the eudaimonic tradition and the hedonic tradition have essentially followed independent lines of study and there are relatively few studies that relate categories associated with psychological well-being to categories associated with subjective well-being.

Relatively few researchers have attempted to establish conceptual or empirical relationships between the two constructs and their components (Gonzalez & Marrero, 2017; Kahn & Juster, 2002; Seligman, 2011). Among the previous empirical studies that have found a close relationship between psychological well-being and subjective well-being are those carried out by Díaz et al. (2011), who did so through factor analysis; Moreta et al. (2017), who found a strong correlation between life satisfaction and Ryff's dimensions of psychological well-being among Ecuadorian university students; and Moratori et al. (2015), who found a relationship between happiness and Ryff's dimensions of psychological well-being among Argentines and Spaniards. Recently, the so-called PERMA model (Butler & Kern, 2016) has been proposed, which attempts to integrate the two perspectives. Similarly, a close relationship between the two types of well-being has been confirmed (Sun et al., 2018). In summary self-realisation expresses a subjective need to surpass oneself and develop potential and is a conceptually different construct from subjective well-being, which is an overall judgement of one's life expressed at the cognitive and emotional levels. By its nature, self-realisation is not a stable personality trait, but neither is it a situational variable, it is a basic human need that demands to be satisfied and is thus fuelled by life events and, while it has some proximity to the need for competence (Ryan & Deci, 2000) or achievement motivation (McClelland, 1989), they are supported by philosophically different paradigms. Self-realisation is subject to constant evaluation, an aspect in which it would be similar to subjective well-being. Only in well-being, life as a whole is evaluated. The two concepts would have a very close connection, and this should be evidenced in this work. Providing empirical evidence of the close connection between the two types of well-being would be one of the contributions of this study.

## Resentment and Subjective Well-being

Most studies on negative personality traits and their role in well-being come from work on neuroticism, which is too broad a dimension, leaving large gaps in knowledge (Sun et al., 2018). According to Keyes, et al. (2002), it usually involves instability, worry, anxiety and irritability (very vague and general symptoms), and therefore does not allow us to understand all the specific problems present in the personality. This is the case of resentment, defined as an internal process of an emotional nature and moral justification, deep-rooted and chronic, characterised by the accumulation of frustration, pain, anger, rancour rumination of past events, self-victimisation, external attribution of blame and thirst for revenge (see Murillo & Salazar, 2019; for a reference definition). Resentment would therefore fall within the very broad spectrum of neuroticism, but the latter would not account for the specificities of the former, which is why it is relevant to study it in relation to well-being.

Given that resentment often tends to become a permanent and self-destructive personality trait, it has been negatively associated with well-being (see Leal et al., 2005; León et al., 1988). However, most references to the harmful impact of resentment on well-being have been conceptual, and few empirical studies have reported such a relationship.

These include studies by Eldeleklioglu (2015), Inga and Vara (2006) and Murillo and Salazar (2019), the latter with Colombian participants.

However, most of the empirical references about the negative relationship of resentment with well-being come from an indirect source: the more numerous studies that have managed to establish a positive impact of forgiveness on subjective well-being. Forgiveness, defined as overcoming resentment and letting go of its various painful manifestations (Mkrtchyan, 2014), has shown positive effects on well-being in different studies (Allemand et al., 2012; Yarnoz-Yaben et al., 2016). Allemand and colleagues found that people with a high disposition to forgiveness had higher and significant life satisfaction, as well as higher positive affect. This positive relationship between forgiveness and well-being would be especially clear, according to Worthington Jr. et al. (2007), in emotional forgiveness, compared to decisional forgiveness, as it produces psychophysiological changes that allow for a genuine overcoming of resentment. Such studies reinforce in a remarkable but indirect way the hypothesis about the negative impact of resentment on well-being, in the absence of a sufficient volume of empirical work to date to support such an assumption. Conceptually, however, it is easy to understand that frustration, pain, self-victimization, pent-up anger, bitterness, rumination on past negative events and an unquenchable thirst for revenge, manifestations of resentment (Murillo & Salazar, 2019), negatively affect well-being. It is hoped that this study will contribute direct empirical evidence to demonstrate this.

## Socio-demographic variables and Subjective Well-being

In an attempt to construct a profile of what a "happy person" is, the behaviors of life satisfaction and happiness in people has been explored according to their age, sex and/or gender, income, educational level, occupation and marital status, among others. The literature suggests that socio-demographic factors have little weight on well-being compared to stable psychological traits (Lyubomirsky & Lepper, 1999). Empirical studies have also shown that the weight on subjective well-being is differentiated according to the sociodemographic variable in question.

There are no conclusive results on the age-wellbeing relationship, since while Hervás (2009) and Siedlecki et al. (2014) have pointed out that age is a poor predictor of well-being, others (Cuadra & Florenzano, 2003; Sarracino, 2013) suggest a significant relationship between them. Moreover, among those who report such a relationship, reports are contradictory, as while Vera et al. (2012) and Cuadra and Florenzano (2003) report higher levels of happiness in younger people, others (Alarcón, 2001; Bruine de Bruin et al., 2016; Moyano & Ramos, 2007), have found them, on the contrary, in older people. Relatively recent studies could explain this contradiction, pointing out that there is a U-shaped distribution from youth to adulthood, which then decreases after the age of 60 (González & Marrero, 2017; Schnettler et al., 2014). It is also considered that young people regulate emotions less than older people (Alarcón, 2001), so they tend to present more extreme emotions, whether positive or negative.

