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## **Marital satisfaction in long-term partnerships: A typological approach**

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### Abstract

The goal of this study was to identify patterns in the quality of long-term married individuals still in their first marriage, a group not substantially empirically researched. Based on questionnaire data from 258 women and 236 men, all of whom were married for at least 40 years, a cluster analysis revealed two groups: a satisfied and an unsatisfied group of partners. The two groups not only differ in interpersonal and intrapersonal resources, but also exhibit different values in health factors. Satisfied individuals in long-term marriages reported higher marital and sexual satisfaction, and furthermore reached higher scores in co-development in the relationship. Additionally, happily married individuals were characterized by lower scores in social loneliness, better psychological and physical health as well as low neuroticism and high scores in agreeableness.

*Keywords:* long-term partnership, typology of marital satisfaction, marriage

## Introduction

In the last century, life expectancy in Switzerland has risen dramatically (Federal Statistical Office [FSO], 2012), making long-term partnerships that last decades far more common (Perrig-Chiello, 2010). With divorce rates high even among the longest-standing marriages (FSO, 2010), the topic of satisfaction in such partnerships is especially relevant. Relationship satisfaction is most often studied among younger couples (Acitelli, 1992; Lawrence, Nylén, & Cobb, 2007), while the long-standing marriages of older generations tend to be neglected (Martin & Schmitt, 2004; Schmitt & Re, 2004). Furthermore, although a rising divorce rate is certainly important, many studies tend to ignore factors that keep long-term partners together in favor of discerning why they divorce (Bodenmann, 2006). Complicating matters, elderly couples can be differentiated from their younger counterparts not only in terms of length of the relationship (Jose & Alfons, 2007), but also through their responsibilities and roles associated with a different phase of life; this may in fact mean that conclusions drawn from studies of relationships between younger couples cannot simply be applied to relationships among long-term partners (Cohen, Geron, & Farchi, 2010; Schmitt, 2000)

Although there are many studies that consider the variables and constructs that influence and aid our understanding of relationships, in order to adequately evaluate relationships in general, a multidimensional construct must be considered in which the length of relationships play a role in defining the variables upon which relationship satisfaction is dependent (D. H. Olson & Fowers, 1993). Among other variables, relationship satisfaction correlates with subjective well-being (Diener, 1984; Glenn & Weaver, 1981), psychological state (Beach, Katz, Kim, & Brody, 2003; Whisman & Uebelacker, 2009) and physical state (Bookwala, 2005; Kiecolt-Glaser & Newton, 2001; Walker & Luszcz, 2009), which explains the large number of studies that attempt to discern the determinants of satisfaction in a partnership (Karney & Bradbury, 1995; Levenson, Carstensen, & Gottman, 1993). A typological approach satisfies these requirements for a multidimensional construct while taking into account the numerous facets and complexities of long-term relationships, and contributes to a deeper understanding of this subject and its interrelated variables (Cohen et al., 2010; Gottman, 1993; D. H. Olson & Fowers, 1993; Wunderer, Schneewind, Grandegger, & Schmid, 2001).

The purpose of this study is to supplement current understanding of long-term marriages by empirically grouping long-term married partners through a typology based on a

subjective assessment of the partner's individual relationship with his or her respective husband or wife. The selected variables are based on a comprehensive review of determinants of marital satisfaction (Karney & Bradbury, 1995). Determinants of marital satisfaction in long-term relationships can be classified as intrapersonal or interpersonal (Karney & Bradbury, 1995; Schmitt, 2001; Schmitt & Weber, 2004), and in this paper will be referred to as intrapersonal and interpersonal resources. The goal of this study is to demonstrate that groups can be formed on the basis of relationship quality, and to evaluate how the groups differ in demographic variables (i.e. age, gender, duration of marriage, origin, education, financial status and children), interpersonal (i.e. marital satisfaction, co-development in the relationship, sexual satisfaction, social loneliness and professional help) and intrapersonal (i.e. neuroticism, agreeableness and extraversion) resources as well as psychological (i.e. life satisfaction and depression) and physical state (i.e. subjective health).

### **Marital Stability and Quality**

Although about two-thirds of Swiss couples remain in a stable marriage after 30 years (FSO, 2010), we cannot assume all of these partners are satisfied with their relationships. It is possible for a fundamental disunion between relationship stability and relationship quality to exist in a given relationship, and to even differ in perception between partners in the same marriage (Lewis & Spanier, 1979). As per the authors, a stable marriage will be defined as a partnership which is only ended by the natural death of a partner. Therefore an unstable marriage will be defined as a partnership which is willfully ended by one or both partners. In various studies, the relationship satisfaction of partners in long-term marriages has been determined to be high, ranging from 80% to 90% of partners who would describe themselves as satisfied (Schmitt & Re, 2004). Unsurprisingly, marriages with a higher subjective assessment of relationship quality tend to be stable marriages (Lewis & Spanier, 1979). There are also partners who despite the stability of their relationships admit a low subjective assessment of relationship quality (Duba, Hughey, Lara, & Burke, 2012; Hawkins & Booth, 2005; Heaton & Albrecht, 1991). Associated with staying in an unhappy marriage include low values in overall happiness, satisfaction with life, self-esteem and health as well as a higher likelihood of various psychological distresses (Hawkins & Booth, 2005). This subgroup with high stability and low relationship quality is important, as it demonstrates the potential schism between relationship stability and relationship satisfaction (Hawkins & Booth, 2005).

