Life satisfaction in Europe and Iran: the role of self-esteem, gender identification and ambivalent sexism

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Response to Reviewers:	Dear Editors and Reviewers of Current Psychology,

We sincerely thank you for your comments on the manuscript entitled "Life satisfaction in Europe and Iran: the role of self-esteem, gender identification and ambivalent sexism". This memo summarizes the changes made and provides responses to each comment.

REVIEWER 2:
Comment: Good article, interesting, simple and easy to read. Its references are very varied and current. Congratulations. Just note that the summary refers to the fact that the classification of countries as more or less equal is based on the Global Gender Gap Index.

Response: Thank you for bringing this to our attention. In the Abstract we have added that the classification of countries as more or less equal is based on the Global Gender Gap Index. References to the classification on the Global Gender Gap Index are reported in the manuscript as well.

REVIEWER 3:
Comment: Thank you for the chance to read this interesting study. This paper is definitely of my interest and I believe that it should be of the interest of other readers. This paper attempts to the influencing factors of life satisfaction from two dimensions of individual and environment. The theoretical perspective is good, and data collection is rigorous. However, I would recommend the authors consider the following points which should allow the paper to be of a greater impact to this field. In terms of data analysis, the author only uses correlation and regression analysis to explain the influence of these factors on life satisfaction. This analysis does not prove the hypothesis sufficiently. Since the researchers collected data from multiple countries, it is suitable to adopt a multi-layer linear model. This may help to observe the effects of variables such as country and gender on life satisfaction in an integrated model
Response: Concerning the analyses, a multi-layer linear model would allow us to observe the effects of both gender and country on life satisfaction. However, our aim was to investigate factors related to life satisfaction within each country, from a gender perspective (even considering the large number of other variables and countries in our study). For this reason, and after receiving the Editor's endorsement, we decided not to change the analyses.

Life satisfaction in Europe and Iran: the role of self-esteem, gender identification and ambivalent sexism

Abstract

Life satisfaction is one of the most relevant indicators of psychological health. The present study aimed at extending previous research on life satisfaction by examining its antecedents for men and women in five ~~different~~ countries (e.g., Italy, Poland, Romania, the UK, and Iran), with different levels of gender equality, according to the Global Gender Gap Index. Besides traditional variables (i.e., age, self-esteem and income), we also investigated the role of ambivalent sexism and gender identification. Participants were 2561 adults (54% female). Results showed the key role of self-esteem for both men and women and across countries. Gender identification was positively associated with life satisfaction, with the only exception of the more gender egalitarian country, i.e., the UK. Furthermore, in the less egalitarian countries, i.e., Italy and Iran, life satisfaction is also positively related to benevolent stereotypes toward men. Taken together, findings underline the interdependence between personal and contextual dimensions in sustaining life satisfaction, and the role of gender as a significant variable in terms of both the existence of different patterns for men and women and the effects of gender stereotypes across cultures.

Keywords:

Life satisfaction; self-esteem; gender identification; ambivalent sexism; culture

Introduction

From the time of Aristotle in the ancient Greece, the search for happiness has been a major concern among philosophers and theologians. Within the field of psychology, the study of

happiness generally falls under investigations of subjective well-being (see Diener 1994; Diener, Suh, Lucas, & Smith, 1999; Diener, Oishi, & Tay, 2018). Subjective well-being is a tripartite category of phenomena, which includes emotional responses (i.e., positive and negative affect), domain satisfactions (e.g., work satisfaction, relationship satisfaction), and global judgements of life satisfaction (Diener et al., 1999). Life satisfaction has been defined as a cognitive-judgmental process in which a person forms a general perception of his or her life by comparing it with a personal standard (Diener, Emmons, Larsen, & Griffin, 1985). It represents a cognitive and global evaluation of the quality of one's life as a whole (Pavot & Diener, 1993). Although correlated with the emotional components of subjective well-being, life satisfaction forms a separate factor and is considered one of the most relevant indicators of psychological health (Moreno-Maldonado et al., 2020).

Over the past few decades, research on life satisfaction has grown dramatically (Margolis, Schwitzgebel, Ozer, & Lyubomirsky, 2019), with investigations in different cultures across the world (e.g., Ngoo, Tey & Tan, 2015; Sortheix & Lönnqvist, 2014). A number of correlates and predictors of life satisfaction have been examined, including socio-demographic characteristics, income, environmental quality, social support, heritability and psychological variables (e.g., Lee, Grace, Sirgy, Singhapakdi, & Lucianetti, 2018; Martínez-Martí & Ruch, 2017; Schmitt, Aknin, Axsen, & Shwom, 2018). Among these factors, one of the most powerful is self-esteem, an influencing factor across cultures but particularly within individualistic cultures, where there is an emphasis on an independent construal of the self (Diener & Diener, 1995).

Self-esteem is a vital part of psychological well-being (Duchesne et al., 2017) and has a close relationship with life satisfaction. For instance, Diener and Diener (1995) explored the discriminate validity of self-esteem and life satisfaction among a large cross-national group of 13,118 college students and discovered a positive correlation, not only across the entire

sample, but also in most countries. A large body of more recent empirical literature confirmed self-esteem as a significant predictor of life satisfaction (e.g., Al-Krenawi & Kanat-Maymon, 2017; Chen et al., 2017; Refaeli, Levy, & Benbenishty, 2018; Wang & Kong, 2020). In their study with Norwegian subjects, Moksnes and Espnes (2013), using four-step hierarchical regression analyses, showed that self-esteem accounted for 47% in life satisfaction even after controlling for other predictors.