The relationship between sex (and/or gender) and subjective well-being, as with age, has presented contradictory and inconclusive results in previous studies. Thus, while there are studies that show no differences in life satisfaction and happiness between men and women (Alarcón, 2001; Castella-Sarriera, 2012; Vera et al., 2012), there are others that do. Among the research that has shown differences in well-being according to gender, we have the work of Wood et al. (1989), which indicates higher levels of happiness in women, Mookherjee (2010), who found greater life satisfaction in married women than in married men, and Ayyash-Abdo and Alamuddin (2007), who found greater positive affect in men than in women. Hervás (2009) concludes that gender is not a good predictor of happiness. Tesch-Römer et al. (2008), however, have postulated, after analysing studies in several European countries, that gender differences may exist as a function of access to relevant resources.

Most of the previous work reviewed for this research suggests that a higher level of education is positively associated with subjective well-being. This relationship is supported by studies developed by Arita et al. (2005) and González and Marrero (2017) in Mexico; Barrantes and Ureña-Bonilla (2015) in Costa Rica; Inga and Vara (2006) in Peru, and Murillo and Molero (2012) with Colombian migrants in Spain. These results are independent of the well-being component measured (life satisfaction, happiness, affect balance). This hegemonic tendency is conceptually coherent in that a higher academic level constitutes an achievement and achievement is in itself a source of personal satisfaction.

Academic achievement also places a person in a privileged social category, given the cultural emphasis on study as a path to personal improvement, an emphasis that is especially notable in developing countries such as those in Latin America, where studies are equivalent to upward social mobility. In addition, a higher level of education means a higher probability of employment and income.

This research also studies the relationship between subjective well-being and employment as an additional activity to university studies, an aspect not generally documented in this way in the literature reviewed. However, previous studies have shown a positive relationship between subjective well-being, both with income and employment (students who work also have an additional income that those who only study and depend on the help of their elders do not have). The positive relationship between income and well-being is sufficiently documented (see Arita et al., 2005; Murillo & Molero, 2012; Murillo & Salazar, 2019), but with the caveat that it would only be present among lower-income socio-economic groups (Biswas-Diener & Diener, 2006; Moyano & Ramos, 2007). It is argued that the reason for this is that, for high-income people, a little more money would not make a difference (Moyano & Ramos, 2007). On the second aspect, there is empirical evidence that shows that unemployed people have lower subjective well-being than those who are employed (González & Marrero, 2017; Vander Meer, 2014). A job provides, in addition to income, a sense of usefulness and achievement. This, however, would not necessarily be applicable to those who do not work because they are engaged in alternative activities that are highly valued, such as university studies.

In this research we studied the relationship between subjective well-being and having a stable partner (marriage, free union or dating) or not having one. Most previous studies have been more specifically concerned with establishing the relationship between well-being and marital status, showing that married people tend to have higher levels of well-being (Alarcón, 2001; Moyano & Ramos, 2007). A study by Murillo and Salazar (2019), however, showed that marriage was a predictor of life satisfaction, but not of happiness. The positive relationship, however, would not be present only with marriage, as González et al. (2005) found higher positive affect among Spanish nurses with a stable partner. According to Mookherjee (2010), previous research shows that marriage enhances women's well-being more than that of men. However, there are also reports of higher well-being in married men than in men living in a union, and especially, than in single men (Kamp-Dush & Amato, 2005). According to a study by Diener et al. (2000) with data from 42 countries, the tendency of married people to have higher well-being than those living in a cohabiting partnership is culturally nuanced, being higher in collectivist societies and also decreasing in divorce-tolerant societies. The positive relationship between subjective well-being and marital status was apparently stronger in older studies (Haring-Hidore et al., 1985) and has not been confirmed in all cases (see González & Marrero, 2017). It is often argued that marriage (or a stable relationship) is protective of well-being because it provides social support while supplying the need to love and be loved, one of the essential human needs.

## The present research

The objectives of this research were: (a) to establish the relationship of the components of subjective well-being of university students (life satisfaction and happiness) with personal self-esteem, extraversion, self-realisation and resentment; (b) to identify which of these variables could predict subjective well-being; and (c) to compare the predictive weight of the psychological variables under study with the predictive weight of the socio-demographic variables included in the two components of students' subjective well-being.

In congruence with the literature reviewed, the hypotheses put forward in this study were: **H1a.** Apositive relationship of personal self-esteem with the two components of subjective well-being (life satisfaction and happiness) will be found. **H1b.** Personal self-esteem will emerge as a positive predictor of the studied components of subjective well-being. **H2a.** A positive relationship of extraversion will be found with the studied components of subjective well-being. **H2b.** Extraversion will emerge as a positive predictor of the components of subjective well-being. **H3a.** A positive relationship of self-realisation will be found with the components of subjective well-being (life satisfaction and happiness). **H3b.** Self-realisation will emerge as a positive predictor of the components of subjective well-being.

