

Perceptions of love and sex in young and middle Greek adults, relationship satisfaction and duration

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Abstract

Sexuality is perceived either as result or prerequisite of love or as working in tandem with love in romantic relationships. Hendrick & Hendrick (2002) proposed a theory and a measure capturing the lay perceptions of the love-sex link. The PLSS (Perceptions of Love and Sex Scale) comprises four themes/subscales, Love is Most Important, Love Comes Before Sex (“love themes”), Sex is Declining, Sex Demonstrates Love (“sex themes”). We examined the validity of PLSS in the Greek context, across two age-groups, young (18-40) and middle adults (41-65), and whether the themes predicted relationship satisfaction and duration. Greek participant (N=631) in romantic relationships responded online to the PLSS and other measures of relationship constructs (e.g., passionate, companionate love, sex, satisfaction). Exploratory and confirmatory factor analyses revealed that the PLSS maintained its fourfold structure. The PLSS sexual themes correlated more strongly with relationship constructs than love themes. Young adult women stated that Sex was Declining less than middle adult ones and reported shorter relationships than men. Irrespective of age-group, Sex is (not) Declining, Love is Most Important, and Sex Demonstrates Love predicted satisfaction. Love Comes Before Sex and Sex is Declining predicted duration among young adults. Sex is Declining was the only predictor of duration among middle adults. Our findings suggest that love and sex work in tandem but sexual themes are more important for the Greek population. The study corroborated the validity of PLSS in the Greek context, demonstrating its sensitivity to capture cultural developments in conceptions of intimacy.

Keywords: Perceptions of love and sex, Satisfaction, Duration, young adults, middle adults, Greece

Introduction

When Aristippus of Cyrene (435-355 B.C.), a philosopher of the Hedonist School, was asked “*Does love exist for sex?*”, he answered “*Neither because of it nor without it*” (Laertius, 2020). Although the actual existence of the connection between love and sex, has hardly been questioned, the mode of their association has puzzled the minds of philosophers, sociologists, psychologists, anthropologists, evolutionary scientists, and lay people alike (Hendrick & Hendrick, 2004). Aron and Aron (1991) have succinctly classified the various theoretical approaches on the relation of love and sex along a single bipolar dimension. On one end, love is viewed as the result of sexuality whereas on the other, sex is seen as a pale outcome of love (Platonic eros or Christian agape). In between some approaches emphasize sexuality, assigning love a minor part while others emphasize love, treating sex as a minor factor. At the very midpoint lie approaches that consider love and sex as separate and equal in importance or even overlapping. In support of this “overlapping” view, it has been proposed that in humans, sex may subsume love to promote genetic fitness by searching and focusing on the appropriate mate, while love may subsume sex to foster the imperative for human survival communion (Fisher, 2006).

Hendrick and Hendrick (2002) identified a lay-theory that construes the link of love and sex in terms of four themes and have developed a corresponding 17-item Likert type instrument to measure them. According to the first theme, “Love is Most Important”, love is the predominant emotion in a romantic relationship with sex having a minor role. In the second theme, “Sex Demonstrates Love”, love is viewed as inseparable from sex and springing out of sex. The third theme, “Love Comes Before Sex”, describes love as preceding sex chronologically and “driving sex”. Sex is a mere expression of Love. The fourth scheme, “Sex is Declining” depicts sex as diminishing in a relationship. This framework is consistent with the view that both sex and love are important in partnered intimate relationships. Lay

people do link sex and love irrespective of the primacy they may give to one over the other. The U.S. cultural background emphasizes Christian Love, thus displaying a strong concern whether sex in romantic relationships is bestowed with an emotional, companionate context (Aron & Aron, 1991; Fehr, 1988; Hendrick & Hendrick, 2004). In the study mentioned above (Hendrick & Hendrick, 2002) and within the nexus of love and sex, love was given primacy (Love is Most Important). On the other hand, sex (Sex is Declining) was a strong negative predictor of commitment. In simple terms, love was found to be vital for relationships but so did dwindling sexuality. Neto's (2012) study, which further looked at psychosocial age-group (Erikson & Erikson, 1998) differences among the Portuguese population, suggested that love was given primacy (Love is More Important, Love Comes before Sex) more among the older groups rather than the younger. To complete the picture, for the older groups, the declining of sex was less important for their relationships.

From a psychometric perspective, the Perceptions of Love and Sex Scale has demonstrated robust properties with U.S. participants (Hendrick & Hendrick, 2002), including internal reliability, convergent and discriminant validity, construct validity and predictive validity. Neto (2012), further showed that the instrument preserves the same structure with Portuguese participants, structural stability across different psychosocial age-groups as well as theoretically predictable differences across these groups and gender. This may further imply that the PLSS is a useful and valid instrument within the context of other cultures for all seem to have pursued ways to blend "*love as desire and love as enduring affection*" (Jankowiak, 1995, p. 7). More specifically, European, and other Western cultures share with the US the cultural background of seeking a connection between Christian Love with carnal desire, and thus the PLSS and its underlying lay theory may be meaningful in their context.

Aims of the present study

Construct validity of the PLSS. The main goal of the present study and our primary hypothesis concerned the construct validity of the PLSS instrument, that is whether the fourfold conceptualization of the love and sex relationship obtains in the Greek cultural context. Further we were interested to explore the stability of this structure across two psychosocial age groups, young and middle adults.

There is no empirical research on the link between love and sex in Greece using the PLSS or its conceptual framework. Greece is a south European nation with a dominant Christian Orthodox tradition and a high degree of religiosity that influences family values as well as perceptions on love and sex. Paxson (2007) has identified a widespread folk conceptual differentiation between “eros” and “agape”. The former is passionate and physical/sexual love and is to be distinguished from the latter that is long-lasting and can be also expressed among siblings, parent and child and friends. The two are linked as the transformation of eros to agape is the precondition that makes a romantic relationship long-lasting and a marriage sound. Sex without love is perceived as an enjoyable privilege (usually for men) and an emotionally and socially costly risk (usually for women). In another line of research, the unique blend of age-old collectivism and modern individualism that characterizes the contemporary Greek culture (Nezlek et al., 2008) contrasts sexual pleasure as an individual right that one may seek at own moral and possibly social cost, to love as a collectively “appropriate”, family-oriented value. Individuals maintain high expectations that long-term relationships and marriage will fulfil a diverse array of sexual and psychological needs including love (Papastylianou & Lambridis, 2016). It appears then that Greece may share with the U.S.A. (Aron & Aron, 1991; Fehr, 1988), and Portugal (Neto, 2012) and other western cultures, the concern of linking sex with love, possibly dictated to some extent by the notions of Christian Love and Platonic Eros.

Within cultures, love and sex are important to people of all ages. Until recently, however, researchers have focused on college students in their studies (Neto, 2012; Reeder, 1996). Neto (2012) reasoned for the importance of examining the love and sex nexus across psychosocial age-groups (Erikson & Erikson, 1998). To illustrate, young adulthood, middle adulthood, and late adulthood face distinct transitions and challenges in physical, cognitive, and socioemotional development (Chung, 2018; Erikson & Erikson, 1998). Love and sex may take on a different value for each age group as the preponderance on one over the other carries different consequences for the individual's psychosocial adjustment. Albeit the link of sex with love, per se, is likely to remain the same despite the importance placed by individuals on the one end or the other. In fact, Neto's findings suggested that this is the case as the structure of the instrument was constant across the three groups he examined, young, middle adults, and the elderly. We have chosen to focus on the former two groups because the underlying challenge in the young adulthood is to determine the nature of intimacy and the degree of self-involvement whereas in middle adulthood deciding to support and maintain relationships (Aron et al., 1991; Gilead & Higgs, 2016).