Another factor whose influence on life satisfaction has been largely investigated is income. According to the absolute income hypothesis, money can buy happiness because it can be exchanged for goods that will increase an individual's satisfaction (Boyce, Brown & Moore, 2010). Although this hypothesis has been criticised (Kahneman & Deaton, 2010), research has clearly established a positive association between income and life satisfaction. Indeed, people who report high income and financial satisfaction are likely to also report high levels of life satisfaction (Hayes, 2014; Kahneman & Deaton, 2010; Ngamaba, Armitage, Panagioti, & Hodkinson, 2020), and this result is consistent in both richer and poorer countries (Brown & Grey, 2016; Delhey, 2010; Ebrahim, Botha & Snowball, 2013; Howell & Howell, 2008; Ng & Diener, 2019; Ngamba et al., 2020).

The relationship between other demographic variables, such as age and gender, and life satisfaction are weak and research has shown that such variables contribute only modestly to the prediction of life satisfaction (Degges-White & Kepic, 2020; Proctor, Linley, & Malby, 2009). According to Gómez Berrocal, Porras and Matas (2020), the exact effect of age and gender on well-being and its components has not yet been determined. Concerning age, there are remarkable differences regarding the aetiology of life satisfaction (Bartels, 2015). Longitudinal and cross-sectional research has shown that levels of happiness remain relatively stable across age (Lucas & Gohm, 2000), at least until one comes close to death (Gerstorf et al., 2008). A recent cross-sectional study with a representative sample from 166 countries and

more than 1.7 million people found very small to no differences in life satisfaction across the lifespan (Jebb, Morrison, Tay, & Diener, 2020).

In reference to gender, it is not clear whether it could be an important factor for understanding individual differences in life satisfaction, as the inconsistent results may be the consequence of different patterns between genders (Bartels, 2015). In other words, rather than investigating gender differences on life satisfaction, attention should be given to the potential determinants of life satisfaction for men and women (Rollero, Gattino, & De Piccoli, 2014).

Life satisfaction and ambivalent sexism

Beside the effects of gender *per se*, recent literature has begun paying attention to the role played by attitudes toward genders, considering whether the endorsement of gender stereotypes may affect life satisfaction. According to the Ambivalent Sexism Theory (Glick & Fiske, 1996; 1999), gender stereotypes comprise significant ambivalence on the part of each sex toward the other and may be conceptualized through four related dimensions. In respect to women, hostile sexism (HS) is an adversarial view of gender relations in which women are perceived as seeking to control men and usurping their power, whereas benevolent sexism (BS) idealizes women as pure creatures who ought to be protected and supported, but it implies that women are weak and best suited for conventional gender roles. Similarly, stereotypes toward men include both hostility toward men (HM) and benevolence toward men (BM). The first conveys hostility toward male dominance and the ways in which men exert control within intimate relationships. Benevolence toward men encompasses positive attitudes rooted in traditional admiration for a man's role as protector and provider, but also the belief that men require women to provide domestic and maternal care.

In their seminal work based on nationally representative data from 32 countries, Napier and colleagues (2010) found that BS was positively related to life satisfaction for both men and women, and this effect was more pronounced in more egalitarian nations. Their findings support the argument that rationalising inequalities may serve a palliative function for both advantaged and disadvantaged groups, increasing their well-being (Jost & Hunyady, 2005). Similarly, other subsequent studies in different countries showed that the endorsement of BS predicted life satisfaction for both genders, either directly or through the mediation of system justification mechanisms (Connelly & Heesacker, 2012; Hammond & Sibley, 2011; Waddell, Sibley, & Osborne, 2019). Surprisingly, despite the strong interdependence among the four dimensions of ambivalent sexism, no research has yet examined the role of ambivalent attitudes toward men in relation to life satisfaction.

Life satisfaction and group identification

The concept of group identification comes from the social identity approach in social psychology (Haslam, Jetten, Postmes, & Haslam, 2009). It has been defined as subjective feelings of group belonging and commonality with other members of a social group (Wakefield et al., 2017). According to the Social Identity Theory and the Self-Categorization Theory (Tajfel & Turner, 1979; Turner, Hogg, Oakes, Reicher, & Wetherell, 1987), group identification comprises positive affect about the group as an entity (Postmes, Haslam, & Jans, 2013) and about the emotional meaning and values that are related with belonging to the group. Group identification includes satisfaction from belonging to the group, as well as the centrality of group participation in one's self-concept (Leach et al., 2008).

Research has clearly shown that group membership and identification can significantly contribute to individuals' happiness and well-being (e.g., de Vroome and Hooghe 2014; Hannaford, Moore & Macleod, 2018; Gómez Berrocal et al., 2020; Rosenthal, Somers,

Fleming, & Walsh, 2014; Sani, Madhok, Norbury, Dugard, & Wakefield, 2015; Wakefield, Sani, & Herrera, 2018). For instance, Haslam and colleagues (2005) found a positive correlation between identification with family and friends and well-being in a sample of patients recovering from heart surgery. Consistently, in a study carried out in Poland, Sani and colleagues (2012) showed that family identification (Study 1) and army unit identification in a group of soldiers (Study 2) were both significant predictors of life satisfaction, even after controlling for age, education level/army rank, and the extent of social contact. In a recent cross-cultural research study by Wakefield et al. (2017), 3829 participants from both Scotland and Italy completed a questionnaire assessing their identification with their family, local community, and a group of their choice. Results showed that in both cultures individuals who reported higher levels of group identification tended to have greater life satisfaction.