**H4a.** Anegative relationship of resentment will be found with the studied components of subjective well-being (life satisfaction and happiness). **H4b.** Resentment will emerge as a negative predictor of the components of subjective well-being. **H5.** The set of psychological variables under study will have a greater predictive weight on the components of subjective well-being than the set of socio-demographic variables.

# Method

## Design

Empirical study using quantitative correlational methodology with non-probabilistic convenience sampling.

## Participants

A sample of 392 students from the Universidad del Valle, Palmira, who participated voluntarily and without any compensation, in response to a direct invitation from the researcher. The selection criteria for the sample were: being a registered student at the university and willing to collaborate with the research. The sex of the participants was 50.4% male and 49.6% female. 65.2% were day students and 34.8% were evening students, with an age range between 16 and 49 years (mean age = 21.1 years; T.D. = 3.73). 83.4% were students in their first to fourth semester and 16.6% in their fifth semester or higher. 64.2% were studying exclusively, while 35.3% were working in addition to studying at the time of the instrument application (first semester 2019). 49.1% of the participants were in a stable relationship (marriage, free union or courtship), while 50.1% were not in a stable relationship. 15.6% were studying business administration, 6.1% accounting, 15.3% industrial engineering, 14.3% psychology, 5.1% literature, 11.5% physical education and sports, and 30.5% a technology. The socio-economic stratum was not explored, as the previous exploration showed that many were unaware of it or were confused about it (it is known from the university that the vast majority of its students are from strata 1, 2 and 3, the lowest strata).

## Instruments

The variables were measured with a 48-item Likert-type questionnaire, which, as a battery, included all the scales under study. The range of responses for the six scales was from 1 (total disagreement) to 5 (total agreement). The scales used were:

### Life satisfaction

The Diener life satisfaction scale (Diener et al., 1985), Spanish version by Cabañero et al. (2004), was used. This scale has shown psychometric strengths tested in different cultural contexts. The scale, which consists of five items, showed a reliability of 0.79. Factor analysis indicated that a single component explained 55% of the variance, accepting it as unidimensional. An example of its items is: "If I could live my life over again, I would like everything to be the same again".

### Happiness

It was measured with three items from Lyubomirsky and Lepper's (1999) subjective happiness scale. The original scale consists of four items, but one of them was confusing for the participants, affecting its reliability, so it was removed. The reliability test yielded an alpha of 0.86. One component explained 78.5% of the variance and was accepted as unidimensional. An example of its items is: "Compared to most of my friends and/or peers, I consider myself... less happy... happier".

### Self-esteem

Eight of the ten items of Rosenberg's (1965) self-esteem scale were applied, as two items have recurrently presented interpretation problems for participants in previous studies in Colombia, apparently for cultural reasons. The reliability of the scale was 0.75. Two components with an eigenvalue greater than one explained 66.2% of the variance.

However, this scale has been considered unidimensional in many applications in different cultural contexts. Examples of items are: "I feel that I am a person worthy of esteem" and "Sometimes I feel that I am good for nothing".

### Extraversion

A ten (10) item scale constructed by Murillo (Murillo & Salazar, 2019) and inspired by Eysenck (1967) was applied. Its reliability was 0.73. Two components explained 48.1% of the variance, but it is accepted as unidimensional because the variance explained by the first component is much greater than the variance explained by the second. Examples of its items are: "I am a talkative person" and "At social gatherings, I am usually an entertainer".

### Self-realisation

A 9-item scale constructed ad hoc for this study was applied. Its reliability was 0.75. The factor analysis yielded only one component with an eigenvalue greater than one and which explained 41.4% of the variance, so the scale is accepted as unidimensional. Examples of its items are: "I have no doubt that my life has meaning" and "In the last few years I have grown quite a lot as a person".

### Resentment

The Murillo resentment scale (Murillo & Salazar, 2019) consisting of 13 items was applied. Its reliability was 0.76. Factor analysis showed three components with an eigenvalue greater than 1, which explained 54.1% of the variance. However, since the first one alone explained 31.5% of the variance, the scale is accepted as unidimensional. Examples of its items are: "I don't have much to thank life for" and "there are certain people I would somehow like to punish for what they did to me".

## Procedure

The reliability and validity of the scales (by Cronbach's alpha and factor analysis by varimax rotation and principal components, respectively) were tested by pilot testing and after full data collection. The pilot test made it possible to discard two items from the original scales that affected the reliability of the scales: one from the self-realisation scale and one from the happiness scale.

The instrument was applied directly by the researcher and an ad hoc monitor in the classrooms. Of the 392 final questionnaires (eight questionable ones were previously eliminated in the researcher's opinion), 250 were answered in paper format and 142 in virtual format. The average time to answer the instrument was 10-15 minutes.

The results were statistically analyzed by a professional in the discipline using SPSS software version 23. Statistical procedures performed included descriptive, parametric (t, F and reliability tests), correlation (Pearson's *r*) and multivariate (hierarchical regression analysis) tests.

## Ethical aspects

Ethical protocols for human studies were followed, including informing participants in advance about the purpose and nature of the research, the voluntary and anonymous nature of their participation, and their right to refuse to collaborate with the study or to discontinue their participation at any time they wished. This was followed by the signing of the informed consent form. The research office at the university headquarters verified and certified compliance with ethical standards. In addition to the above, consent was obtained from the living authors of the scales used.