Hypothesis 1. We expect that the four-factor model of lay perceptions on love and sex, found among the American and Portuguese population will be replicated among the Greek one. Moreover, the structure of these lay perceptions will remain constant across the psychosocial age groups of young and middle adults.

Convergent and discriminant validity of the PLSS. Our second aim was to further examine the convergent, discriminant and predictive validity of the PLSS. Based, in part on the two studies validating the PLSS in the USA and Portugal (Hendrick & Hendrick, 2002; Neto, 2012 respectively), we assumed that the four subscales of the PLSS should also be correlated in a cogent and predictable manner with (a) the basic relationship processes underlying romantic relationships, that is those of passionate, companionate love and sex

(Fletcher et al., 2000; Fisher, 1990; Hatfield & Rapson, 2002) (b) relationships outcomes such as relationship satisfaction and duration across the two psychosocial age groups, young (18-40) and middle adults (41-65), men and women.

Correlating with relationship process variables. We have selected the Scales of Passionate and Companionate Love (Hatfield & Rapson, 2002; Hatfield & Sprecher, 1986) for their extensive use in past literature and because they reflect concise and empirically valid definitions of the Passionate and Companionate love processes in romantic relationships. To capture the various aspects of an individual's sexuality while in a relationship we employed several measures: (a) Hurlbert's Index of Sexual Desire (Apt & Hurlbert, 1992) to tap individual sexual motivation as well as sexual desire focused on the partner, (b) Sexual Activity frequency within the relationship, a single question on how often the couple engages in any type of sexual activity with each other (Lawrence & Byers, 1995); (c) four items from the Sociosexual Orientation Inventory (Penke & Asendorpf, 2008) that we labelled "Extradyadic Sex" to account for sexual engagement with a partner outside one's committed relationship (d) three items from the Sexual Desire Inventory (Spector et al., 1996), named "Solitary Sexual Desire" as we were interested to assess sexual drive per se, irrespective of sexual attraction or feelings of passionate or companionate love toward a partner.

Hypothesis 2. Love is Most Important, and Love Comes before Sex will correlate positively with Companionate Love and negatively with Passionate Love, Sexual Desire, Sexual Activity within the Relationship, Solitary Sexual Desire and Extradyadic Sex. Sex Demonstrates Love is more likely to be positively associated with Passionate Love, Sexual Activity and Sexual Desire and negatively with Companionate Love and Extradyadic Sex. Sex is Declining is expected to correlate negatively with Passionate Love, Sexual Desire and positively with Companionate Love, Solitary Sexual Desire and Extradyadic Sex.

Correlating with relationship outcome variables, satisfaction and duration. The relation of general relationship satisfaction with the PLSS subscales has been studied in the original validation study of the instrument using the Relationship Assessment Scale (Hendrick, 1988). It was found to correlate positively and moderately with Love is Most Important, positively, and weakly with Sex Demonstrates Love, and Love Comes Before Sex and negatively but strongly with Sex is Declining. Duration has not been used before as validation criterion of the PLSS. Considering the Greek context, it is important to also examine the relation of duration to the lay perceptions of the love-sex nexus. In the Greek culture, love and sex seem to be weighed against each other in lay-thinking to decide whether to invest or not in a relationship of any considerable duration (Kordoutis & Manessi, 2012; Paxson, 2007). Greece continues to have one of the lowest rates of divorce among the European nations (Eurostat, 2015; Karela & Petrogiannis, 2018), an indication that relationship duration is still valued, and relationships are maintained despite failing high expectations (Papastylianou & Lampridis, 2016).

Hypothesis 3. Love is Most Important, and Love Comes before Sex will correlate positively with both satisfaction and duration whereas Sex Demonstrates Love will correlate positively with satisfaction and negatively with duration. Sex is Declining is expected to correlate negatively with satisfaction. We are not sure what to expect in the case of duration although the Greek studies we mentioned above indirectly suggest that a positive correlation might obtain.

There is no direct evidence involving the PLSS to support specific expectations on the preferences of the Greek population on the love and sex link. Considering the cultural identity of Greece among southern European nations with a Cristian background, one should expect similar findings to those of Portugal, at least for middle adults and women. Older generations in Greece have experienced a value system that viewed sex without love (eros) as

unacceptable and love (agape) as an absolute prerequisite for intimate relationships. At the same time, eros, permissiveness and casual sex were tolerated or even encouraged for men whereas women were discouraged to claim or even speak of personal sexual satisfaction or pleasure (Papastyliaou & Lambridis, 2016; Paxson, 2007). Cross-cultural research examining Sociosexuality may be informative. Sociosexuality reflects the degree to which someone invests sex with emotions (restricted sexuality) or, in contrast, experiences lower levels of romantic intimacy along with sex (unrestricted). Schmitt (2005) in a study of 48 nations, found that Greece was higher than Portugal and closer to the U.S.A. scoring on unrestricted sexuality. However, it was among the four countries with the largest gender difference (Schmitt, 2005, p. 262) with women scoring much lower than men on unrestricted sexuality. It is thus, hard to predict whether the preferences of the Greek population on the love-to-sex links will be consistent with those in the U.S.A. or those in Portugal. However, we can expect large gender differences with Greek women supporting love themes more (Love is More Important and Love Comes Before Sex) than Greek men who will support sex themes (Sex Demonstrates Love and Sex is Declining).

Recent demographical data and population attitudes on social issues in Greece suggest that differences between psychosocial age groups may also obtain as the younger generation has been systematically exposed to significant developments in intimacy during the last two decades. Civil marriage competes in numbers religious marriage, registered partnership has been legally introduced and is a respectable option. Protracted singlehood and independent living are valued and are more frequent as a choice per se; sexual relationships outside the bond of marriage have been normalized. The age of marriage for women and men is increasing while divorce rate, once the lowest in Europe, has gradually and steadily risen. Gender roles also appear to be changing with more women participating in public life, the labor market and education. Cohabitation, alternating short lived affairs are more common

and acceptable (Argyroudi & Kordoutis, 2012; Corselli-Nordblad & Gereoffy, 2015; Kordoutis, 2020; Statistics Office of the European Union, 2021). Although, these data do not necessarily point to differences on how love and sex are related, they are likely to be more associated with changes in the values pertaining to intimacy and indirectly to the love and sex linkage among younger adults rather than middle ones.

Hypothesis 4. Love themes will prevail in people's preferences over sex ones, that is, Love is Most Important, and Love Comes before Sex will be preferred to Sex Demonstrates Love and Sex is Declining. Women and middle adults will give primacy to the two love themes whereas men and younger adults to the two sex ones.

Hypothesis 5. Love is Most Important and Love Comes before Sex will further be positive predictors of the two outcome relationship variables, satisfaction and duration, among middle adults, whereas Sex Demonstrates Love will predict satisfaction and duration positively among younger adults. Sex is Declining will also predict the two outcome variables among younger adults although negatively. Among middle adults being a woman is more likely to be associated with greater relationship satisfaction and duration.

Method

Participants

Initially, 809 people were recruited for the study by means of social media links. Participants who reported that they were involved in a romantic relationship shorter than a month or being single, at the time of the study, were excluded. Thus, the final sample consisted of 631 participants, 79.9% ($n = 504$) women and 20.1% ($n = 127$) men. Participants' age ranged from 18 to 66 and the mean age was 34.68 years ($SD = 10.83$). The sample was divided into two groups, in accordance with Erikson's psychosocial stages (1963; Erikson, 1982; Erikson & Erikson, 1998): 67.2% ($n = 424$) were identified as "young adults" (18 – 40 years old)

while the rest were identified as “middle adults” (41 – 65 years old, $n = 207$). For detailed demographic characteristics of both groups see Table 1.