### **Marital Satisfaction and its Determinants**

Marital satisfaction is one of the most important predictors of subjective well-being (Diener, 1984; Glenn & Weaver, 1981). Relationship quality is an important component of life satisfaction and a happy partnership correlates with high life satisfaction (Brandtstädter & Felser, 2003). Inversely, problems in a marriage are both significantly and negatively associated with life satisfaction (Whisman, Uebelacker, Tolejko, Chatav, & McKelvie, 2006).

Marital satisfaction has many determinants, of which sexual satisfaction tends to be a very significant variable. Despite a general lack of research regarding sexual satisfaction among older partners, studies demonstrate that sexual activity is important for a majority of older married persons, although the overall frequency of sexual activity declines as partners age (Bucher, Hornung, & Buddeberg, 2003; Lindau et al., 2007). Important to note is that sexuality over a lifetime remains intraindividually stable, while the frequency of sexual activity is interindividually different, and therefore sexual satisfaction should primarily be considered when evaluating marital satisfaction (Bucher et al., 2003). Studies consistently demonstrate a positive correlation between marital satisfaction and sexual satisfaction, although the direction of the causality remains unclear (Bodenmann, Ledermann, & Bradbury, 2007; Byers, 2005; Heiman et al., 2011).

The togetherness implicit in the intimacy of sexual satisfaction for a relationship is certainly important, yet a successful and satisfactory relationship further requires the possibility for individual development, in addition to reaching personal goals and desires within the partnership (Perrig-Chiello & Höpflinger, 2009). As per Brandtstädter and Felser (2003), subjective assessment of support for and fulfillment of dreams and goals play a role in perceiving relationship satisfaction. Moreover, Brunstein, Dangelmayer, and Schultheiss (1996) demonstrated that supporting a partner in reaching goals raises relationship satisfaction.

Thus far, variables generally thought of as positive in nature have been explored. However, ill-health, depression and loneliness must be accounted for when considering long-term marriages. Depression and loneliness are not limited to older partners, but it is important to note that with age comes a smaller yet tighter-knit social environment, characterized by higher emotional proximity (Schmitt & Re, 2004). Although married couples have a much lower risk of social loneliness than unmarried persons, the fact remains that 18% of 64-92 year old women and 26% of 64-92 year old men indicate they are socially lonely (De Jong Gierveld, Van Groenou, Hoogendoorn, & Smit, 2009). Further studies demonstrate a negative

correlation between experienced loneliness and relationship quality (Dykstra & Fokkema, 2007; Knoke, Burau, & Roehrl, 2010; K. Olson & Wong, 2001).

Various studies also investigated the relationship between symptoms of depression and marital satisfaction, which indicate a link between such symptoms and satisfaction in couples with long-standing marriages (Davila, Karney, Hall, & Bradbury, 2003; Kouros, Papp, & Cummings, 2008). Marital discord is likely associated bidirectionally with symptoms of depression in older adults (Whisman & Uebelacker, 2009; Whisman et al., 2006).

Rounding out the often negatively associated variables, general health is unsurprisingly linked with marital satisfaction. Negative behaviors such as arguing or criticizing the partner can be frequently associated with worsened physical health (Bookwala, 2005; Kiecolt-Glaser & Newton, 2001). Health, illness and recovery from illness are all influenced by marital relationships. Reciprocally, the marriage itself can be impacted by ill-health (Walker & Luszcz, 2009). It should be mentioned that as couples reported lower marital satisfaction for any reason, they tended to visit marital therapy within the next 12 months (Doss, Rhoades, Stanley, & Markman, 2009).

Lastly, it is important to remember that the two partners in a long-term marriage should be considered as individuals, not only as a partner effected by the relationship. Although most socio-demographic factors correspond only loosely with marital satisfaction (Hahlweg, 1991) and results regarding gender differences in relationship satisfaction are often inconsistent (Stegmann & Schmitt, 2006), many studies nonetheless indicate that men are often more satisfied with their relationships than women (Carstensen, Gottman, & Levenson, 1995; Fowers, 1991; Schmitt & Weber, 2004).

Regarding individual personality, this study will use the NEO-Five Factor Inventory with the five factors neuroticism, agreeableness, extraversion, conscientiousness and openness (Costa & McCrae, 1985; Costa & McCrae, 1992). Various studies have examined the influence exercised by these personality traits with regards to relationship satisfaction, and of the five, neuroticism tends not only to correlate negatively with relationship satisfaction, but also to be its strongest predictor (Donnellan, Conger, & Bryant, 2004; Heller, Watson, & Iles, 2004; Karney & Bradbury, 1995, 1997; Kelly & Conley, 1987; Malouff, Thorsteinsson, Schutte, Bhullar, & Rooke, 2010). Additionally, some of these studies showed a positive correlation between marital satisfaction and agreeableness, extraversion and conscientiousness. However, as it remains unclear whether the Personality Inventory denotes significant results in studies with participants married between 20 and 65 years (O'Rourke, Claxton, Chou, Smith, & Hadjistavropoulos, 2011; Rosowsky, King, Coolidge, Rhoades, &

Segal, 2012), this study will attempt to gauge and perhaps demonstrate the usefulness of personality variables with regards to relationship satisfaction among exactly such participants.

Various studies succeeded in establishing typologies of couples, which differentiated in numerous relationship characteristics (Cohen et al., 2010; Gottman, 1993; D. H. Olson & Fowers, 1993; Synder & Smith, 1986; Wunderer et al., 2001). One such typology was accomplished by Wunderer et al. (2001), who when examining individuals found two distinguishable patterns based on the Partnership Climate Scale which consists of the three dimensions ‘commitment,’ ‘independence,’ and ‘motivation/activity.’ Additionally, they combined the two individual patterns to form couple patterns. A major advantage of our data set and, therefore, of this study is that long-term partners are studied after a relationship spanning over 40 years, whereas other studies mostly focused on younger or middle-age couples.