# Results

Table 1 shows the descriptive statistics. As can be seen, self-realisation had the highest mean and resentment the lowest.

**Table 1**

*Applied Scales and their Descriptive Statistics (N = 391)*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Scale** | **N° Items** | **Reliability by Cronbach's alpha** | **Media** | **DT** |
| Life satisfaction | 5 | 0,79 | 3,49 | 0,71 |
| Happiness | 3 | 0,86 | 3,60 | 0,73 |
| Self-esteem | 8 | 0,75 | 3,63 | 0,77 |
| Extraversion | 10 | 0,73 | 3,13 | 0,63 |
| Self-realisation | 9 | 0,75 | 3,96 | 0,51 |
| Resentment | 13 | 0,76 | 2,51 | 0,61 |

*Note:* The range used for all scales was 1 to 5. Higher scores indicate higher conformity with the construct measured.

Table 2 presents the Pearson's r correlations. They support the first assumption of hypotheses 1, 2, 3 and 4, respectively: self-esteem was positively related to life satisfaction (r = 0.42, p < 0.001) and happiness (r = 0.60, p < 0.001); extraversion was positively related to both life satisfaction (r = 0.34, p < 0.001) and happiness (r = 0.49, p < 0.001); self-realisation was positively related to life satisfaction (r = 0.54; p < 0.001) and happiness (r = 0.63; p < 0.001). Finally, and as previously stated, resentment was negatively related to both life satisfaction (r = -0.38, p < 0.001) and happiness (r = -0.36, p < 0.001).

**Table 2**

*Correlations (Pearson's r) between variables*

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Variable** | **1** | **2** | **3** | **4** | **5** | **6** |
| 1. Vital Satisfaction | - | 0,62\*\*\* | 0,42\*\*\* | 0,34\*\*\* | 0,54\*\*\* | -0,38\*\*\* |
| 2. Happiness |  | - | 0,60\*\*\* | 0,49\*\*\* | 0,63\*\*\* | -0,36\*\*\* |
| 3. Self-esteem |  |  | - | 0,41\*\*\* | 0,51\*\*\* | -0,32\*\*\* |
| 4. Extraversion |  |  |  | - | 0,42\*\*\* | -0,21\*\*\* |
| 5. Self-realisation |  |  |  |  | - | -0,39\*\*\* |
| 6. Resentment |  |  |  |  |  | - |

*Note:* N = 391. *\*p* < 0.05; *\*\*p* < 0.01; *\*\*\*p* < 0.001.

## Predictors of subjective well-being

After finding support for hypotheses 1, 2, 3 and 4 in their first assumption, support was sought for the second assumption of these same hypotheses by means of a hierarchical regression analysis using the stepwise method, testing whether self-esteem, extraversion, self-realisation and resentment could predict life satisfaction and happiness. Support for hypothesis 5 was also sought by comparing the predictive weight of these psychological variables with the predictive weight of the sociodemographic variables.

In model 1, only the socio-demographic variables were introduced in order to control for them, while in the second model, psychological variables were introduced in addition to these. Previously, compliance with the application conditions and assumptions was verified, such as the confirmation of independence of residuals by the Durbin-Watson statistic, the confirmation of normality of the distribution plots of such residuals and compliance with the assumptions of linearity and homoscedasticity.

Finally, the non-existence of multicollinearity was confirmed by means of the tolerance and variance inflation factor. Accordingly, the conclusions of the model are considered valid.

Life satisfaction was the first variable to be explained (see table 3). The variance explained by the sociodemographic variables in model one was 2.3% (R2 = 0.023). The F-value (7, 372) was 1.28 (not significant). Having a stable partner was the only socio-demographic predictor of life satisfaction (β = -0.14; t = -2.57; p ≤ 0.01).

In the second model, having a stable partner continued as the only socio-demographic predictor variable (β = -0.09; t = -1.95; p ≤ 0.05), but it was the psychological variables that bore the brunt of the variance in life satisfaction, explaining 32.8% (R2 = 0.328). The F value (4, 362) was 46.47 (p < 0.001). Hypothesis 5 is thus supported. The results also supported hypotheses 1, 3 and 4, in their second assumption, as self-esteem (β = 0.19; t = 3.16; p = 0.002), self-realisation (β = 0.34; t = 6.21; p < 0.001) and resentment (β = -0.17; t = -3.66; p < 0.001) emerged as predictors of life satisfaction (positive for the first two and negative for the last one). The second assumption of hypothesis 2 was not supported by the hierarchical regression analysis (β = 0.09; t = 1.77; p = not significant) as extraversion did not emerge as a predictor of life satisfaction.