Table 1

Demographic characteristics of the sample ($N = 631$)

Demographics	Young adults		Middle adults	
	Males ($n =$	Females ($n =$	Males ($n =$	Females ($n =$
Gender	68)	356)	59)	148)
<i>Sexual orientation</i>				
Straight	53 (77.9)	315 (88.5)	49 (83.1)	138 (93.2)
Bi	1 (1.5)	11 (3.1)	0 (0)	1 (0.7)
Gay	14 (20.6)	30 (8.4)	10 (16.9)	9 (6.1)
<i>Education</i>				
Up to sec. education	4 (5.9)	20 (5.6)	6 (10.2)	17 (11.5)
Post- sec. education	9 (13.2)	11 (3.1)	8 (13.6)	9 (6.1)
Bachelor	21 (30.9)	203 (57)	22 (37.3)	39 (26.4)
Postgraduate	34 (50)	122 (34.3)	23 (39)	83 (56.1)
<i>Cohabitation</i>				
Family	27 (39.7)	170 (47.8)	30 (50.8)	91 (61.5)
Partner	22 (32.4)	105 (29.5)	15 (25.4)	30 (20.3)
Roommates	3 (4.4)	7 (2)	1 (1.7)	0 (0)
Alone	16 (23.5)	59 (16.6)	13 (22)	25 (16.9)
Other	0 (0)	15 (4.2)	0 (0)	2 (1.4)
<i>Family status</i>				
Single	2 (2.9)	3 (0.8)	3 (5.1)	5 (3.4)
Civil partnership	1 (1.5)	6 (1.7)	1 (1.7)	3 (2)
Partnered	42 (61.8)	211 (59.3)	15 (25.4)	24 (16.2)
Engaged	1 (1.5)	11 (3.1)	0 (0)	0 (0)
Living with partner	10 (14.7)	51 (14.3)	6 (10.2)	14 (9.5)
Married	12 (17.6)	68 (19.1)	30 (50.8)	90 (60.8)
Separated	0 (0)	5 (1.4)	1 (1.7)	5 (3.4)
Divorced	0 (0)	1 (0.3)	3 (5.1)	5 (3.4)
Widowed	0 (0)	0 (0)	0 (0)	2 (1.4)
<i>Residency</i>				
Metropolitan Areas	53 (77.9)	269 (75.6)	46 (78)	110 (74.3)
Rural areas	8 (11.8)	72 (20.2)	10 (16.9)	32 (21.6)
Living abroad	7 (10.3)	15 (4.2)	3 (5.1)	6 (4.1)
<i>Occupation</i>				
Students	11 (16.2)	119 (33.4)	0 (0)	2 (1.4)
Employed	50 (73.5)	188 (52.8)	50 (84.7)	125 (84.5)
Unemployed	4 (5.9)	30 (8.4)	4 (6.8)	8 (5.4)
Other	3 (4.4)	5 (8.5)	5 (8.5)	13 (8.8)
<i>Income^a</i>				
0 to 1,000	36 (52.9)	292 (82)	17 (28.8)	57 (38.5)
1,000 to 2,000	20 (29.4)	52 (14.6)	30 (50.8)	75 (50.7)
More than 2,000	12 (17.6)	12 (3.4)	12 (20.3)	16 (10.8)

Relationship duration	57.60	±	56.73 ± 57.93	142.25	±	170.69	±
(months)	64.57			111.06		124.76	

Note. Percentages are column percentages, "per month in euros"

Tools

For the purposes of the present study, it was necessary to translate into Greek all tools but the SOI-R items which have been translated by Schmitt (2005). We employed the forward-backward translation procedure (Brislin, 1980; Tsang et al., 2017). A bilingual researcher translated the original English questionnaires to Greek and another one, independently and with no knowledge of the original English versions, subsequently translated the resulting Greek versions back into English. The semantic and cultural misunderstandings in translation were resolved by a third bilingual researcher in the domain of the Psychology of Interpersonal Relationships. The Greek versions were then administered to ten graduate students who were asked to pick out any phrases, words or items that were difficult to comprehend. No comprehension difficulties were found at this final stage.

The Perceptions of Love and Sex Scale (PLSS) (Hendrick & Hendrick, 2002). The PLSS consists of 17 items, rated on a 5-point Likert scale ranging from 1 (Strongly agree) to 5 (Strongly Disagree). It measures four perceptions of love-to-sex associations. (a) "Love is Most Important" (six items): describes companionate love as the predominant relationship emotion whereas sex has a minor role; (b) "Sex Demonstrates Love" (four items): considers love as inseparable from sex and emanating from sex; (c) "Love Comes Before Sex" (four items): sees sex as an expression of love and love as "driving" sex; and (d) "Sex is Declining" (three items): captures the course of diminishing sex in a relationship. For the detailed psychometric properties of the Greek version of the tool used in the present study see Results (Tables 2-6).

Passionate and Companionate Love Scales (Hatfield & Rapson, 2002; Hatfield & Sprecher, 1986) (PL and CL). The Passionate Love Scale captures the cognitive, affective, and

behavioral aspects of the intense longing for another person. We used the short 15-item version of the scale. The measure is rated on a 9-point scale describing one's feelings about their partner (1 = not at all true – 9 = definitely true). Higher scores indicate higher levels of passionate love. In the present study, we confirmed the uni-dimensionality of the instrument (1-factor solution, eigenvalue = 9.02, total variance explained = 60.13%, $\alpha = .93$) suggested by the designers of the scale. Companionate love (Hatfield & Rapson, 2002) is characterized by its level of intimacy, trust, commitment, and affection. The measure of Companionate Love Scale (Hatfield et al., 2008) consists of 4 items tapping intimacy ($\alpha = .84$, in the present study) and 4 items measuring the decision to be with a partner and commit ($\alpha = .89$, in the present study). Each item is answered on a 9-point scale ranging from 1 (not at all true) to 9 (definitely true). Higher scores manifest higher levels of companionate love.

Hurlbert Index of Sexual Desire (HISD) (Apt & Hurlbert, 1992). This measure, comprising 25 statements, assesses in a simple way “libido”. The total score (sum) provides an estimate of sexual desire and ranges from 0 (hyposexual desire) to 100 (hypersexual desire). In the present study, a two-factor structure was found (first factor: “Personal Sexual Desire”, eigenvalue = 14.35, total variance explained = 57.38%, $\alpha = .96$ and second factor: “Sexual Desire towards Partner”, eigenvalue = 2.25, total variance explained = 9.01%, $\alpha = .78$).

Sexual Activity Frequency extracted from the Interpersonal Exchange Model of Sexual Satisfaction Questionnaire, IEMSS (Lawrence & Byers, 1995). The Interpersonal Exchange Model of Sexual Satisfaction Questionnaire is an extensive self-report instrument developed to provide a conceptual framework for studying sexual satisfaction within the tradition of sexual exchange models. For our study we used Question 17 of the questionnaire to assess frequency of sexual activity within the couple: “*In the last month how often have you and your partner engaged in sexual activities (of any type) with each other?*”. Response ranged from 1 (rarely or never) to 6 (once a day or more).

Solitary Sexual Desire extracted from the Sexual Desire Inventory (Spector et al., 1996).

The Sexual Desire Inventory employs 13 items to evaluate interest in sexual activity across three dimensions: Partner-focused dyadic sexual desire, general dyadic sexual desire for an attractive person, and solitary sexual desire. We were interested in the latter dimension, reflected in three items, as an independent indication of sexual drive. The items were “*How strong is your desire to engage in sexual behavior by yourself?*” (9-point scale, 1 = “no desire” to 9 = “strong desire”), “*During the last month, how often would you have liked to behave sexually by yourself?*” (8-point scale, ranging from 1=not at all to 8=more than once a day), “*How long could you go comfortably without having sexual activity of some kind*” (9-point scale, 1 = forever, 9 = less than one day). Cronbach's alpha, in our study, revealed coefficients of .96.