When research has focused on gender identification, scholars have shown that people who are most strongly identified with their gender tend to be most affected by gender-related stereotypes by demonstrating stereotype-consistency in their thoughts and behaviors (e.g., Nosek, Banaji, & Greenwald, 2002; Schmader, 2002; Weisgram, Dinella, & Fulcher 2011; Wout, Danso, Jackson, & Spencer, 2008). For instance, in the domain of career planning, Dinella and colleagues (2014) found that gender identification in women was a positive predictor of interest in feminine careers and a negative one of interest in masculine careers. For women with careers in science, technology, engineering and mathematics (STEM) domains, women report being told this type of work is "naturally" more suited to men (Settles, O'Connor, & Yap, 2016), where conflicts of personal and professional identity by women in STEM subjects has been found to adversely affect mental health and well-being (Settles, 2004).

Traditional views of masculinity and self-perceived gender typicality were also found to correlate with traditional masculine interests in academia (Leaper & Van, 2008). Furthermore,

men who report higher gender identification have also been shown to express higher entrepreneurial intentions (Gupta, Turban, Wasti, & Sikdar, 2009; Hadjar & Aeschlimann, 2015). However, to our knowledge, in both genders the role of gender identification in relation to life satisfaction has not yet been investigated, despite promising findings based on research assessing other group identifications.

The current study

The purpose of the present study was to extend previous research on life satisfaction by examining its antecedents in different countries, with a particular focus on the role of both ambivalent sexism and gender identification. Furthermore, since we aim to assess whether potential antecedents of life satisfaction play a similar or different role in men and women, we tested our hypotheses on each gender separately, in line with scholars who suggested paying attention to potential different patterns for men and women (Bartels, 2015; Rollero et al., 2014).

Based on previous research, we expected that:

(1) Income and self-esteem would be positively associated with life satisfaction for both men and women (e.g., Al-Krenawi & Kanat-Maymon, 2017; Brown & Grey, 2016; Ebrahim et al., 2013; Ng & Diener, 2019; Ngamba et al., 2020; Refaeli et al., 2018; Wang & Kong, 2020);

(2) Benevolent sexism toward women would be positively related to life satisfaction in both genders (Connelly & Heesacker, 2012; Hammond & Sibley, 2011; Napier et al., 2010; Waddell et al., 2019). Considering the strong interdependence between ambivalent attitudes toward men and toward women (Glick & Fiske, 1999), benevolence toward men would be positively related to life satisfaction as well;

(3) In line with research on group identification and life satisfaction (e.g., de Vroome and

Hooghe 2014; Hannaford et al., 2018; Gómez Berrocal et al., 2020; Rosenthal et al., 2014;

Wakefield et al., 2018), gender identification would be positively related to life satisfaction.

Due to inconsistent previous results, no specific prediction was made in reference to age.

Method

Participants and cultural contexts

The study enrolled 2,561 adults (54% female) between 18 and 50 years old ($M = 33.7$, $SD =$

9.1) living in five different countries. Four European countries, i.e., Italy, Poland, Romania,

and the United Kingdom (UK), and one Asian country, i.e., Iran, were selected. In reference

to gender equality policies, these countries show hugely different performances. To assess

gender parity in relevant domains, in 2006 the World Economic Forum introduced the Global

Gender Gap Index, to capture the magnitude of gender-based disparities and track their

progress over time. It examines the gap between men and women across four categories:

economic participation and opportunity (women and men in the labor force, income, and

career opportunities); educational attainment; health and survival (sex ratio at birth, life

expectancy); political empowerment (women and men in parliament, ministerial level and

head of state). According to the last Global Gender Gap Report (World Economic Forum,

2020), the UK is one of the most egalitarian countries, as it ranks 21st out of 153 nations. The

same report ranks Poland and Romania as 40th and 55th respectively, with significant progress

made since the previous year. Italy, ranking 76th, is instead one of the least egalitarian

countries in Europe, and Iran is one of the least egalitarian nations in the world (148th).

Among our participants, 14.3% resided in Italy (women = 51.2%), 31.4% in Poland (women

= 51.6%), 18.9% in Romania (women = 52%), 14.3% in the UK (women = 48.9%), and

21.2% in Iran (women = 63.1%). Of the participants, 63.8% were employed, 16% students,

7.8% homemakers, 0.3% retired, and 4.5% unemployed. Concerning the educational level, 26.8% were college graduates, 13.6% high school graduates, and 59.6% had a lower educational level.

In Italy, household income ranged from less than EUR 700 to more than EUR 5000 per month. Of the Italian subjects, the most frequent ranges were: between EUR 1200 and 2000 (45.2%), between EUR 3000 and 5000 (20.4%), and between EUR 700 and 1200 (18%). In Romania, it ranged from less than RON 700 to more than RON 5000 per month. Many subjects reported income between RON 3000 and 5000 (31.4%), between RON 1200 and 2000 (24.4%), and more than RON (20.1%). In Poland, household income ranged from less than PLN 700 to more than PLN 5000 per month. Most participants earned more than PLN 5000 (43%) or between PLN 3000 and 5000 (26.9%). In the UK, income ranged from less than GBP 600 to more than GBP 4300 per month. The most frequent ranges were: between GBP 1700 and 2600 (23.3%), between GBP 2600 and 4200 (22.7%), and between GBP 1000 and 1700 (18.9%). Finally, in Iran household income ranged from less than IRR 700000 to more than IRR 5 million per month. Many subjects reported income between IRR 2 and 3 million (30.2%), between IRR 1.2 and 2 million (24.7%), and between IRR 3 and 5 million (21.2%).