**Table 3**

*Predictors of Life Satisfaction*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Predictor** | **R2** | **Change in R2** | **β** | **t** |
| Step 1 | 0,023 |  |  |  |
| Age |  |  | -0,01 | -0,11 |
| Sex |  |  | -0,02 | -0,40 |
| Shift (Daytime or Nighttime) |  |  | 0,04 | 0,59 |
| Semester achieved |  |  | -0,03 | -0,51 |
| Study programme |  |  | 0,07 | 1,09 |
| Occupation |  |  | -0,01 | -0,14 |
| Stable Couple (Yes - No) |  |  | -0,14\*\* | -2,57 |
| Step 2 | 0,351 | 0,328 |  |  |
| Age |  |  | -0,04 | -0,76 |
| Sex |  |  | -0,03 | -0,58 |
| Shift (Daytime or Nighttime) |  |  | 0,06 | 1,01 |
| Semester achieved |  |  | 0,05 | 0,95 |
| Study programme |  |  | -0,01 | -0,23 |
| Occupation |  |  | 0,04 | 0,83 |
| Stable partner (yes - no) |  |  | -0,09\* | -1,95 |
| Self-esteem |  |  | 0,19\*\*\* | 3,16 |
| Extraversion |  |  | 0,09 | 1,77 |
| Self-realisation |  |  | 0,34\*\*\* | 6,21 |
| Resentment |  |  | -0,17\*\*\* | -3,66 |
| R2 Total | 0,351 |  |  |  |

*Notes: (*a) Variance explained by sociodemographic variables = 2.3%; (b) Variance explained by psychological variables = 32.8%; (c) Total variance explained = 35.1%; (d) *\*p* < 0.05; *\*\*p* < 0.01; *\*\*\*p* < 0.001.

In the second hierarchical regression analysis, the variable to be explained was happiness. In model 1, socio-demographic variables were introduced in order to control for them, and in model 2, psychological variables were also introduced (see table 4). In order to accept the validity of the findings, the conditions and assumptions of application were checked.

The variance explained by the sociodemographic variables in model 1 was 4.1% (R2 = 0.041). The F value (7, 372) was 2.27 (p < 0.05). In this first model, two socio-demographic variables emerged as predictors of happiness: semester achieved (first semesters: β = -0.11; t= -2.00; p < 0.05) and again, having a steady partner (β = -0.14; t = -2.56; p ≤ 0.01).

When interacting sociodemographic and psychological variables in model 2, the only sociodemographic predictor of happiness was the study shift (β = 0.10; t = 2.29; p < 0.05). Having a steady partner exhibited a residual value (β = -0.07; t = -1.92; p < 0.056). A complementary Scheffé test for group differences, however, showed that the only socio-demographic factors for satisfaction and happiness were having a partner and studying engineering or a degree in physical education and sports (compared to studying psychology or literature). Overall, as with life satisfaction, the predictive weight of happiness was again on the psychological variables that explained 50% of the variance (R2 = 0.50). The F-value (4, 368) was 100.38 (p < 0.001). Thus, hypothesis 5 was supported (table 4). Hypotheses 1, 2, 3 and 4 were also supported in their second assumption by the hierarchical regression analysis, as self-esteem (β = 0.36; t = 7.28; p < 0.001), extraversion (β = 0.20; t = 4.96; p < 0.001), and self-realisation (β = 0.32; t = 6.95; p < 0.001) emerged as positive predictors of happiness, while resentment (β = -0.08; t = -2.18; p < 0.05) emerged as a negative predictor of happiness.

**Table 4**

*Predictors of Happiness*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Predictor** | **R2** | **Change in R2** | **β** | **t** |
| Step 1 | 0,041 |  |  |  |
| Age |  |  | 0,01 | 0,11 |
| Sex |  |  | -0,01 | -0,26 |
| Shift (Daytime or Nighttime) |  |  | 0,07 | 1,03 |
| Semester achieved |  |  | -0,11\* | -2,00 |
| Study programme |  |  | 0,11 | 1,90 |
| Occupation |  |  | -0,02 | -0,37 |
| Stable Couple (Yes - No) |  |  | -0,14\*\* | -2,56 |
| Step 2 | 0,541 | 0,50 |  |  |
| Age |  |  | -0,03 | -0,72 |
| Sex |  |  | 0,01 | 0,29 |
| Shift (Daytime or Nighttime) |  |  | 0,10\* | 2,29 |
| Semester achieved |  |  | 0,01 | 0,26 |
| Study programme |  |  | 0,01 | 0,15 |
| Occupation |  |  | 0,02 | 0,45 |
| Stable partner (Yes - No) |  |  | -0,07 | -1,92 |
| Self-esteem |  |  | 0,36\*\*\* | 7,28 |
| Extraversion |  |  | 0,20\*\*\* | 4,96 |
| Self-realisation |  |  | 0,32\*\*\* | 6,95 |
| Resentment |  |  | -0,08\* | -2,18 |
| R2  Total | 0,541 |  |  |  |

*Notes: (*a) variance explained by sociodemographic variables = 4.1%; (b) variance explained by psychological variables = 50%; (c) total variance explained = 54.1%; (d) *\*p < 0.05; \*\*p < 0.01; \*\*\*p < 0.001.*

# Discussion

The present research sought to establish the relationship between the components of subjective well-being (life satisfaction and happiness) of Colombian university students, with personal self-esteem, extraversion self-realisation and resentment, identifying which of these psychological variables could predict well-being. We also sought to compare the explanatory weight of psychological variables versus sociodemographic variables in the components of well-being.