Extradynamic Sex extracted from the Sociosexual Orientation Inventory – Revised (SOI-R).

The SOI-R (Penke & Asendorpf, 2008) evaluates unrestricted Sociosexuality or the willingness to engage in uncommitted sexual encounters with little or any emotional investment. It comprises 9 items, rated on a 9- point Likert scale anchored differently for any item. SOI-R encompasses three facets: (i) Sexual Behavior, (ii) Attitudes and (iii) Desire. The instrument has been used and evaluated for validity (variance of first factor 43.10%) and reliability ($\alpha = .76$) in Greece by Schmitt (2005). For the needs of the present study participants answered to four out of the nine questions. One on the Sexual Behavior facet (“*With how many different partners have you had sex within the past 12 months?*”), one on the Attitudes facet (“*I can imagine myself being comfortable and enjoying “casual” sex with different partners*”) and two on the Desire facet (e.g., “*How often do you have fantasies about having sex with someone with whom you do not have a committed romantic relationship?*” and “*How often do you experience sexual arousal when you are in contact*

with someone you are not in a committed romantic relationship with?”). The four questions tap the behavior, attitude, and desire associated specifically with sex outside one’s committed relationship or extradyadic sex; hence we employed the average of the four items as a total score of “Extradyadic Sex”, with higher scores indicating higher levels ($\alpha = .76$, in the present study).

Relationship Assessment Scale (RAS) is a widely used brief measure of global relationship satisfaction (Hendrick, 1988). It consists of seven items, each rated on a five-point Likert scale with higher scores indicating higher relationship satisfaction. The RAS captures several aspects of a relationship (e.g., love, problems, expectations, the social facet of a relationship) and is designed to be general enough so that it can cover married couples, cohabiting couples, dating couples and gay couples. The uni-dimensionality of the instrument was confirmed in the present data (1 factor solution, eigenvalue = 4.50, total variance explained = 64.34%) and its internal consistency was found high (Cronbach’s alpha = .90).

Kinsey scale. The sexual orientation of the respondents was assessed through the Kinsey Scale (Kinsey et al., 1948). The scale is a seven-point measure, ranging from 0 (“*Exclusively heterosexual*”) to 6 (“*Exclusively homosexual*”). Responses from 1 (“*Predominantly heterosexual, only incidentally homosexual*”) to 5 (“*Mostly homosexual and only occasionally heterosexual*”) identify individuals with different levels of same-sex or opposite-sex attraction and sexual behaviour in both sexes (Grollman, 2012).

Demographic questions. Participants provided details about their gender, age, education level, occupation, cohabitation, place of residency, income, family status and relationship duration concerning either their current or their most recent relationship.

Procedure

Sampling extended between June and September 2020 and was conducted online. The study's link was posted on social media e.g., Facebook, Instagram, LinkedIn etc. (virtual snowballing) (Baltar & Brunet, 2012). All participants were volunteers; they were assured, at the outset, of the anonymity and confidentiality of their responses and the right to withdraw at any time during the study procedure. Subsequently, they filled out a consent form. For minimizing serial effects between measures, the presentation of all but Demographics and RAS was randomized. Demographics and the RAS were presented first and last respectively. Participants read a debriefing screen providing e-mail contact for further questions once they had completed the response procedure. Average time of participation was 20 minutes.

Results

Construct validity

Exploratory and Confirmatory Factors Analyses were employed to examine the construct validity of the Greek version of the PLSS. We expected to observe the same fourfold structure of the PLSS found in the American population (Hendrick & Hendrick, 2002) and the two age-groups of the Portuguese population (Neto, 2012).

EFA. Exploratory Factor Analyses (EFA) were conducted on the raw data of the Perceptions of Love and Sex Scale for each psychosocial age group and for the total sample (see Table 2). Four interpretable factors emerged that accounted for 63.68% of the variance for all participants, 62.66% for young adults and 65.88% for middle adults. Each factor had an eigenvalue higher than 1 (ranging from 1.65 to 3.93), while this orthogonal four-factor solution was retained and subjected to varimax rotation for all participants and for each age group separately. The first factor explained 17.68% of the variance, 23.59% for young adults and 27.00% for middle adults and was identified as the Sex Demonstrates Love Factor. The second factor explained 15.63% of the variance, 17.25% for young adults and 21.27% for middle adults and was identified as the Love Comes Before Sex factor. The third factor

explained 15.46% of the variance, 11.88% for young adults and 9.36% for middle adults and was identified as the Love Is Most Important factor. Lastly, the fourth factor explained 14.91% of the variance, 10.06% for young adults and 8.27% for middle adults and was identified as the Sex is Declining factor.

Table 2

Factor loadings of the PLSS for young and middle adults and for the total sample

Items	Youn g adults	Middl e adults	Total sampl e
<i>Sex Demonstrates Love (Cronbach's α)</i>	.84	.89	.82
PLSS 5. When we have sex, it proves that we love each other.	0.84	0.85	0.85
PLSS 3. Sex shows our love for each other	0.81	0.87	0.83
PLSS 4. For my partner and me, love and sex cannot be separated.	0.78	0.84	0.80
PLSS 7. Words tell us we love each other, but sex shows us we love each other.	0.78	0.77	0.78
<i>Love Comes Before Sex (Cronbach's α)</i>	.83	.79	.82
PLSS 11 (R). For my partner and me, sex came first, followed by love	0.89	0.86	0.88
PLSS 16. For my partner and me, love came first, followed by sex	0.88	0.86	0.87
PLSS 2. My partner and I wouldn't have had sex if we didn't love each other	0.70	0.56	0.67
PLSS 6. We had to love each other before we could really enjoy being sexual with each other	0.63	0.66	0.63
<i>Love Is Most Important (Cronbach's α)</i>	.72	.78	.74
PLSS 15. For my partner and me, communication is more important than physical affection	0.75	0.78	0.76
PLSS 10. My partner and I love each other for many reasons other than sex	0.59	0.77	0.67
PLSS 17. For us, the physical aspect is a small part of the whole of our relationship	0.50	0.77	0.66
PLSS 9. For me partner and me, sex is not necessary, but it can make our love stronger	0.68	0.62	0.64
PLSS 14. We don't always have time for sex, but it is important	0.61	0.59	0.63

to show love in other ways

PLSS 8. For us, sex is secondary to the friendship aspects of our relationship 0.69 0.66 0.49

Sex is Declining (Cronbach's α)

.84 .85 .85

PLSS 1. My partner and I are drifting apart, and the sex is declining 0.89 0.87 0.89

PLSS 13. We were sexual at the beginning of our relationship, but now we are abstinent 0.87 0.78 0.85

PLSS 12. We love each other and are comfortable together, but the excitement of being "in love" has decreased 0.82 0.80 0.82

Note. In all three factorial structures, Varimax Rotation with Kaiser Normalization was applied (5 iterations).

CFA. A Confirmatory Factor Analysis (Method: Maximum Likelihood) was further performed using IBM Amos 23.0 to ascertain the goodness of fit of the theoretical structure of PLSS (Hendrick & Hendrick, 2002) on the responses of the Greek participants. Since no differences were observed between young and middle adults, a model was created for the whole sample reflecting the theoretical structure of PLSS. In assessing the model, multiple goodness of fit indices were observed (Hu & Bentler, 1999, 1995; Tucker & Lewis, 1973): the Comparative Fit Index (CFI; good: ≥ 0.90), the Tucker-Lewis Index (TLI; good: ≥ 0.90), the Root Mean Square Error of Approximation (RMSEA; good: ≤ 0.068) with 90% confidence interval, 0.061 to 0.075, the Standardized Root Mean square Residual (SRMR; good: ≤ 0.06) (See also Figure 1). For improving the model fit, residual covariances between the items were taken into consideration, after investigating the misfit plot. Criterion was set for misfit $>.20$. Results are presented in Table 3 and Figure 1 (the full wording of items appears in Table 2).