Procedure and Measures

The Ethics Committee of the University of Turin, Italy, approved the study protocol. Participants were recruited in the five countries through snowball sampling. They were informed that their participation was voluntary and anonymity was granted. No compensation was given for their enrollment.

Data were collected by the researchers themselves and by research assistants trained by the researchers. Data collection involved completion of a self-report, pencil-and-paper

questionnaire in the language of each country, which took approximately 20 minutes to complete.

When available, we used validated scales in the language of each country and translated and back-translated scales from English for the other measures using Brislin (1970) back-translation methodology.

The questionnaire included the following measures:

1. *The short version of the Ambivalent Sexism Inventory* (ASI; Glick & Fiske, 1996; Rollero, Glick, & Tartaglia, 2014) assessing Hostile Sexism (HS, 6 items, e.g., "Once a woman gets a man to commit to her, she usually tries to put him on a tight leash") and Benevolent Sexism (BS, 6 items, e.g., "Women should be cherished and protected by men"). The items were rated on a 6-point point Likert-type scale ranging from "strongly disagree" (0) to "strongly agree" (5). Both HS and BS showed appropriate internal consistency in each sample (HS: Italian α = .80; Polish α = .80; Romanian α =.79; British α = .90; Iranian α = .78; BS: Italian α = .77; Polish α = .78; Romanian α =.79;; British α = .86; Iranian α = .71).

2. *The short version of the Ambivalence Toward Men Inventory* (AMI; Glick & Fiske, 1999; Rollero et al., 2014) assessing Hostility toward Men (HM, 6 items, e.g., "Men will always fight to have greater control in society than women") and Benevolence toward Men (BM, 6 items, e.g., "Men are more willing to put themselves in danger to protect others"). The items were rated on a 6-point Likert-type scale ranging from "strongly disagree" (0) to "strongly agree" (5). Both HM and BM showed acceptable internal consistency in each sample (HM: Italian α = .75; Polish α = .79; Romanian α =.73; British α = .83; Iranian α = .65; BM: Italian α = .75; Polish α = .77; Romanian α =.74; British α = .87; Iranian α = .69).

3. *The Rosenberg Self-Esteem Scale* (Rosenberg, 1965) including 10 items (e.g., "I feel that I am a person of worth, at least on an equal plane with others") rated on a 4-point

scale ranging from 1 (strongly disagree) to 4 (strongly agree). The scale showed

appropriate internal consistency in each sample (Italian α = .78; Polish α = .81;

Romanian α =.80; British α = .92; Iranian α = .81).

4. *The Gender Identification Scale* (Fasoli et al., 2018) including 3 items measuring

participants' identification with the ingroup associated with their own gender (e.g. "I

identify with the category of men/women"). The items were rated on a 7-point Likert-

type scale ranging from "strongly disagree" (1) to "strongly agree" (7). In each sample

the scale showed acceptable internal consistency for both men and women (Men:

Italian α = .65; Polish α = .77; Romanian α =.69; British α = .74; Iranian α = .69;

Women: Italian α = .60; Polish α = .71; Romanian α =.74; British α = .75; Iranian α =

.73).

5. *The Satisfaction with Life Scale* (Diener et al., 1985) including 5 items (e.g. "In most

ways, my life is close to my ideal") rated on a 7-point Likert-type scale ranging from

"strongly disagree" (1) to "strongly agree" (7). The scale proved excellent internal

consistency in each sample (Italian α = .86; Polish α = .88; Romanian α =.84; British α

= .90; Iranian α = .86).

6. A list of socio-demographic items, including gender, age, educational level,

occupational status, and monthly household income in local currency.

Data analyses

First, we performed multi-group confirmatory factor analysis for each scale across the five

samples, in order to check for measurement invariance[1]. Results were satisfactory and this no

item was deleted.

After bivariate descriptive statistics, we carried out multivariate regression analyses to test our

hypotheses. Specifically, we entered the following variables as predictors of life satisfaction:

age, income, self-esteem, gender identification, BS, HS, BM, and HM. The same regression model was tested in each country and within gender.

All statistical analyses were carried out using IBM SPSS Statistics version 26.0 software.

Results

Bivariate analyses

First, *t*-tests were carried out to assess gender differences on the study variables across the whole sample (except for gender identification, whose measure was gender-specific). As shown in Table 1, men outscored women on both HS and BM, whereas women reported higher levels of HM. No significant gender differences emerged in relation to BS, self-esteem and life satisfaction.

Second, a one-way analysis of variance was performed to test for country differences on the study variables (income was not comparable, as it was reported in local currencies). As seen in Table 2, HS in the Italian sample was lower than in the Romanian and in the Polish ones. Concerning BS and BM, Italy showed the lowest scores, whereas Romania and Iran showed the highest. Participants from these last two countries also reported the highest levels of HM. The Italian and Romanian samples scored highest on self-esteem, whereas the UK and Polish samples scored lowest. Men were more identified with their gender in Iran than in all the other countries, and in Italy and the UK identification was significantly lower. In Iran, as well as in Poland, women reported the highest levels of gender identification, whereas Italian women reported the lowest. Finally, Romanian participants expressed the greatest life satisfaction, while Iranian and the UK subjects were the least satisfied.