### **Research Questions**

Although much research regarding the empirical determinants of marital satisfaction has been accomplished, there remain distinct inconsistencies as well as specific facets, especially in the under-researched subject area of partner typology, into which further insight can be gained. The typological aspect of this study is explorative in nature, while the distinguishing factors between the resulting groups are assumption-based. This study aims at contributing towards overcoming some of the previously mentioned gaps in other research into relationship typology and seeks to improve our understanding of long-term partnerships by using a large sample of persons married 40 and more years. Additionally, in most studies regarding the determinants of marital satisfaction, individual factors are examined, while this study attempts to inspect the connections between various factors. Lastly, this study places specific yet empirical emphasis on the subjective side of a partnership.

Based on existing research and theoretical insights, this study aims to identify patterns of marital satisfaction in long-term married individuals with regards to marital satisfaction, sexual satisfaction and opportunity for co-development in the relationship, while integrating the various important factors mentioned above. Participants are from German and French-speaking Switzerland, and at the time of data collection were in first marriages. Based on existing research referenced above as well as Schmitt’s (2001) distinction between intrapersonal determinants and interpersonal characteristics of marital satisfaction, the following research questions were developed:

1. What patterns in the relationship quality of long-term married individuals still in their first marriage can be identified through analyzing the variables marital satisfaction, sexual satisfaction and co-development in the relationship?

2. To what degree do individuals belonging to various clusters differ with regards to:

*Demographic Variables:*

- Age
- Gender
- Duration of Marriage
- Origin
- Education
- Financial Status
- Children

*Interpersonal Resources:*

- Marital Satisfaction
- Co-Development in the Relationship
- Sexual Satisfaction
- Social Loneliness
- Outreach to Professional Help

*Psychological and Physical State:*

- Life Satisfaction
- Depression
- Subjective Health

*Intrapersonal Resources:*

- Neuroticism
- Agreeableness
- Extraversion

We based our research on the assumption that the patterns of marital satisfaction depend largely on the resources and circumstances listed above. Marital satisfaction is hypothesized to be associated with good interpersonal resources, namely sexual satisfaction and co-development in the relationship, low scores in social loneliness and a low likelihood of seeking professional help. Satisfaction in a marriage is also assumed to correlate with high scores in subjective health, low depression and high life satisfaction. Furthermore, satisfied partners are expected to enjoy good intrapersonal resources, namely low neuroticism and high scores in agreeableness as well as extraversion. Demographic variables, i.e. age, gender, origin, education, financial status and children are expected to not be associated with marital satisfaction.

## Method

The data for this study originated from the project, “Vulnerability and growth: Partnership in the second life half – challenges, losses, and benefits” (IP12) led by Prof. Dr. P. Perrig-Chiello from the University of Bern, as part of the national interdisciplinary research program “LIVES” (Hutchison et al., 2013). This longitudinal research project utilizes data obtained from a voluntary questionnaire. The present study is based upon cross-sectional data from the primary wave of survey results collected in February 2012 both in German and French-speaking Switzerland. From the 6,909 questionnaires sent 2,204 were completed and returned, resulting in a 32% return rate (Hutchison et al., 2013).

### Sample

In total the IP12 project included 2,761 participants. This study deals with a sub-sample of those participants, all of whom are in their first marriage and have been married for at least 40 years. These criteria resulted in a sub-sample of 494 participants (258 women, 236 men). The average age of women was 74.2 ( $SD = 7.4$ ; range: 58-89). The average age of men was significantly higher at 76.8 ( $SD = 7.2$ ; range: 61-89) ( $U = 36,558$ ,  $p < .001$ ). On average participants were married for 50.1 years ( $SD = 6.5$ ; range: 40-66). Of those surveyed a majority (89%) were Swiss citizens. Men had a significantly higher degree of education than women  $\chi^2(6) = 46.60$ ,  $p < .001$ . The majority of participants (82.4%) considered their financial means adequate. 95.5% of participants indicated they had children. For further detailed demographic information see Table A1 (see appendix).

### Measures

#### *Demographic Variables*

- Age, gender, civil status, duration of marriage, origin, education, financial status, first or additional marriage and children were selected.

#### *Interpersonal Resources*

- In order to assess marital satisfaction the ten-item “Marital Satisfaction Inventory, Revised (MSI-R)” was used (Klann, Hahlweg, Limbird, & Snyder, 2006; Whisman, Snyder, & Beach, 2009). The answers were evaluated on a 2-point scale (1 = true, 2 = false).
- In order to assess sexual satisfaction two items developed by Humbel (2009) in collaboration with Perrig-Chiello were used. The answers were evaluated on a 5-point scale (1 = very unsatisfied through 5 = very satisfied).

- In order to assess co-development in the relationship, or whether one could develop with the partners support over the course of the relationship, two items developed by Humbel in collaboration with Perrig-Chiello were used (Humbel, 2009). The answers were evaluated on a 5-point scale (1 = yes through 5 = no).
- In order to assess social loneliness three items from the “De Jong Gierveld Loneliness Scales” were used (De Jong Gierveld & Kamphuis, 1985; De Jong Gierveld & Van Tilburg, 2006). The answers were evaluated on a 5-point scale (1 = yes through 5 = no). The Cronbach’s alpha was  $\alpha = .81$ , indicating good internal consistency.
- In order to assess outreach to professional help one item developed by the IP12 team was used (Hutchison et al., 2013). The answers were evaluated on a 2-point scale (1 = yes, 2 = no).