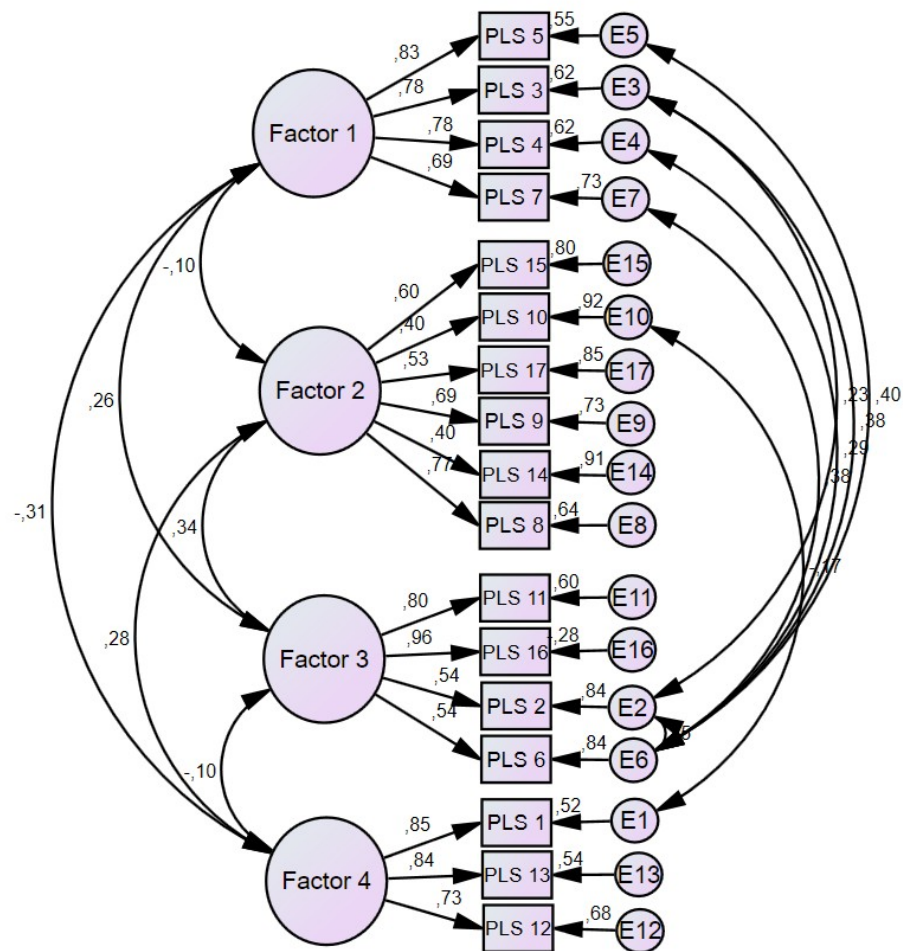
Table 3

CFI results for the total sample

Model	χ^2	Df	NFI	TLI	CFI	AGFI	RMSEA
Baseline	4,460.07	136					
Four-factor solution	414.22***	106	.91	.91	.93	.93	.068

*** $p < .001$

Figure 1. CFA of the final model for the PLSS



Note. Factor 1 = Sex Demonstrates Love, Factor 2 = Love is Most Important, Factor 3 = Love Comes Before Sex, Factor 4 = Sex is Declining. Numbers displayed are standardized coefficients.

The structure of the PLSS was found to be identical to that found with the U.S.A and Portuguese populations. Similarly, identical was the structure of the PLSS unveiled among the two different psychosocial age-groups of the Greek participants. After confirming construct validity, we examined the reliability of the instrument (Tables 4 to 6).

Reliability analyses

Independence of the subscales. The four subscales were relatively independent, with only one subscale Love is Most Important correlating strongly and positively with Love Comes Before Sex and Sex is Declining and strongly and negatively with Sex Demonstrates Love (Table 4). Strong correlations among the two subscales (Love is Most Important and Love Comes Before Sex) were also found by Neto (2012). Thus, in line with Neto (2012) and Hendrick & Hendrick (2002) we have found that the Greek version of the measure taps different constructs. For Cronbach's α indices per subscale, see Table 4.

Table 4

Means, Standard Deviations and Independence of Perceptions of Love and Sex subscales

Subscales	M(SD)	Perceptions of Love and Sex			
		1.	2.	3.	4.
1. Love is Most Important	3.02 (0.73)	-			
2. Sex Demonstrates Love	2.95 (0.94)	-.21**	-		
3. Love Comes Before Sex	2.48 (1.08)	.35**	.12	-	
4. Sex is Declining	2.17 (1.04)	.19*	.12	.02	-

Note. The higher the mean score the higher the endorsement.

* $p < .05$, ** $p < .01$

Item-total correlations. In Table 5, the item-total correlations for each subscale are displayed. Overall, all correlations were found statistically significant ($p < .001$) and strong ($>.60$), confirming the tool's reliability.

Table 5

Item-total correlations for each subscale of Perceptions of Love and Sex tool

Subscales	Total scores for each subscale			
	1. Total score	2. Total score	3. Total score	4. Total score
1. Love is Most Important				
PLSS 8	.73***			
PLSS 9	.71***			
PLSS 10	.60***			
PLSS 14	.61***			
PLSS 15	.70***			
PLSS 17	.62***			
2. Sex Demonstrates Love				

PLSS 3	.84***	
PLSS 4	.85***	
PLSS 5	.87***	
PLSS 7	.79***	
<i>3. Love Comes Before Sex</i>		
PLSS 2	.77***	
PLSS 6	.74***	
PLSS 11 (Reversed)	.83***	
PLSS 16	.87***	
<i>4. Sex is Declining</i>		
PLSS 1		.89***
PLSS 12		.84***
PLSS 13		.88***

Note: for the full wording of the PLSS items see Table 2.

*** $p < .001$

Convergent and discriminant validity

Our second hypothesis focused on testing the convergent and discriminant validity of the PLSS with other theoretically relevant relationship constructs. Thus, correlations were computed between the PLSS subscale scores and the measures selected and presented in the Introduction (see Table 6).

In line with expectations, Love is Most Important was positively and moderately associated with Companionate Love ($r_{599} = .23, p < .001$), and negatively and moderately associated with Sexual Desire ($r_{599} = -.31, p < .001$). Consistent to prediction, there was also a weak negative association with Sexual Activity ($r_{599} = -.12, p = .002$). On the other hand, contrary to expectation, there was a weak but positive association with Passionate Love ($r_{599} = .11, p < .001$) and no association with Extradynamic Sex and Solitary Sexual Desire. We expected a similar to Love is Most Important pattern of correlations for Love Come Before Sex. As expected, we found that it correlated moderately and positively with Companionate Love ($r_{599} = .21, p < .001$) and negatively, albeit weakly, with Extradynamic Sex ($r_{599} = -.16, p < .001$), and Solitary Sexual Desire ($r_{599} = -.15, p < .001$). However, contrary to expectation it

also correlated positively although weakly with Passionate Love ($r_{599}=.18$) and there was no association with Sexual Desire and Sexual Activity.

Consistently to our hypothesis, Sex Demonstrates Love correlated strongly and positively with Passionate Love ($r_{599} = .42, p < .001$) and moderately with Sexual Desire ($r_{599} = .22, p < .001$) and Sexual Activity ($r_{599} = .18, p < .001$). As predicted the correlation with Extradynamic Sex was negative although weak ($r_{599} = -.16, p < .001$). Contrary to the hypothesis, Sex demonstrates Love correlated moderately with Companionate love ($r_{599} = .30, p < .001$). There was no correlation with Solitary Sexual Desire.