Zero-order correlations were then carried out within each sample. As shown in Table 3, in all countries the four dimensions of ambivalent sexism were positively related. Life satisfaction positively correlated with self-esteem and gender identification in Romania, Poland, and the UK, whereas life satisfaction correlated only with self-esteem and male identification in Italy.

In Iran, life satisfaction was correlated with self-esteem and female identification but it was also correlated with benevolence toward women and benevolence toward men.

Regression analyses

Multivariate regression analyses were performed separately for men and women in each country to predict life satisfaction. As reported in Table 4, all the regression models for male participants were significant, with higher adjusted R square in the UK and in Poland and lower in Italy. Self-esteem plays a very significant role in all the countries, as it represents the strongest predictor of life satisfaction. Gender identification had a positive impact in Italy, Romania, and Poland, whereas household income was a significant predictor in Poland and in the UK. Moreover, in the Iranian sample, older men were more satisfied with their life than their younger counterparts. No dimension of ambivalent sexism, either toward men or toward women, affected life satisfaction.

All the regression models were also significant for women, as seen in Table 5. As in the case of men, self-esteem proved to be the most relevant predictor of life satisfaction in all five countries. Gender identification played a positive role in Italy, Romania, and Iran. Only in Poland was household income associated with life satisfaction for women as well. Furthermore, both in Italy and Iran benevolence toward men was positively related to life satisfaction, and in Iran hostility toward men was negatively related to it.

Discussion

This study has mainly focused on exploring the antecedents of life satisfaction in different countries on each gender separately, taking into account ambivalent sexism, gender identification, self-esteem, age and household income. Our hypotheses were based on the direction of other scholars, who suggest attention is given to potentially different patterns for

men and women (e.g., Bartels, 2015; Rollero et al., 2014) and within different countries (e.g., Chebotareva, 2015; Ngoo et al., 2015; Sortheix & Lönnqvist, 2014).

In line with research showing that self-esteem is positively related to life satisfaction (e.g., Al- Krenawi & Kanat- Maymon, 2017; Wang & Kong, 2020), the current findings show that the self-esteem of both women and men is the strongest predictor of life satisfaction in all the countries. How we perceive our own abilities, whether we respect ourselves and see our positive qualities, all play a key role in our well-being, regardless of gender and country of residence. This is a very important discovery, because when considering people from different cultural backgrounds, we should be aware that they may have different values and perceptions of well-being. Our research shows that despite these differences, the main determining factor is universal, and it is self-esteem.

The positive relationship between life satisfaction and household income (e.g., Brown & Grey, 2016; Ebrahim et al., 2013; Ng & Diener, 2019) is only partially confirmed, as in our study household income was a significant predictor only in Poland (for both men and women) and in the UK (for men). A relationship similar to that in Poland was observed in a Chinese sample (Ye et al., 2012), Australian sample (Brown & Grey, 2016) and South African sample (Ebrahim et al., 2013). Moreover, previous research shows that participants in wealthier countries have a higher level of life satisfaction compared to poorer countries, and that people from countries with greater income inequality report a higher life satisfaction level than those in more equal countries (Ng & Diener, 2019). It may therefore mean that not only income, but income (in)equality is a factor determining life satisfaction. This is confirmed by Ng and Diener's outcomes (2019) which indicate that household income is more strongly associated with subjective well-being in more equal countries than in nations with stronger income inequality. Their results highlight the fact that money plays a less significant role in life satisfaction in unequal nations compared to equal nations (Ng & Diener, 2019).

It has been assumed that benevolent sexism toward women and men is positively related to life satisfaction (Connelly & Heesacker, 2012; Hammond & Sibley, 2011; Hammond & Overall 2016; Napier et al., 2010; Waddell et al., 2019). However, our results tend not to confirm this. Only in Iran did benevolent sexism and benevolence toward men increased in tandem with life satisfaction. In turn, regression analysis showed that only benevolence toward men among Italian and Iranian women was a significant predictor of life satisfaction. Similar results were also observed with regard to the relationship between life satisfaction and hostile sexism/hostility toward men. Only among Iranian women was hostility toward men a significant predictor of satisfaction and the relationship between variables was negative. One explanation for our results may be related to the more (or less) egalitarian gender norms in the countries analyzed (Salinas-Jiménez, Artés, & Salinas-Jiménez, 2016). These norms can be the source of differences in how other variables determine women's and men's life satisfaction (Salinas-Jiménez et al., 2016). In less egalitarian nations (i.e., Italy and Iran) benevolence toward men – but not hostility – is "adaptive" for the low status group. In other words, in cases of greater gender inequalities, people who show positive attitudes toward the high-status group are those who experience higher well-being. At the same time, however, benevolence toward the dominating group may foster gender inequalities, as it may reinforce the *status quo*.