#### *Psychological and Physical State*

- In order to assess life satisfaction the five-item “Satisfaction with Life Scale” was used (Diener, Emmons, Larsen, & Griffin, 1985; Schumacher, 2003). The answers were evaluated on a 7-point scale (1 = completely disagree through 7 = completely agree). The Cronbach’s alpha was  $\alpha = .89$ , indicating good internal consistency.
- In order to assess depression the 15-item “Center for Epidemiologic Studies Depression Scale (CES-D)” was used (Hautzinger & Bailer, 1993; Radloff, 1977). The answers were evaluated on a 4-point scale (1 = rarely / never [less than 1 day] through 4 = often / all the time [5-7 days]). The Cronbach’s alpha was  $\alpha = .89$ , indicating good internal consistency.
- In order to assess subjective health one item was used (Swiss Household Panel, 2009). The answers were evaluated on a 5-point scale (1 = very good through 5 = very bad).

#### *Intrapersonal Resources*

- In order to assess the three personality dimensions neuroticism, agreeableness and extraversion from the “Big Five Inventory (BFI-10),” two items per dimension were used (Rammstedt & John, 2007). The answers were evaluated on a 5-point scale (1 = strongly disagree through 5 = strongly and completely agree).

Psychometric properties of the major study variables are detailed in Table 1. Cronbach’s alpha ranged from .81 (Social Loneliness) to .89 (Life Satisfaction), which denotes a high internal consistency (Hutchison et al., 2013).

*Table 1: Psychometric properties of the major study variables*

<b>Variable</b>	<b><i>n</i></b>	<b><i>M</i></b>	<b><i>SD</i></b>	<b><i>Min-Max</i></b>	<b><i>Possible Range</i></b>
<i>Interpersonal Resources</i>					
Marital Satisfaction	440	1.35	.24	.85-1.85	1-2
Co-Development	467	4.08	.80	2.34-5.00	1-5
Sexual Satisfaction	398	3.48	.90	1.55-5.00	1-5
Social Loneliness	488	.21	.32	.00-.90	1-5
<i>Psychological / Physical State</i>					
Life Satisfaction	493	5.61	.79	3.73-7.00	1-7
Depression	312	.47	.30	.07-1.20	1-4
Subjective Health	489	3.74	.73	2.21-5.00	1-5
<i>Intrapersonal Resources</i>					
Neuroticism	466	2.75	.95	1.00-4.67	1-5
Agreeableness	476	3.53	.81	1.86-5.00	1-5
Extraversion	481	3.16	1.01	1.11-5.00	1-5

*Note.* *n* = sub-sample size, *M* = mean, *SD* = standard deviation, *Min-Max* = minimum to maximum,  $\alpha$  = Cronbach's alpha

### **Data Analysis**

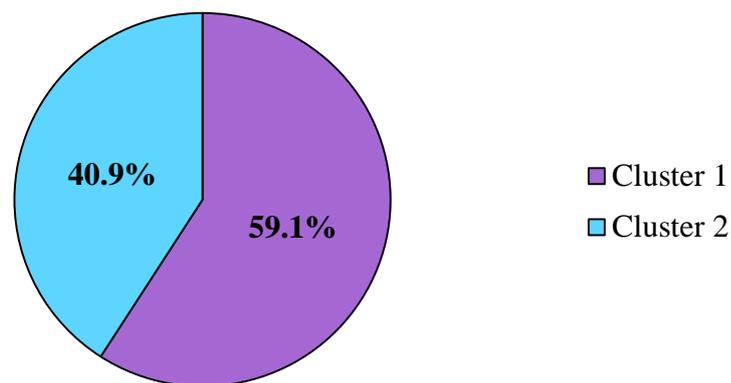
The following analyses were made with IBM SPSS Statistics 20.0. With the goal of establishing an empirical typology of partners in long-term relationships, a two-step cluster analysis was selected. The purpose of this analysis was to group participants through their shared characteristics while maintaining heterogeneity between the resulting types (Backhaus, Erichson, Plinke, & Weiber, 2008). This method is well-suited to analyzing large samples. Furthermore, nominal as well as interval-scaled variables can be simultaneously integrated in the analysis (Schendera, 2010; SPSS Corporation, 2001). Couples previously analyzed through cluster analyses were found to differ based on the quality of their relationships (Cohen et al., 2010; Gottman, 1993; D. H. Olson & Fowers, 1993) which led to the inclusion in this study's cluster analysis of the following partnership variables: marital satisfaction, co-development in the relationship and sexual satisfaction. The next step was to compare the central tendencies of the two resulting groups and their respective differences in the previously mentioned scales and demographic variables. Pursuant to the Kolmogorov-Smirnov-Test, the assumption for normal distribution was not met ( $p < .001$ ) and therefore

non-parametric tests (Mann-Whitney-U-Tests) were used. The effect sizes for the Mann-Whitney-U-Tests were calculated according to Pallant (2007). In order to discover whether the groups were differentiated with regards to the nominally scaled variables (gender, origin, education, financial status, children, professional help), Chi-squared tests at a significance level of  $\alpha = .05$  were run. In order to reduce the likelihood of distortions due to the influence of outliers in the data, extreme values were replaced by the mean plus / minus two standard deviations (Field, 2011).

## Results

### Cluster Analysis

The two-step cluster analysis resulted in two distinct clusters for the 374 married partners based on the variables marital satisfaction, co-development in the relationship and sexual satisfaction. The first cluster included 221 people (106 women, 115 men), while the second included 153 people (80 women, 73 men). Figure 1 depicts the percental distribution of both clusters.



*Figure 1:* Percentage of persons in both clusters

The significant difference in overall relationship satisfaction between the two clusters necessitates that Cluster 1 partners henceforth be referred to as satisfied and Cluster 2 partners as unsatisfied partners in long-term relationships.