The results of the study support hypothesis 1, indicating a positive relationship of self-esteem with both life satisfaction and happiness. Self-esteem also predicted both components of well-being. These results are congruent with findings previously obtained in different cultures (Ayyash-Abdo & Alamuddin, 2007; González & Marrero, 2017; Gutierrez & Gongalvez, 2013; Murillo & Molero, 2012; Murillo & Salazar, 2019). González and Marrero found in their study with a Mexican population that self-esteem was a better predictor of subjective well-being than the so-called big five personality traits, which also occurred in this study, compared to extraversion. These researchers also found higher levels of well-being in university students than in people with less education. Their results and those obtained in the present study are relevant, in that they could demonstrate the psychological importance of university attachment for young people in developing countries. In our case, the fact that young people from predominantly lower socio-economic strata have gained access to a university that is difficult to access may have had an impact on both subjective well-being and self-esteem. If self-esteem is highly correlated with individual achievement (Murillo & Molero, 2016; Oishi et al., 1999) and subjective well-being is in turn nurtured by these achievements (Ryan & Deci, 2000), it could be thought that self-esteem is an important mediator on the path from university access as an achievement to subjective well-being. Such access may, in developing countries, have greater significance, possibly associated with upward social mobility. This interpretation would also explain why, contrary to the majority trend in the literature (Olivera, 2015), self-esteem has been shown in this study to be more strongly associated with happiness than with life satisfaction, since happiness can be affected by recent events more easily than life satisfaction, which is built over the long term.

The fact that the detected levels of happiness were higher in students in their first semesters than in more advanced students, gives greater strength to this interpretation: the recent entry of the former to university probably favoured both self-esteem and the emotional component of well-being, an impact that may have been diluted in students in advanced semesters. If in Colombian culture, as stated by Murillo and Salazar (2019), it is a cultural imperative to exalt self-esteem as a main value, that which strengthens the self-esteem of its members will result in greater well-being. That a strong relationship has previously been found between self-concept and subjective well-being (Moreta et al., 2017), would seem to support this.

Extraversion was positively related in this research to both life satisfaction and happiness, but predicted only the latter, supporting the first assumption of hypothesis 2 in its entirety and the second assumption partially, since it was expected to be predictive of both. Previous studies have shown that although extraversion is usually related to the cognitive and emotional components of subjective well-being (DeNeve & Cooper, 1998), this relationship is stronger with the emotional component, explaining it more categorically and directly (Marrero & Carballeira, 2011; Murillo & Salazar, 2019).

As has been reported, extraversion tends to emerge as the greatest predictor of well-being among the big five personality traits (DeNeve & Cooper, 1998; González & Marrero, 2017), perhaps because, as stated by Zelenski et al. (2012), extraverted people tend to be spontaneous, carefree, optimistic and open to relationships. This last aspect is, according to the literature, the one on which the main explanatory emphasis of the role played by extraversion in happiness rests: the greater ability of extraverts to socialise and establish friendly relationships (Diener & Seligman, 2011; Hills & Argyle, 2001; Siedlecki et al., 2014). Although the greater ability of extraverts to socialise is a reasonable resource in the explanation of their greater propensity to happiness, such a factor may not be the only one, as it has been argued that the greater ease that the extraverted person has to generate and express positive emotions could be a determinant of their happiness (Hervás, 2009).

If extraverts can focus their attention on positive experiences, rather than negative ones, they would have a greater disposition to be happy. It is even possible that this disposition, even more than their socialisation skills, explains why extraverts are happier, whether or not they live with others, whether or not they live in cities or rural areas, and whether or not they work in social occupations (Diener et al., 1992).

Although this study confirms extraversion as a predictor of happiness, the result departs, at least partially, from the predominant trend in the literature that shows it as the major predictor of well-being (Costa & McCrae, 1980; DeNeve & Cooper, 1998), as self-esteem and, especially, self-realisation emerge as its strongest predictors. The cause is unclear, but probably has to do with specific factors related to the role of achievement in this particular group of participants. It was noted in the previous section that the participants are students from humble backgrounds for whom university study could be a fundamental achievement in their lives, and this aspect would be more strongly associated with self-realisation and self-esteem than with extraversion. Social skills related to extraversion might be more relevant to well-being in cultural settings where people are less open and interpersonal relationships are more difficult, but not in a cultural setting where being extraverted is not an atypical trait.

Consistent with the two assumptions of hypothesis 3, self-realisation was positively related to life satisfaction and happiness, being a strong predictor of both and the variable that contributes most to explaining the variance of well-being as a whole. The very high association of self-realisation with the two components of well-being suggests that they are closely related constructs, which is conceptually reasonable considering that it has already been established that achievement, an important aspect of self-realisation, is a predictor of subjective well-being (Arita et al., 2005; Moyano & Ramos, 2007). The mean of self-realisation, the highest among all, suggests that participants subjectively experience self-improvement and development of their potential, which provides them with self-satisfaction. It is possible, given their socio-economic background, that the link to the university is a key factor in their feeling of fulfilment and simultaneously enhancing their well-being. Self-realisation and subjective well-being would, however, be conceptually and empirically different, as Keyes et al. (2002) pointed out when referring to the two types of well-being and their strong connection. The concept of self-realisation stems from the eudaimonic tradition and is associated with psychological well-being and humanistic psychology (Barrantes & Ureña-Bonilla, 2015; Maslow, 1970; Moratori et al., 2015; Rogers, 1977; Venhoutte, 2014), while life satisfaction and happiness are constructs of the hedonic tradition, associated with subjective well-being. The fact that the two traditions, hedonic and eudaimonic, have followed different paths in the study of well-being has been an obstacle to researching them together. However, previous studies have confirmed a close relationship between components of subjective well-being and psychological well-being (Diaz et al., 2011; Moratori et al., 2015; Moreta et al., 2017), so this paper would not be the first to establish such a connection. Such works, however, have been less specific in relating a single component of subjective well-being to Ryff's (1989) dimensions of psychological well-being, unlike the present study, which focused on relating both life satisfaction and happiness to self-realisation.