As hypothesized, Sex is Declining was strongly and negatively associated with Passionate Love ($r_{599} = -.48, p < .001$), Sexual Activity ($r_{599} = -.55, p < .001$), Sexual Desire ($r_{599} = -.53, p < .001$) and positively and strongly with Extradynamic Sex ($r_{599} = .31, p < .001$). On the other side, we did not find a correlation with Solitary Sexual Desire whereas there was a strong unexpected negative correlation to Companionate Love ($r_{599}=-.37, p<.001$).

In Hypotheses 3 we expected that the two love themes (Love is Most Important and Love Comes before Sex) would correlate positively with both satisfaction and duration whereas Sex Demonstrates Love would correlate positively with satisfaction and negatively with duration. We expected that Sex is Declining would correlate negatively with satisfaction. Having no clear basis to formulate an expectation about duration we suggested that there might be a positive correlation as long-term relationships seem to be valued in the Greek culture even when sexual exchange is unsatisfactory. Love is Most Important, and Love Comes before Sex were indeed positively correlated with Relationship Satisfaction (RAS) although the correlations were weak ($r_{599} = .14, p < .001$ and $r_{599} = .11, p < .001$, respectively). Surprisingly, only Love Comes Before Sex was positively correlated with relationship duration ($r_{599} = .12, p < .001$). As predicted Sex Demonstrate Love was positively

correlated with satisfaction. Unexpectedly, it had no correlation with duration. Sex is Declining had a strong negative correlation with satisfaction ($r_{599} = .55, p < .001$) and an interesting although not entirely surprising positive correlation with duration.

The correlational findings were for the most part consistent to Hypothesis 2 and 3 and at any case the pattern of correlations found was meaningful and interpretable suggesting that the four perceptions of love-to-sex associations have more than satisfactory convergent and discriminant validity.

Table 6

Correlations between measures of relationship processes, relationship outcomes and the Perceptions of Love and Sex Scale

	PLSS			
	Love is Most Important	Sex Demonstrates Love	Love Comes Before Sex	Sex is Declining
<u><i>Relationship Processes</i></u>				
<i>Love Scales</i>				
Passionate love (PL)	.11**	.42***	.18***	-.48***
Companionate love (CL)	.23***	.30***	.21***	-.37***
<i>Sex Measures</i>				
Sexual Desire	-.31***	.22***	-.07	-.53***
Sexual Activity	-.12**	.18***	-.01	-.57**
Extradyadic Sex	-.04	-.16***	-.16***	.31***
Solitary Sexual Desire	-.03	-.04	-.15***	.04
<u><i>Relationship Outcomes</i></u>				
Satisfaction (RAS)	.14***	.26***	.11**	-.55***
Duration	.03	.00	.12**	.24**

*** $p < .001$, ** $p < .01$

PLSS, gender and psychosocial age group comparisons

Following our fourth hypothesis we examined the differences across psychosocial age groups and gender, in the Perceptions of Love and Sex. Overall mean values for each PLSS subscale appear in Table 5. Further, we computed the means, separately, for each gender and each psychosocial age group (see Table 7). The data were analyzed using a 2 X 2 MANOVA with

independent variables: gender (two levels) and psychosocial age groups (two levels) and dependent variables (DVs) the four PLSS subscales, after checking for assumptions. Overall, MANOVA indicated a significant main effect for psychosocial age groups (*Wilks' lambda* = 0.98, $F_{4, 624} = 3.76$, $p = .005$, $\eta_p^2 = .02$), while the main effect for gender was not found significant (*Wilks' lambda* = 1.00, $F_{4, 624} = 0.60$, $p = .665$, $\eta_p^2 < .01$). The interaction, Gender x Age was also not significant (*Wilks' lambda* = 0.99, $F_{4, 624} = 1.25$, $p = .289$, $\eta_p^2 < .01$). For a full presentation of MANOVA results, see Table 7.

In more detail, the main effect for psychosocial age groups was attributed only to differences in the DV *Sex is Declining*. ($F_{1, 624} = 7.16$, $p = .008$, $\eta_p^2 = .01$). Further exploration using two independent samples t-test (Bonferroni correction for alpha level: $0.05 / 2 = 0.025$) revealed that young adult women ($M = 2.05$, $SD = 1.00$) scored significantly lower than middle adult woman ($M = 2.48$, $SD = 1.10$) ($t_{502} = -4.35$, $p < .001$, 95% CI of the difference: -0.64 to -0.24, *Cohen's d* = 2.33). For men, no such difference was detected ($t_{125} = -0.66$, $p = .508$, 95% CI of the difference: -0.48 to 0.24, *Cohen's d* = 0.11).

Table 7

MANOVA results for men (n = 127) and women (n = 504) in the two psychosocial age groups (young adults: n = 424, middle adults: n = 207).

	Psychosocial age groups			MANOVA	
Factors	Young adults	Middle adults	Effect	F	η^2
<i>Love is Most Important</i>					
Male	3.00 (0.67)	2.87 (0.72)	G	1.47	<.01
Female	3.05 (0.70)	3.00 (0.81)	P	1.54	<.01
			GxP	0.23	<.01
<i>Sex Demonstrates Love</i>					
Male	2.88 (0.92)	3.03 (0.93)	G	<0.01	<.01
Female	2.93 (0.89)	2.98 (1.07)	P	1.14	<.01
			GxP	0.31	<.01
<i>Love Comes Before Sex</i>					
Male	2.54 (1.09)	2.46 (1.03)	G	0.01	<.01
Female	2.40 (1.11)	2.62 (1.03)	P	0.39	<.01

			GxP	1.89	<.01
<i>Sex is Declining</i>					
Male	2.09 (1.05)	2.21 (0.99)	G	1.26	<.01
Female	2.05 (1.00)	2.48 (1.10)	P	7.16**	.01
			GxP	2.30	<.01

Note. G = Gender, P = Psychosocial age group, GxP = Interaction. Means and SDs (in parentheses) are for each dependent variable. The higher the mean the greater the endorsement. Alpha level was set at 0.05.

PLSS, Relationship Satisfaction and Duration across two psychosocial age groups

To test Hypothesis 5, two standard multiple regression models were applied for the prediction of relationship satisfaction (RAS) and relationship duration measured in months. Predictors in both models were the four subscales of PLSS, gender (which was recoded into a dummy variable with males as reference group), the two psychosocial age groups and age per se as psychosocial age groups include a broad range of age. Results are presented in the same table (Table 8) for both age groups.

Relationship Satisfaction. For relationship Satisfaction, both the models of young and middle adults were found significant (for young adults: $F_{6, 416} = 41.75, p < .001, R^2 = .38, R^2_{\text{adjusted}} = .37$ and for middle adults: $F_{6, 200} = 23.95, p < .001, R^2 = .42, R^2_{\text{adjusted}} = .40$) and fitted the data well. For young adults, all PLSS subscales, with the notable exception of Love Comes Before Sex predicted relationship Satisfaction. However, the strongest, predictor among them was a negative one, Sex is Declining” ($\beta = -.58, t = -14.07, p < .001$). Love is Most Important ($\beta = .28, t = 6.86, p < .001$) was the strongest positive predictor followed by Sex Demonstrates Love ($\beta = .09, t = 2.18, p = .030$). Identical results were found for the middle adults except for Age which was found to be a positive predictor ($\beta = .12, t = 2.88, p = .004$) among young adults and a negative one among middle one ($\beta = -.12, t = 2.09, p = .04$). Gender was not a significant predictor in any psychosocial age group.