### Group Comparison

Firstly, both groups were compared based on their demographic variables. Both the Mann-Whitney-U and Chi-squared tests determined that the unsatisfied persons were not differentiated significantly ( $p > .05$ ) from satisfied persons based only upon demographic variables including age, gender, length of marriage, origin, education, financial status and

whether or not partners had children. See Table 2 for a detailed listing of the dispersal of demographic variables between the two clusters.

Table 2: Demographic characteristics of both clusters

Demographic Variables	Cluster 1	Cluster 2	$\chi^2$ (df)	Cramer-V	Fisher's exact test
	<i>n</i> (%)	<i>n</i> (%)			
<b>Age <i>M</i> (<i>SD</i>)</b>	74.17 (7.22)	74.51 (7.08)	n.s.		
<b>Gender</b>			.51 (1)	.04	.46
Women	106 (48.0)	80 (52.3)			
Men	115 (52.0)	73 (47.7)			
<b>Duration of Marriage <i>M</i> (<i>SD</i>)</b>	48.73 (6.24)	49.48 (6.07)	n.s.		
<b>Origin</b>			3.22 (3)	.09	
Swiss	201 (91.0)	133 (87.5)			
European	19 (8.6)	18 (11.8)			
Other	1 (0.5)	1 (0.7)			
<b>Education</b>			7.14 (6)	.14	
Primary School	38 (17.4)	21 (13.8)			
Secondary School I	13 (5.9)	3 (2.0)			
Professional Formation	85 (38.8)	73 (48.0)			
Secondary School II	24 (11.0)	20 (13.2)			
Higher Profess. Formation	38 (17.4)	25 (16.4)			
University / ETH / EPFL	19 (8.7)	9 (5.9)			
Other	2 (0.9)	1 (0.7)			
<b>Financial Status</b>			3.73 (2)	.10	
More than enough Money	39 (17.8)	16 (10.6)			
Enough Money	171 (78.1)	129 (85.4)			
Not enough Money	9 (4.1)	6 (4.0)			
<b>Children</b>			.00 (1)	.002	1.00
Yes	213 (96.8)	148 (96.7)			
No	7 (3.2)	5 (3.3)			

Note. *n* = sub-sample size, *M* = mean, *SD* = standard deviation,  $\chi^2$  = Chi-squared test, n.s. = not significant (Mann-Whitney-U-Test)

The next step was to compare both clusters with regards to the instruments listed below. Table 3 depicts the means and standard deviations of the variables in both clusters, as well as summarizes multiple Mann-Whitney-U-Tests. These tests indicated significant

differences ( $p < .05$ ) between the clusters. As expected, based upon the partnership variables which were originally used to define the groups, significant differences ( $p < .001$ ) were demonstrated between satisfied and unsatisfied partners in long-term relationships. This result confirmed that each of the three selected variables (marital satisfaction, co-development in the relationship and sexual satisfaction) contributed significantly to the formation of the two clusters. Satisfied persons in long-term partnerships are characterized by high marital satisfaction values ( $M = 1.49$ ;  $SD = .13$ ), high co-development in the relationship values ( $M = 4.52$ ;  $SD = .51$ ) and high sexual satisfaction values ( $M = 3.82$ ;  $SD = .74$ ). In contrast, unsatisfied persons in long-term partnerships are characterized by low marital satisfaction values ( $M = 1.14$ ;  $SD = .19$ ), low co-development in the relationship values ( $M = 3.44$ ;  $SD = .69$ ) and low sexual satisfaction values ( $M = 2.97$ ;  $SD = .86$ ).

*Table 3: Means and standard deviations for variables in both clusters*

Variables	<i>n</i>	Cluster 1		Cluster 2		<i>U</i>
		<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	
<i>Interpersonal Resources</i>						
Marital Satisfaction	374	1.49	.13	1.14	.19	31,295***
Co-Development	374	4.52	.51	3.44	.69	29,728***
Sexual Satisfaction	374	3.82	.74	2.97	.86	25,866***
Social Loneliness	372	.15	.27	.27	.35	14,033**
<i>Psychological / Physical State</i>						
Life Satisfaction	374	5.84	.73	5.26	.73	24,417***
Depression	250	.37	.24	.54	.32	5,164***
Subjective Health	370	3.91	.65	3.62	.77	20,077***
<i>Intrapersonal Resources</i>						
Neuroticism	368	2.62	.95	2.82	.92	14,249*
Agreeableness	368	3.60	.79	3.46	.75	18,348*
Extraversion	372	3.27	1.02	3.07	.95	18,411

*Note.* \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ , *n* = sub sample size, *M* = mean, *SD* = standard deviation, *U* = Mann-Whitney-U-Test

In order to make direct comparisons between both groups possible, the means and standard deviations depicted in Figures 2 and 3 were z-standardized. The z-standardized means and standard deviations are depicted in Table A2 (see appendix). Figure 2 illustrates

the significant differences between both groups as per the three selected partnership variables, while Figure 3 includes life satisfaction, subjective health, depression and social loneliness.