With reference to gender identification, in Italy and Romania, it was a significant predictor of life satisfaction for both men and women. However, in Poland such a relationship was observed exclusively among men and in Iran exclusively among women. In other words, in most countries adherence to traditional gender roles appears to be related to women's and men's well-being, in line with previous research on group identification and life satisfaction (e.g., de Vroome and Hooghe 2014; Hannaford et al., 2018; Gómez Berrocal et al., 2020; Rosenthal et al., 2014; Wakefield et al., 2018). Only in the UK did this factor not matter in the prediction of life satisfaction. This may be due to the fact that the UK is a more gender

egalitarian country, where the norms of femininity and masculinity are not exclusively based on the traditional division into feminine-expressive and masculine-instrumental characteristics (Matud, López-Curbelo, & Fortes, 2019). In more gender egalitarian countries (e.g., the UK), this explicit division is blurred, and this may foster a self-concept less related to traditional gender stereotypes and identifications. Moreover, another study of a Spanish sample shows that gender identification is associated with life satisfaction in both men and women, though the relationship is moderated by social support in women and self-esteem in men (Matud, Bethencourt, & Ibáñez, 2014). Therefore, future studies should ensure that these moderators are also relevant in other countries.

It should also be borne in mind that in each country the path to life satisfaction is different. The Global Gender Gap Index is quantitative and thus does not capture certain psychological variables, such as how gendered a certain country is, how much importance/value is associated with a particular gender, and whether the two genders perceive each other to be in conflict or in competition to gain social/personal power.

The last predictor analysed was age. Previous studies have found inconsistent results (e.g., Berrocal et al., 2020; Degges-White & Kepic, 2020; Jebb et al., 2020). In line with such findings, in our study the relationship between age and life satisfaction was not markedly relevant, as only among Iranian men was age a significant predictor of life satisfaction. This may be due to the specific culture of Iran, where age hierarchy is particularly salient. The elders, particularly the aged men, have most of the power and respect in their family and in the whole society.

Several limitations of the present study have to be noted. First, its cross-sectional nature does not allow any causal conclusions. There is scope for additional research using different designs (e.g., experimental, longitudinal) to explore further the direction of the relationships. Second, we used only questionnaires which may have artificially increased the relationships between our variables due to common method bias. However, we followed the

guidelines of Podsakoff, MacKenzie, Lee and Podsakoff (2003) to reduce feelings of being evaluated and socially desirable answers; this should consequently reduce common method bias. More specifically, we mentioned to our participants that there were no right or wrong answers, that the questionnaire was anonymous and that they could answer freely and spontaneously. Third, we used a non-probability sampling technique (snowball sampling) rather than representative samples (i.e., probability sampling) although our samples are heterogenous in terms of sex, age, level of education and level of household income, we acknowledge that they may not be representative of their country.

Limitations aside, our findings underline the interconnection between contextual and individual dimensions as antecedents of life satisfaction. On the one hand, the context plays an important role in bringing out patterns of variables affecting life satisfaction. On the other hand, however, closely individual dimensions are key variables in very different social contexts and cannot be ignored. Furthermore, gender represents a key variable at both individual and sociocultural level that can not be neglected. Indeed, life satisfaction of men and women seems to be related to partially different variables, in line with literature on gender differences in health and well-being (Denton, Prus, & Walters, 2004; McDonough & Walters, 2001; Rollero, Fedi, & De Piccoli, 2016) Moreover, like other stereotypical beliefs, gender stereotypes are consensual and exist as ideology that is socially built and shared (Tartaglia & Rollero, 2015). Such beliefs toward genders rooted in cultures, i.e., sexism, can impact on people well-being in different national contexts.

Ethic declarations

Conflict of Interest

The authors have no conflicts of interest to declare that are relevant to the content of this article.

Ethics Approval

All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

Informed Consent

Informed consent was obtained from all individual participants included in the study.

Data availability: The datasets generated during and/or analysed during the current study are available from the corresponding author on reasonable request.

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Note

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[1] Results of multi-group confirmatory factor analyses are available upon request.

Life satisfaction in Europe and Iran: the role of self-esteem, gender identification and ambivalent sexism.

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Dear Editors and Reviewers of *Current Psychology*,

We sincerely thank you for your comments on the manuscript entitled "Life satisfaction in Europe and Iran: the role of self-esteem, gender identification and ambivalent sexism". This memo summarizes the changes made and provides responses to each comment.

REVIEWER 2:

Comment: *Good article, interesting, simple and easy to read. Its references are very varied and current. Congratulations. Just note that the summary refers to the fact that the classification of countries as more or less equal is based on the Global Gender Gap Index.*

Response: Thank you for bringing this to our attention. In the Abstract we have added that the classification of countries as more or less equal is based on the Global Gender Gap Index. References to the classification on the Global Gender Gap Index are reported in the manuscript as well.

REVIEWER 3:

Comment: *Thank you for the chance to read this interesting study. This paper is definitely of my interest and I believe that it should be of the interest of other readers. This paper attempts to the influencing factors of life satisfaction from two dimensions of individual and environment. The theoretical perspective is good, and data collection is rigorous. However, I would recommend the authors consider the following points which should allow the paper to be of a greater impact to this field. In terms of data analysis, the author only uses correlation and regression analysis to explain the influence of these factors on life satisfaction. This analysis does not prove the hypothesis sufficiently. Since the researchers collected data from multiple countries, it is suitable to adopt a multi-layer linear model. This may help to observe the effects of variables such as country and gender on life satisfaction in an integrated model*

Response: Concerning the analyses, a multi-layer linear model would allow us to observe the effects of both gender and country on life satisfaction. However, our aim was to investigate factors related to life satisfaction within each country, from a gender perspective (even considering the large number of other variables and countries in our study). For this reason, and after receiving the Editor's endorsement, we decided not to change the analyses.

Table 1. Mean, standard deviation and sex comparison.