The self-realisation scale constructed ad hoc for the present study integrates several facets of Ryff's dimensions. Self-realisation involves personal growth, achievement, satisfaction with one's life, fulfilment of expectations, meaning and purpose in life, acceptance of oneself and others, and control over one's life, i.e., how much one has grown as a person, how much one has developed one's capabilities and human potential, and how much one has achieved one's life goals (Merino et al., 2015; Moratori et al., 2015; Ryan & Deci, 2001). In this logic, and since life satisfaction reflects an overall judgement of one's life (Shin & Johnson, 1978), happiness, a balance of the good and bad elements of our life (Triadó et al., 2005), the strong connection found in this study between self-realisation and the components of subjective well-being suggests that psychological well-being has more in common with subjective well-being than the different paths taken by the two traditions seem to indicate. They could be two hands of the same subject. Hands that attend to the flourishing of the person, but also hands that attend to those aspects that make you feel good and make you function well (Butler & Kern, 2016; González & Marrero, 2017). It is also possible that feeling fulfilled is an important condition for hedonic well-being. This will, however, need to be established by explanatory-causal studies.

As expected according to hypothesis 4, resentment was negatively related to both life satisfaction and happiness, emerging as a predictor of both. The literature has attributed a negative impact of resentment and rumination, a key symptom of resentment, on mental health and well-being (Cheng & Furnham, 2003; Cuadra & Florenzano,2003; Leal et al., 2005; León et al., 1988; Worthington Jr. et al., 2007). However, most of these attributions originate from clinical observations, philosophical reflections or indirect associations (Lersch, 1971; Nietzsche, 1981; Scheler, 1998) and only a few in empirical studies (Eldeleklioglu, 2015; Murillo & Salazar, 2019). Murillo and Salazar's study, also conducted in Colombia with a heterogeneous sample, showed resentment as a negative predictor of life satisfaction and happiness, but unlike the present work, in theirs, happiness was impacted more than life satisfaction.

Conceptually, it would not seem difficult to explain the negative impact of resentment on well-being, given that resentment is characterised by the chronic accumulation of pain, frustration, self-victimization, permanent bitterness, and a constant and unfulfilled need for revenge (Leal et al., 2005; Murillo & Salazar, 2019), all factors that generate psychological distress. However, another key manifestation of resentment, the inability to forgive, could be useful in understanding why resentment negatively affects subjective well-being, since there are numerous studies on forgiveness, understood as the overcoming of resentment (Worthington Jr. et al., 2007) and its positive relationship with well-being. They show how well-being increases in people who are able to forgive (Allemand et al., 2012; Yarnoz-Yaben et al., 2016). A possible explanation as to why resentment negatively affects well-being and overcoming resentment through forgiveness positively affects well-being could lie in the strong emotional nature of resentment and its psychophysiological expression, as supported by a study by Worthington Jr. et al. (2007) that showed greater well-being benefits from emotional forgiveness compared to decisional forgiveness. Such a study would suggest that resentment occurs primarily at the emotional level and only at this level can it be truly overcome. It also suggests that, if replacing negative emotions with positive emotions, which occurs in forgiveness, increases well-being, it is because the negative emotions replaced were associated with low levels of well-being. Alternative explanations for why resentment negatively impacts well-being would be the resentful person's strong predisposition to dwell on past regrets and/or his or her strong, but usually blocked, need for revenge (Lersch, 1971; Scheler, 1998). Another factor that would help to understand the impact of resentment on well-being is that it has been identified that the greater the motive for affiliation, the greater the emotional reaction to negative interpersonal events (Oishi et al., 1999). In a culture such as Colombia's, where interpersonal relationships are so important, it is reasonable that frustrations with respect to these relationships negatively impact well-being. This result confirms the need to address the relationship between negative personality traits and well-being at more specific levels than the very generic one of neuroticism, as proposed by Sun et al. (2018).

When comparing the predictive weight of psychological variables with socio-demographic variables in the two components of subjective well-being, it was evident that the former had a much greater impact on life satisfaction and happiness. This result, which supports hypothesis 5, goes in the same direction as several previous studies, which have shown that personality characteristics and other psychological variables, at least relatively stable, predict well-being as a whole more strongly than sociodemographic and situational factors (Ayyash-Abdo & Alamuddin, 2007; De Neve & Cooper, 1998; Lyubomirsky & Lepper, 1999; Murillo & Salazar, 2019; Olivera, 2015). The effect size of sociodemographic variables on well-being, which in previous research ranges, according to González and Marrero (2017), between 8% and 20% of the variance, was clearly lower in the present study (2.3% for life satisfaction and 4.1% for happiness). Much smaller than the effect sizes of the psychological variables, which were 32.8% and 50%, respectively.