Figure 2: z-standardized means of partnership variables in both clusters

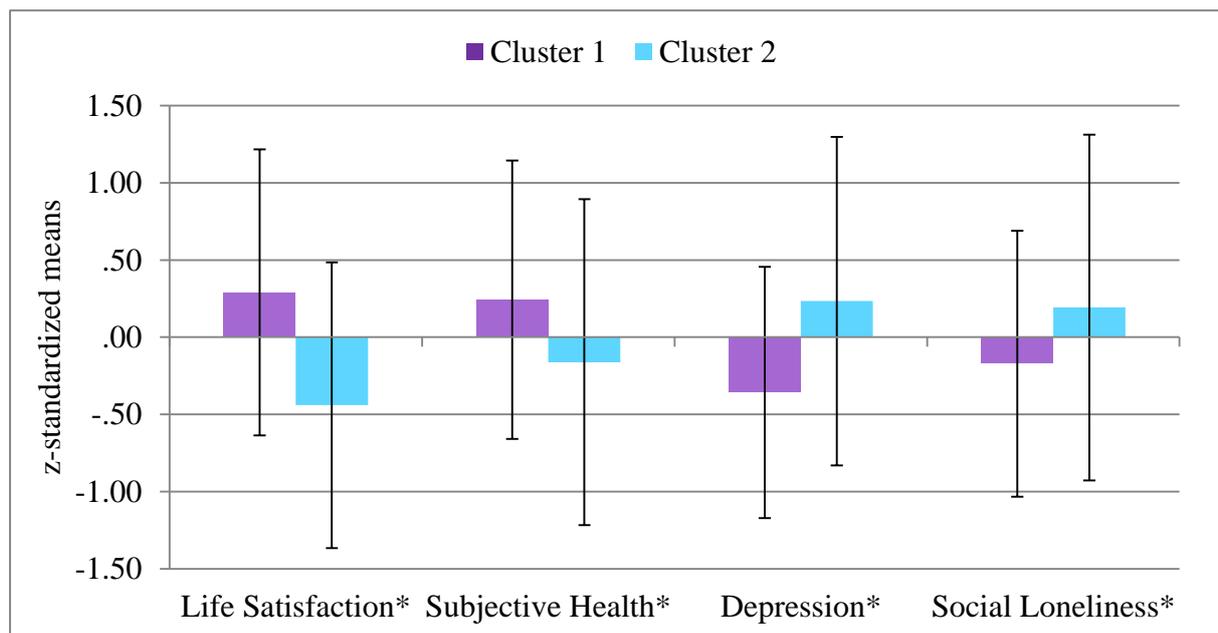


Figure 3: z-standardized life satisfaction, subjective health, depression and social loneliness means in both clusters

The results of the group comparisons detailed in Table 3 also demonstrate significant ( $p < .001$ ) differences between the two clusters in life satisfaction, psychological state, physical state and social loneliness through the Mann-Whitney-U-Tests. Satisfied persons in long-term partnerships rate their life satisfaction as well as their subjective health higher than unsatisfied partners. Furthermore, those in the satisfied cluster demonstrate consistently lower

values in areas such as depression and social loneliness (see Table 3). As per the ADS-scale manual (Hautzinger & Bailer, 1993), the depression values of satisfied partners correspond to a percentile rank of 27 and the depression values of unsatisfied partners correspond to a percentile rank of 46, which although noteworthy, have no clinical relevance. Additionally, partners in the unsatisfied cluster are significantly more likely to seek professional help than those in the satisfied cluster,  $\chi^2(1, N = 365) = 8.11, p < .01$ . The personality dimension neuroticism differs significantly ( $p < .05$ ) in both groups. Agreeableness differs significantly, but only barely so, and extraversion proved not to be significant ( $p > .05$ ) in differentiating the two clusters.

### Effect Sizes

In order to evaluate the relevance of the effect the standardized effect size  $r$  as per Pearson was calculated (Pallant, 2007). As per J. Cohen (1988),  $r = .50$  indicates a large effect,  $r = .30$  indicates a medium effect and  $r = .10$  indicates a small effect. As depicted in Table 4, the partnership variables demonstrate a large effect, life satisfaction and depression a medium effect, and subjective health, social loneliness and personality a small effect.

Table 4: Effect sizes of the variables

Variables	$r$
<i>Interpersonal Resources</i>	
Marital Satisfaction	0.74
Co-Development	0.66
Sexual Satisfaction	0.46
Social Loneliness	0.38
<i>Psychological / Physical State</i>	
Life Satisfaction	0.20
Depression	0.29
Subjective Health	0.16
<i>Intrapersonal Resources</i>	
Neuroticism	0.11
Agreeableness	0.10
Extraversion	0.09

Note.  $r$  = Effect size

## Discussion

Given that long-term marriages lasting over 40 years have largely been neglected in previous research, the goal of this study was to examine and empirically establish the patterns exhibited by long-term married individuals as related to their marital quality. Additionally, the aim of this study was to show to what degree individuals differ in terms of demographic variables, interpersonal resources, psychological and physical state and intrapersonal resources. Two distinct types of individuals resulted from the cluster analysis: a satisfied group and an unsatisfied group.

Although it is impossible to equate the resulting types from couple-based research projects to the present study, there are various indications that striking similarities exist, despite the inherent difference in study data based on individual and not dyadic information. This research supports findings by Wunderer et al. (2001) as well as Cohen et al. (2010); that among other types, there exist clearly definable happily and unhappily married couples in long-term partnerships. Wunderer et al. (2001) found two distinguishable patterns based on the Partnership Climate Scale, a “committed” and a “distanced” relationship type, which closely resembles the two types of satisfied and unsatisfied married individuals in this study. The “committed” type was characterized by emotional closeness, few restrictive tenancies and taking an active part in the relationship whereas the “distanced” type was characterized by less emotional closeness, rather restrictive behaviors and passivity in the relationship (Wunderer et al., 2001).