		Mean	SD	T
HS	Men	3.11	1.11	11.61**
	Women	2.62	1.10	
BS	Men	3.26	1.04	-.94
	Women	3.30	1.11	
HM	Men	2.57	1.01	-13.22**
	Women	3.10	1.02	
BM	Men	3.17	1.06	8.97**
	Women	2.79	1.13	
Self-esteem	Men	3.07	.56	.98
	Women	3.00	.58	
Life satisfaction	Men	4.57	1.30	.45
	Women	4.55	1.28	

** $p < .01$

Table 2. Country differences on hostile sexism (HS), benevolent sexism (BS), hostility toward men (HM), benevolence toward men (BM), self-esteem (SE), male gender identification (MGI), female gender identification (FGI), and life satisfaction (LS): mean scores, standard deviations, F values, and Post hoc tests (Bonferroni).

		Mean scores	SD	F	Post hoc (Bonferroni)
HS	Italy	2.68	1.16	3.26*	Italy - Romania*
	Romania	2.93	1.11		Italy - Poland*
	Iran	2.83	1.05		
	Poland	2.89	1.11		
	UK	2.78	1.28		
BS	Italy	2.82	1.10	62.21**	Italy – Romania**
	Romania	3.73	.94		Italy – Poland **
	Iran	3.60	.88		Italy – Iran **
	Poland	3.11	1.08		Italy – UK *
	UK	3.05	1.22		Romania– Poland**
					Romania – UK **
					Iran – Poland **
					Iran – UK **
HM	Italy	2.77	1.02	14.86**	Italy – Iran **
	Romania	2.94	1.05		Romania– Poland**
	Iran	3.09	.90		Iran – Poland**
	Poland	2.68	1.10		Iran – UK **

	UK	2.75	1.10		
BM	Italy	2.43	1.12	84.51**	Italy – Romania**
	Romania	3.35	1.02		Italy – Iran **
	Iran	3.47	.90		Italy – Poland **
	Poland	2.76	1.07		Italy – UK *
	UK	2.67	1.22		Romania– Poland**
					Romania – UK **
					Iran – Poland **
					Iran – UK **
SE	Italy	3.27	.50	57.45**	Italy – Iran **
	Romania	3.23	.49		Italy – Poland**
	Iran	3.04	.48		Italy – UK **
	Poland	2.89	.57		Romania – Iran **
	UK	2.84	.70		Romania– Poland**
					Romania – UK**
					Iran – Poland **
					Iran – UK **
MGI	Italy	5.10	1.24	24.81**	Italy – Romania**
	Romania	5.65	1.19		Italy – Iran **
	Iran	6.09	1.13		Italy – Poland **
	Poland	5.78	1.24		Romania – Iran **
	UK	5.15	1.19		Romania – UK **
					Iran – Poland *

FGI	Italy	4.79	1.21	42.77**	Italy – Romania**
	Romania	5.59	1.19		Italy – Iran **
	Iran	5.95	1.19		Italy – Poland **
	Poland	5.99	1.96		Italy – UK **
	UK	5.60	1.16		Romania – Iran **
					Romania–Poland **
					Iran – UK **
					Poland – UK **
LS	Italy	4.59	1.32	21.68	Italy – Romania *
	Romania	4.88	1.13		Italy – Iran **
	Iran	4.27	1.42		Italy – UK **
	Poland	4.66	1.23		Romania – Iran **
	UK	4.24	1.31		Romania – Poland*
					Romania – UK **
					Iran – Poland **
					Poland – UK **

** $p < .01$; * $p < .05$

Table 3. Pearson's correlations on the whole sample and separate by gender among hostile sexism (HS), benevolent sexism (BS), hostility toward men (HM), benevolence toward men (BM), self-esteem (SE), male gender identification (MGI), female gender identification (FGI), and life satisfaction (LS).

_____

	Italy						
	1.	2.	3.	4.	5.	6.	7.
1. HS							
2. BS whole sample	.43**						
Men	.29**						
Women	.35**						
3. HM whole sample	.39**	.48**					
Men	.47**	.31**					
Women	.45**	.50**					
4. BM whole sample	.61**	.62**	.45**				
Men	.48**	.57**	.43**				
Women	.47**	.67**	.45**				
5. SE whole sample	.05	.09	.03	.04			
Men	.01	-.03	.00	.04			
Women	.03	.03	.02	-.04			
6. MGI (men only)	.20**	.17*	.12	.30**	.12		

7. FGI (women only)	-.11	.10	-.00	.07	-.02		
8. LS whole sample	.06	-.05	-.08	-.03	.39**	.17*	.14
Men	-.11	.09	-.06	.06	.29**	.17*	-
Women	.04	-.04	-.03	.02	.45**	-	.14

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Romania

	1.	2.	3.	4.	5.	6.	7.
1. HS							
2. BS whole sample	.26**						
Men	.32**						
Women	.25**						
3. HM whole sample	.25**	.42**					
Men	.39**	.39**					
Women	.33**	.42**					
4. BM whole sample	.55**	.48**	.30**				
Men	.59**	.54**	.47**				
Women	.45**	.48**	.28**				
5. SE whole sample	-.14**	-.06	-.16**	-.06			
Men	-.09	-.10	-.19**	-.06			
Women	-.21**	-.02	-.12	-.08			