Except for the positive impact on well-being shown by having a stable partner compared to not having one, this study demonstrated, as previous studies have done (Lyubomirsky & Lepper, 1999), that socio-demographic factors are irrelevant in their explanation and suggests, moreover, that possibly situational variables tend to cancel themselves out (Costa & McCrae, 1980), or to be cancelled out by more stable variables. Psychological factors, on the other hand, are determinant. As stated by Wei et al. (2011), personal characteristics can lead to high levels of well-being, which would be largely independent of age, gender, occupation or available resources. Such results are not novel in the case of extraversion and self-esteem, previously identified as predictors of well-being in multiple empirical studies, but they are novel in the case of self-realisation and resentment, variables on which there is much conceptual reference that presumes their impact on well-being, but little field work to support it.

It would show that people construct a basic and relatively stable way (Murillo & Salazar, 2019) of relating to life, people, their successes and failures, and that this, more than the situations of the moment, would contribute to their happiness and their overall balance of that same life. This study suggests that variables closely related to psychological well-being and the satisfaction of needs and achievements, such as self-realisation and self-esteem, which are closely related to each other in the study, could have, in certain groups, an even greater weight on subjective well-being than classic dispositional variables, such as extraversion. Such a result offers support to theories that emphasise need and goal satisfaction as a determinant of subjective well-being (Diener et al., 2009; Ryan & Deci, 2000) and to those who have posited a strong connection between subjective well-being and psychological well-being (Keyes et al., 2002; Sun et al, 2018).

The participants, with an average age around 20 years old, in full bloom of dreams and expectations, as is typical of adolescence, possibly feel that they are fulfilling these expectations with their university studies: it is an achievement that allows them to advance in the development of a life project, makes them feel better about themselves, contributes to feeling more competent and valuable, and allows them, in addition, to continue dreaming. Achievement simultaneously nourishes their self-esteem, their psychological well-being and their subjective well-being.

## Conclusions and contributions

The present study provides evidence on the impact of self-esteem and extraversion on subjective well-being as previous literature has already shown, but in this paper, as a novelty, the impact of self-esteem is greater than the impact of extraversion and is stronger on happiness than on life satisfaction, which is contrary to what is mostly reported. The study also shows as a major novelty that the strongest positive impact on subjective well-being is exerted by self-realisation. This result constitutes an invitation to carry out further joint studies of the components of both forms of well-being: hedonic and eudaimonic. Equally significant is the negative impact of resentment on the components of subjective well-being. This finding is a necessary contribution to the effect of specific negative personality facets on well-being, as almost all previous studies have focused on the very broad trait of neuroticism. The study also provides evidence that psychological variables (personality and need satisfaction) have a much greater impact on life satisfaction and happiness than sociodemographic variables. This would show that people probably construct a basic and stable way of relating to life, its successes and difficulties, which responds to their predispositions and needs for achievement, and which would contribute much more to their well-being than socio-demographic and situational variables. Finally, research shows that well-being is determined by a variety of factors beyond those currently explored (Big Five, self-esteem), and more relationships should be explored in the task of understanding life satisfaction and happiness. Governments would do well to take these findings into account in the design of their public policies, given that they tend to focus almost exclusively on socio-demographic factors.

## Limitations and future research

The present study has several limitations. The most important ones are: (a) Participants were recruited by non-probability sampling, so the results are applicable only to themselves, thus preventing generalisation of the findings to other groups; (b) This research is based on correlational testing, which does not allow establishing directionality of effects; (c) The study is based on self-reports, a procedure that may lead to misunderstanding of the items or contamination by social desirability. (d) The variables included in the study as independent variables are few and of a psychological nature; the inclusion of other psychological variables, or variables of a broader nature, could have altered the results obtained, which calls for caution in their interpretation.

This study, like most of those previously published, shows an impact of self-esteem and extraversion on subjective well-being, but in a different direction from many of them, it shows a greater impact of self-esteem on happiness than on life satisfaction. What explains this, perhaps particularities of the participants? Future research should be attentive to this; uncovering it would add much to the development of the discipline. When and why variables such as those studied affect life satisfaction or happiness more or less, and not subjective well-being as a whole, is a question that awaits answers.

It is also recommended that future researchers include variables beyond those traditionally examined in their studies on well-being. The impact of self-realisation and resentment on subjective well-being, obtained in the present study, makes clear the need to explore the role of other psychological variables in order to achieve a more complete map of well-being. These studies become relevant in countries with particularly difficult socio-economic and psychosocial particularities, such as Latin American countries, where traditionally unstudied variables (self-realisation and resentment, among others) could play a role to be discovered.

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   Special circumstances: The study *Subjective Well-Being of University Students Explained by Psychological and Sociodemographic Variables* was part of a larger investigation that included, in addition to this paper, another one in which the relationship of life satisfaction and happiness with domain satisfactions was analysed. The sample for both was partially shared. Although the objectives of the two studies are different, they share, among the conclusions, one that has to do with the central importance of university studies for young people from low-income backgrounds. This conclusion was reached by different routes in each study.

   The research *The Subjective Well-being of University Students Explained by Psychological and Sociodemographic Variables* was carried out in the framework of the author's duties as a part-time occasional lecturer at the Universidad del Valle, Palmira, Colombia.

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