Regarding differences between the two groups’ resources and health, the present study matched very closely the assumptions held at the onset of our research. Our findings are furthermore largely in line with previous research on determinants of marital satisfaction in long-term partnerships. High marital satisfaction was linked positively with high sexual satisfaction and high scores in co-development in the relationship. These findings are consistent with studies that examined the association between marital satisfaction and sexual satisfaction (Heiman et al., 2011) as well as co-development in the relationship (Brandtstädter & Felser, 2003; Brunstein et al., 1996). The importance of subjective well-being as related to marital satisfaction (Diener, 1984; Glenn & Weaver, 1981) was confirmed by our data. Satisfied individuals in long-term marriages reported significantly higher life satisfaction than unhappily married partners. The latter group was furthermore characterized by lower subjective health and higher depression scores. These findings indicate that both depression and poor health can have a detrimental effect on the quality of a relationship (Davila et al.,

2003; Kouros et al., 2008; Walker & Luszcz, 2009). Other studies, such as Levenson et al. (1993), support our results as they have reported finding satisfied and unsatisfied groups, indicate a division between mental and physical health related to marriage satisfaction, and show that unhappy partners are much more likely to consider seeking professional help.

Previous research emphasized the link between personality traits and marital satisfaction; neuroticism especially has been shown to be negatively linked with low relationship satisfaction (Donnellan et al., 2004; Malouff et al., 2010). Findings related to personality traits could be confirmed by our data, but only to a certain degree. Extraversion was not confirmed as significant and agreeableness demonstrated only a marginally significant association with marital satisfaction. Although these results generally correspond to other findings (Rosowsky et al., 2012), the question remains of what role specific combinations of personality traits in long-term marriages play. Personality traits, especially neuroticism, although relevant in evaluating marital satisfaction in newlywed couples (Karney & Bradbury, 1997), may decline in relevance during a long-term partnership. Other factors, such as interpersonal characteristics, could gain in importance (O'Rourke et al., 2011; Schmitt, 2001).

As elucidated above, important differences separate our two groups of participants. The differences between the clusters are not consistently large, however. For example, although the values of the happier group showed significantly lower values of depression, the values in both groups were not clinically relevant. For a further illustration of this trend, we can consider loneliness values. The two groups differed significantly in their reports of loneliness, yet the loneliness values of the unhappy group remained low. Despite this tendency, this issue has to be taken seriously because the data showed that even after 40 or more years of marriage, feelings of loneliness as well as depressive symptoms can become apparent or arise. Another reason for the smaller differences between the two groups is that individuals classified in the unhappy group did not rate their satisfaction at the lowest levels possible, but in the middle of the potential range. Hawkins and Booth (2005) reported similar findings in their study of individuals in low-quality marriages. Our data demonstrated a high level of outreach from unhappily married partners to professional help, and therefore the practical relevance of these findings lies in the need for interventions that improve these issues in relationships.

Demographic variables played a minor role in the evaluation of marital satisfaction between older persons, which is similar to other research (Hahlweg, 1991; Schmitt, 2001). Nevertheless, it is surprising that in this study the distribution of gender is similar in both

satisfied and unsatisfied groups. The literature largely supports the finding that women indicate unhappiness with their relationship more often than men (Brandstädter, Baltes-Götz, & Heil, 1990; Fowers, 1991; Stegmann & Schmitt, 2006). A possible explanation for this difference in results could be that these gender differences begin to fade with age, or that older couples tend to accept their long-term partnership as stable and therefore are less likely to indicate displeasure (Levenson et al., 1993). Another explanation is presented in a study by Rhyne (1981) who only found very little gender differences in the post-parental life stage, while in earlier stages the gender differences were consistently larger. Furthermore, the consistent trend in our data demonstrates a significant age difference between men and women in long-term marriages. Men are not only better educated, but also tend to be older. As life expectancy continues to rise, will this very long-standing trend begin to weaken? As women with increased access to education age, will other trends in relationship satisfaction be influenced? These open questions reflect the continuing importance of researching our oldest partners, because gender differences as well as general demographic variables may come to be significant. Also worthy of noting is that research has demonstrated that the length of a marriage plays a decisive role in establishing marital satisfaction values (Jose & Alfons, 2007), yet regardless of length our data would indicate that marriages tend to reach a plateau of satisfaction after 40 years, and 10 or even 20 or more years of marriage after the first forty no longer play a significant role in determining marital satisfaction.

There is great value in analyzing marriages between members of our oldest cohorts, as repeatedly mentioned throughout this study. However, further research into long-term relationships will need to additionally incorporate data from similarly-aged divorced partners as well as take into account the socio-political changes that gender differences currently play and will play as today's parents become grandparents. Further research in this direction may include the comparison of happily and unhappily married individuals to divorced long-term partners as well as important gender differences in our data. The inherent complexities and questions raised when including divorced couples into the selected data set are respectively both many and worthy of investigation. Are older partners on average better off getting a divorce or remaining unhappily married? How will civil unions be incorporated into marriage research, which currently ignores anyone other than heterosexual partners? These important questions are method-based in nature, but reflect the impact that recent rises in divorce rate and considerations about the definition of marriage have had and will doubtless continue to have on western society. Additionally, with greater gender equality and overall empowerment of women, the topic of divorce becomes even more interesting and worthy of research taking

these changes into account. Further research through the collection of longitudinal data would aid in investigating trends in trajectories of long-wed couples and assist in examining which variables contribute to greater satisfaction in older age.