	1.	2.	3.	4.	5.	6.	7.
6. MGI (men only)	.13*	.06	.08	.18**	.16*		
7. FGI (women only)	-.01	.20**	.10	.20**	.09		
8. LS whole sample	-.06	-08	-.02	.07	.44**	.22**	.17**
Men	-.06	.09	.00	.08	.34**	.22**	-
Women	-.06	.08	-.02	.05	.51**	-	.17**

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Iran

	1.	2.	3.	4.	5.	6.	7.
1. HS							
2. BS whole sample	.31**						
Men	.17*						
Women	.44**						
3. HM whole sample	.25**	.41**					
Men	.17*	.34**					
Women	.46**	.44**					
4. BM whole sample	.45**	.48**	.30**				
Men	43**	.48**	.32**				
Women	.43**	.52**	.41**				
5. SE whole sample	-.16**	-.10	-.15**	.01			
Men	-.20**	.01	-.15*	-.06			

Women	-.17**	-.10	-.13*	.02			
6. MGI (men only)	.17*	.19**	.05	.31**	.08		
7. FGI (women only)	.16*	.22**	.13*	.19**	.12*		
8. LS whole sample	-.02	.14**	-.00	.12**	.43**	.08	.23**
Men	-.07	.14*	.03	.02	.41**	.08	-
Women	.02	.14*	-.05	.18**	.48**	-	.23**

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Poland

	1.	2.	3.	4.	5.	6.	7.
1. HS							
2. BS whole sample	.42**						
Men	.27**						
Women	.58**						
3. HM whole sample	.35**	.51**					
Men	.31**	.39**					
Women	.54**	.63**					
4. BM whole sample	.58**	.60**	.43**				
Men	.53**	.51**	.46**				
Women	.58**	.70**	.58**				
5. SE whole sample	-.07	-.03	-.14**	-.04			

Men	-.11*	.05	-.13**	-.01
Women	-.08	-.10*	-.12*	-.11*

6. MGI (men only)	.02	.18**	-.10	.13**	.36**

7. FGI (women only)	-.01	.15**	.06	.11*	.25**	-

8. LS whole sample	-.02	.06	-.03	.04	.56**	.30**	.20**
Men	-.12*	.08	-.02	.03	.58**	.30**	-
Women	.06	.04	-.04	.06	.54**	-	.20**

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UK

	1.	2.	3.	4.	5.	6.	7.

1. HS

2. BS whole sample	.55**	
Men	.49**	
Women	.61**	

3. HM whole sample	.44**	.58**	
Men	.48**	.61**	
Women	.47**	.62**	

4. BM whole sample	.73**	.75**	.57**
Men	.70**	.70**	.61**
Women	.76**	.80**	.60**

5. SE whole sample	-.03	.05	-.05	.07
Men	-.01	.10	-.05	.10
Women	-.04	-.00	-.05	.04
6. MGI (men only)	.27**	.35**	.22**	.31**	.32**
7. FGI (women only)	.02	.11	.04	.13	.30**	-
8. LS whole sample	.03	.06	.01	.07	.67**	.26**	.24**
Men	.13	.14	.07	.14	.67**	.26**	-
Women	-.07	.00	-.07	.10	.68**	-	.24**

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** p<.01; * p<.05

Table 4. Regression analyses predicting men's life satisfaction: beta scores (and standard errors).

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	Italy	Romania	Iran	Poland	UK
Age	.11 (.01)	.02 (.01)	.24** (.01)	-.01 (.01)	-.10 (.01)
Household income	.00 (.06)	.13 (.05)	.02 (.07)	.12* (.05)	.17** (.05)
Self-esteem	.28** (.18)	.37** (.18)	.41** (.21)	.51** (.10)	.65** (.11)
Identification	.19** (.07)	.22** (.07)	.04 (.09)	.10* (.05)	.02 (.07)
BS	.12 (.10)	.12 (.09)	.10 (.13)	-.00 (.06)	.01 (.09)
HS	-.12 (.09)	-.15 (.08)	-.03 (.11)	-.09 (.06)	.14 (.08)
BM	.02 (.11)	.04 (.10)	-.08 (.15)	.05 (.07)	-.09 (.10)
HM	-.05 (.09)	.10 (.08)	.08 (12)	.10 (.06)	.11 (.09)

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| Adjusted R^2 | .14** | .21** | .21** | .36** | .47** |

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** p<.01; * p<.05

Table 5. Regression analyses predicting women's life satisfaction: beta scores (and standard errors).

	Italy	Romania	Iran	Poland	UK
Age	-.04 (.01)	.03 (.01)	.09 (.01)	-.03 (.01)	-.09 (.01)
Household income	.07 (.06)	-.08 (.05)	.06 (.06)	.13** (.04)	.06 (.06)
Self-esteem	.48** (.15)	.50** (.14)	.42** (.14)	.51** (.09)	.65** (.12)
Identification	.20** (.07)	.13* (.06)	.15** (.06)	.06 (.05)	.02 (.07)
BS	-.12 (.10)	.03 (.10)	.09 (.09)	.01 (.07)	.04 (.11)
HS	.05 (.08)	.01 (.08)	-01 (.08)	.08 (.06)	-.08 (.10)
BM	.20* (.10)	.03 (.09)	.12* (.09)	.11 (.07)	.04 (.14)
HM	-.11 (.09)	.02 (.08)	-.12* (.09)	-.09 (.06)	-.05 (.09)
Adjusted R²	.28**	.25**	.27**	.32**	.44**

** p<.01; * p<.05