Relationship duration. For relationship Duration, both the models of young and middle adults were found significant (for young adults: $F_{6, 417} = 21.36, p < .001, R^2 = .24, R^2_{\text{adjusted}} = .22$ and for middle adults: $F_{6, 200} = 2.75, p = .014, R^2 = .08, R^2_{\text{adjusted}} = .05$) although the model for middle adults was weak explaining a small only percentage of the variance. For young adults, Love Comes Before Sex ($\beta = .13, t = 2.78, p = .006$) and “Sex is Declining” ($\beta = .11, t = 2.35, p = .019$) were both positive predictors of relationship Duration. In addition, age was found to be a strong positive predictor ($\beta = .46, t = 10.04, p < .001$) and women were less likely to maintain a relationship compared to men ($\beta = -.11, t = -2.48, p = .014$). In middle adults, only “Sex is Declining” was found to be a positive predictor ($\beta = .21, t = 2.53, p = .012$) of relationship Duration.

Table 8

Standard multiple linear regression models for predicting relationship satisfaction and duration (n = 631)

	Relationship satisfaction						Relationship duration					
	Young adults			Middle adults			Young adults			Middle adults		
<i>PLSS</i>	B	SE	<i>B</i>	B	SE	<i>B</i>	B	SE	β	B	SE	β
Love Is Most Important	0.28	0.04	.28***	0.30	0.06	.31***	3.05	3.83	.04	-0.93	12.27	-.01
Sex Demonstrates Love	0.07	0.03	.09*	0.10	0.05	.14*	-2.09	3.08	-.03	6.42	9.26	.06
Love Comes Before Sex	-0.04	0.03	-.06	0.04	0.04	.05	7.03	2.53	.13**	14.81	8.95	.13
Sex Is Declining	-0.39	0.03	-.58***	-0.44	0.05	-.62***	6.26	2.66	.11*	23.20	9.18	.21*
<i>Gender</i>												
Females to males ^a	0.03	0.08	.01	0.11	0.09	.06	-17.60	7.10	-.11*	-24.63	18.63	-.09
Age	0.01	0.01	.12**	-.017	0.01	-.12*	4.26	0.42	.46***	2.47	1.60	.11
<i>F</i>		41.75***			23.95***			21.36***			2.75*	
<i>Adjusted R²</i>		.37			.40			.22			.05	

*Note. SE = Standard error of the unstandardized coefficient., ^areference group. ***p < .001, **p < .01, *p < .05*

Discussion

As hypothesized (Hypothesis 1), we found that the factor structure of the Perceptions of Love and Sex Scale among Greek participants was consistent with that in the U.S.A. (Hendrick & Hendrick, 2002) and Portugal (Neto, 2012). As in Neto's findings, the structure, was constant between young (18 – 40) and middle adults (41 – 65), suggesting that the same framework on the love and sex connection is constant in adult life. All loadings, in both age groups were over .49 and even higher, whereas internal consistency for each factor was acceptable as it ranged between $\alpha = .72$ to $\alpha = .89$ (Table 2). The four theoretical constructs, Love is Most Important, Sex Demonstrates Love, Love Comes Before Sex and Love is Declining, provided the best interpretation or fit of the data for both age groups and the overall sample (Table 3 and Figure 1). The PLSS seems to have a robust structure in the three cultures that share the western tradition of associating love with sex, possibly a trace of the Christian influence that requires the idealization of sex. From a social constructionist perspective, this association may be an outcome of socializing and personifying the animalistic sexual instinct (Hendrick & Henrick, 2004). At the same time, according to the social evolutionary perspective, the constancy of the love to sex linkage may represent a species specific universal, as it secures both the sexual behavior for mate selection/procreation and the tendency to form attachments that are necessary for raising children to a procreative age (Fisher, 2006).

The same two subscales that correlated relatively strongly in the previous studies, Love is Most Important, and Love Comes Before Sex, did so in the present one ($r = .35$). Both place an emphasis on the preeminence of love over sex although in different ways, the first one assigns sex a minor role, and the second considers love a prerequisite or an antecedent for sex. Love Comes Before Sex did not correlate with any other subscale. However, Love is Most Important correlated relatively weakly but negatively with Sex Demonstrates Love ($r = -.21$) and positively with Sex is Declining ($r = .19$). No other correlations were observed

(Table 4). Although the independence of the four subscales is only partially supported, the correlations observed are meaningful. The correlation of the two, so called “love themes” (Love is Most Important and Love Comes Before Sex) was expected both by previous findings and by the presumably psychological notion shared by all three cultures, that considers the role of sex minor and a consequence of love. On the other hand, the Greek culture, may still associate, at least partially, the maintenance of long-term relationships with placing greater value on love even against a background of waning sexuality (Sex is Declining) within the relationship (Kordoutis & Manesi, 2012; Paxson, 2007)

According to Hypothesis 2 and 3, the PLSS subscales would correlate in a predictable manner with measures of theoretically relevant relationship constructs. The resulting pattern of correlations (Table 6) revealed that the two love themes correlated in a similar positive way with Passionate and Companionate Love but in different ways when it came to sexuality processes and relationship outcomes. Love is Most Important correlated negatively with Sexual Desire (an interestingly strong negative correlation) and Sexual Activity and not at all with Extradynamic Sex and Solitary Sexual Desire. In contrast, Love Comes before Sex correlated negatively with the latter two variables and not at all with Sexual Desire and Sexual Activity. Both correlated weakly and positively with satisfaction but only Love Comes before Sex with Duration. It may be that love is vital to some extent in upholding both Passionate and Companionate Love but not sufficient, in its de-sexualized “aghapic version” (Love is Most Important), to motivate sex focused on the partner, to sustain relationship longevity and yield great satisfaction. In contrast, one could argue, that love, in its more sexual version (Love Comes Before Sex) fairs somewhat better in, at least, focusing partners away from other sexual distractions (extradyadic sex and solitary sexual desire) while yielding at least some satisfaction and support for the duration of relationship.

In contrast to the love themes, the correlations of sex themes with relationship process and outcome variables were stronger. Sex Demonstrates Love had the strongest positive correlations with Passionate, Companionate Love and Satisfaction while Sex is Declining the strongest negative with all three. However, Sex is Declining was positively correlated with relationship Duration. In terms of the sexual processes, Sex Demonstrates Love was positively associated with Sexual Desire and Sexual Activity and negatively associated with Extradynamic Sex while Sex is Declining was negatively associated with the two former variables and positively with the latter. There was no association with Solitary Sex. The pattern of correlations for both sex themes seems to imply that construing sex as an expression and proof of love motivates (or is motivated by) passion, sex and companionship focused on the partner. The lack of it is detrimental for a committed relationship and satisfaction. The interesting positive correlation of Duration with Love Comes Before Sex and Sex is Declining may imply that relationships are maintained longer when sex and physical intimacy have sprung out of the actual exchange of love, but physical intimacy continues unabatedly to be the expression and testimony of love.

Overall, it seems that the pattern of correlations identified is only partially consistent with previous findings; it reveals a stronger role for sex themes in the relationship processes and outcomes of the Greek population, whereas love themes were more important for the analogous processes among the American and Portuguese populations. Perhaps the findings reflect the recent developments in the Greek society. Although love is still linked with sex, the traditional concern of transforming sex into love to initiate and maintain a long-term satisfying relationship may have been replaced by a different concern, that of how sex can be appreciated so that it can provide a sound basis for any romantic connection.

One of the purposes of the present research, in line with previous studies, was also to examine whether women and men would differ in their perceptions of the links between love

and sex and whether there will be psychosocial age differences between young and older adults. We expected that women and middle adults will give primacy to the two love themes whereas men and younger adults to the two sex ones. Contrary to Hypothesis 4 there was no overall difference between psychosocial age groups neither a gender difference between men and women in perceptions of love and sex (Table 7). Hendrick & Hendrick (2002) did not find any gender differences in their study. On the other hand, consistently with evolutionary and social constructionist theory, Neto (2012) found a single gender difference in Love Comes Before Sex, with women endorsing it more than men, irrespective of psychosocial age group. Our findings also concern a single perception, Sex is Declining. However, it is a difference between younger adult women and older adult ones, with the younger ones stating that Sex is Declining in their relationships less so than older ones. This finding possibly reflects value changes that allow younger women to claim their right to sexual pleasure out of the strict framework of long-term intimate relationships (Papastylianou & Lambridis, 2016; Paxson, 2007). This finding is in line with the social constructivist perspective (Eagly & Wood, 1999), as women falling into the young adults psychosocial group (age range 18-40) are more likely to have stronger individual goals than older ones and possibly are better placed in the social structure having the experience of full access to educational and career (Corselli-Nordblad & Gereoffy, 2015; Kordoutis, 2020; Statistics Office of the European Union, 2021). The lack of any general differences in the love-to-sex themes between the psychosocial age groups should be more systematically explored in the future perhaps by examining such difference by age rather than by psychosocial age groups and by including an elderly group.

The purpose of testing Hypothesis 5 was to examine whether love and sex perceptions can predict relationship satisfaction and duration among the two psychosocial age-groups. This hypothesis has not been entertained before and thus extends previous research. We

found (Table 8) that Satisfaction was predicted by the strong perception that Sex is (not) Declining in one's relationship along with the convictions that that Love is Most Important and Sex Demonstrates Love. Love Comes Before Sex was not a predictor of satisfaction. There were no differences between the two psychosocial groups. In our view, this pattern of predictions seems to suggest that although the importance of "sexless" love cannot be ignored in relationship satisfaction, sex themes are probably more crucial in maintaining it perhaps by means of their function to promote intimacy through sexual exchange and communication.

In contrast, love, as an antecedent of sex in the history of a relationship (Love Comes Before Sex) rather than as an important "sexless" ingredient, positively predicted duration among the young adults, along with the realization that sex is withering away. This was not the case among middle adults, however, where the only predictor of duration was the realization of declining sex in their relationships.

Age within the psychosocial age groups played an interesting role in predicting satisfaction and duration. Among young adults, the older the age, the greater the satisfaction, whereas the opposite obtained among middle ones. Although, in general older adults report greater satisfaction in relationships than younger ones (Luong et al. 2011), the association of age with romantic relationships is complex and probably curvilinear due to shifting age-related criteria regarding the meaning of satisfaction, different life events faced by each age group both within and outside the relationship (career decisions and challenges, developing social networks, decision to make a family, children) and differential responsiveness as a function of age (Hartung et al. 2021). Baird et al. (2010) and Blanchflower & Oswald (2019) have found a decrease in general life satisfaction at the age range of middle adulthood followed by an increase among the elderly, a psychosocial group that we have not included in our study. The underlying relationship related challenge, in young adulthood is to determine the nature of desirable intimacy (to connect or not the self with other) whereas for middle

adulthood to care and maintain a long-term relationship. It is likely then that satisfaction reaches a plateau with increasing age as relational goals of young adulthood are attained and then declines as the demands of family and children (Meyer et al., 2016) probably meet with the decreased flexibility of middle adulthood.

Age also strongly predicted relationship duration but only among young adults. This finding supports our previous conjecture that with increasing age individuals within the psychosocial group of young adults work to attain the relational goal of establishing or trying out a long-term relationship whereas middle adults probably live or have lived in one.

Gender was a weak negative predictor only in the case of relationship duration among young adult women, who stated that they had shorter relationships than men. Typically, Greek women report longer relationships than men (Kordoutis, 2020; Kordoutis, 2012; Kordoutis et al., 2000). Moreover, they have been expected, in the traditional Greek context, to pursue long-lasting relationships as compared to men (Paxson, 2007). Our finding however, concerns gender differences between women and men of the younger generation which has experienced the recent, rapid changes in gender roles and values associated with intimacy, private life, and marriage as evidenced by demographic data (Statistical Office of the European Union, 2021). In addition, the gender difference on relationship duration, seems to be conceptually consistent with the finding mentioned earlier that young adult women report sex as declining in their relationships more so than middle adult ones. Taken together and within the broader Greek context of the recent value changes, the two findings could support the argument that young adult women are more likely than middle adult women and young adult men to adopt relationship evaluations and behaviors outside the framework of the traditional family-oriented values which expected them to highly deem the longevity of a relationship and downplay the significance of its sexual quality.

Limitations

The present study is correlational and cross-sectional, hence the interpretation of our findings is limited. Answering questions, such as the above require longitudinal studies or some form of experimentation. In contrast to Neto (2012) we were able to study only young and middle adults leaving out the elderly (60 – 90). Comparisons with the latter group might have allowed for a better understanding of the generational differences in the perceptions of love, and in particular the shift of emphasis from love themes to sex themes among age groups. Our study was conducted online. Thus, self-selection biases may have had an impact regarding the education and age of participants. Highly educated people are more familiar with digital tools and more likely to respond to questionnaires administered through the internet. More than 50% of our participants had a bachelor's or graduate degree. Older people in Greece are also less versed with digital tools and less likely to respond to questionnaires via internet. Hence, we had a relatively smaller number of middle-aged participants and a very limited number of ones over 60. There are about four times as many women in our sample than men. This is a common problem in published research on sexuality and intimate relationships (Lehmiller et al., 2011); women far outnumber men in volunteering for relationship research whereas men (including ones in Greece) seem to eschew participation. Future research should seek ways to systematically minimize these issues that interfere with our ability to make secure inferences about the population of interest.

Conclusions and extensions

The findings of the present study suggested that the link between love and sex is meaningful for understanding romantic relationships in the Greek culture. However, despite the constancy of the construct among the American, the Portuguese and the Greek culture, important differences have emerged reflecting the contemporary cultural characteristics and societal developments of the Greek milieu. The love-to-sex nexus is still a stable reference framework for the Greek population as had been suggested by older relevant literature.

However, recent social changes in values associated with intimacy, may have allowed the shifting of attention, and more particularly, that of women, to the quality of the sexual experience and its contribution to overall relationship functioning. Traditional family values encouraged focusing on the transformation of sexual desire into love and the pursuit of long-term relationships and marriage built upon it. Women, more so than men, were restricted to focusing on this latter goal disregarding the contribution of sexual pleasure, a male privilege. Our data suggest that the emphasis may have generally (irrespective of gender) shifted on sex, as an important indicative factor of the quality of the love-relationships without altogether abandoning the idea that love is important and a vital antecedent of sex in the story of a romantic relationship (Sternberg, 2018). This development may not be limited to the changing Greek culture. Recent findings, from another line of research (Fisher & Garcia, 2019), suggest that sex is an initial and crucial stage of most romantic relationships today, albeit within the old link between love and sex. One-night stands, sex with a potential partner before the first date, friends with benefits relationships, cohabitation, seem to be more common now than before and men and women proceed to marriage or other forms of formal partnership later worldwide (Budd, 2017). These may be indications that people seek to secure a robust, resilient, and enduring link between love and sex using both sexual exchange and other forms of intimate communication, with the same partner over time, or with different ones. In other words, people pursue the development of better personal mating criteria that include both aspects of love and sexuality, hence the process of courtship has slowed down and the decision to establish a long-term relationship and/or get married are delayed (Argyroudi & Kordoutis, 2012; Corselli-Nordbard & Gereoffy, 2015; Fisher & Garcia, 2019).

So, “Does love exist for sex?”. Was Aristippus right in answering “Neither because of it nor without it”. Surprisingly, for the time that has elapsed since his time, the answer is still

valid, supporting the idea that love and sex work in tandem. Sex may presently appear more important for starting and maintaining a relationship but only in a dialogue with love.

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