Our long-term data and data similar to them must continue to be collected and analyzed for the answers to these questions, the answers to which may serve to better educate, support and improve life and partnership satisfaction for all partners, from youngest to oldest. Two clear limitations inherent in our data set, and therefore our study, are: the cross-sectional nature of the data and the omission of a complete partnership perspective, given that the data comes from one married partner and not from both partners as a couple. Additionally, certain variables such as sexual satisfaction and depression contained many missing values. One possible reason for this could be a general silence enforced societally regarding these issues, or perhaps one specific to elder participants. However, as previously mentioned, the literature suggests that overall frequency of sexual activity declines as partners age (Bucher et al., 2003; Lindau et al., 2007). Despite the limitations of this study, it can be stated that the quality of a relationship has far-reaching connections to resources, health and personality traits and therefore should be included in the overall assessment of an individual's situation.

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## Appendix

*Table A1: Sample description*

Demographic Variables	Women <i>n (%)</i>	Men <i>n (%)</i>	Total <i>N (%)</i>	<i>U / <math>\chi^2</math> (df)</i>	Cramer- V	Fisher's exact test
<b>Age <i>M (SD)</i></b>	74.2 (7.4)	76.8 (7.2)	75.5 (7.4)	36,558***		
<b>Gender</b>	258 (52.2)	236 (47.8)	494 (100)			
<b>Duration of</b>						
<b>Marriage <i>M (SD)</i></b>	50.0 (6.5)	50.3 (6.6)	50.1 (6.5)	31,429		
<b>Origin</b>						
				6.03 (3)	.11	5.89
Swiss	222 (86.4)	216 (91.9)	438 (89.0)			
European	34 (13.2)	18 (7.7)	52 (10.6)			
Other	1 (0.4)	1 (0.4)	2 (0.4)			
<b>Education</b>						
				46.60 (6)***	.31	
Primary School	54 (21.1)	23 (9.9)	77 (15.7)			
Secondary School I	21 (8.2)	5 (2.1)	26 (5.3)			
Professional Formation	105 (41.0)	101 (43.3)	206 (42.1)			
Secondary School II	37 (14.5)	24 (10.3)	61 (12.5)			
Higher Profess. Formation	30 (11.7)	53 (22.7)	83 (17.0)			
University / ETH / EPFL	5 (2.0)	26 (11.2)	31 (6.3)			
Other	4 (1.6)	1 (0.4)	5 (1.0)			
<b>Financial Status</b>						
				1.74 (2)	.06	1.73
More than enough Money	29 (11.3)	34 (14.7)	63 (12.9)			
Enough Money	213 (83.2)	189 (81.5)	402 (82.4)			
Not enough Money	14 (5.5)	9 (3.9)	23 (4.7)			
<b>Children</b>						
				.29 (1)	.29	.19
Yes	243 (94.6)	227 (96.6)	470 (95.5)			
No	14 (5.4)	8 (3.4)	22 (4.5)			

*Note.* *n* = sub-sample size, *N* = sample size, *M* = mean, *SD* = standard deviation, *U* = Mann-Whitney-U test,  $\chi^2$  = Chi-squared test, \**p* < .05, \*\**p* < .01, \*\*\**p* < .001, n.s. = not significant

Table A2: z-standardized means and standard deviations for variables in both clusters

Variables	<i>n</i>	Cluster 1		Cluster 2		<i>U</i>
		<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	
<i>Interpersonal Resources</i>						
Marital Satisfaction	374	.59	.55	-.89	.81	31,295***
Co-Development	374	.56	.64	-.80	.87	29,728***
Sexual Satisfaction	374	.38	.82	-.56	.96	25,866***
Social Loneliness	372	-.17	.86	.19	1.12	14,033**
<i>Psychological / Physical State</i>						
Life Satisfaction	374	.29	.93	-.44	.93	24,417***
Depression	250	-.36	.81	.23	1.06	5,164***
Subjective Health	370	.24	.90	-.16	1.06	20,077***
<i>Intrapersonal Resources</i>						
Neuroticism	368	-.14	1.00	.07	.97	14,249*
Agreeableness	368	.08	.98	-.09	.93	18,348*
Extraversion	372	.11	1.00	-.08	.94	18,411

Note. \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ ,  $n$  = sub sample size,  $M$  = mean,  $SD$  = standard deviation,  $U$  = Mann-Whitney-U-Test

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**Erklärung zur Masterarbeit**

„Ich erkläre hiermit, dass ich diese Arbeit selbstständig verfasst und keine anderen als die angegebenen Quellen benutzt habe. Alle Stellen, die wörtlich oder sinngemäss aus Quellen entnommen wurden, habe ich als solche gekennzeichnet. Mir ist bekannt, dass andernfalls der Senat gemäss Artikel 36 Absatz 1 Buchstabe o des Gesetzes vom 5. September 1996 über die Universität zum Entzug des aufgrund dieser Arbeit verliehenen Titels berechtigt ist.

Weiterhin erkläre ich, dass ich das Thema, wie es in der einleitenden Fragestellung umrissen wird, nicht bereits ganz oder teilweise in einer schriftlichen Arbeit bearbeitet habe, die anderswo eingereicht, beziehungsweise als Studienleistung anerkannt worden ist.“ (Ausnahmen, wie eine substantielle Erweiterung einer bereits eingereichten schriftlichen Arbeit, bedürfen des Einverständnisses der zuständigen GutachterInnen.)

Ort / Datum: Bern, 20.06.2013

Unterschrift:

A handwritten signature in blue ink, consisting of a series of fluid, connected strokes that form a cursive name, likely 'J. J. ...'.

**Erklärung des Einverständnisses mit der Veröffentlichung und Ausleihbarkeit der Masterarbeit**

Ich erkläre hiermit, dass ich der Aufnahme der von mir verfassten Masterarbeit in den Bibliothekskatalog IDS Basel Bern sowie in die betreffende Fachbereichsbibliothek zustimme. Die Arbeit ist öffentlich zugänglich und kann von den BenutzerInnen der Bibliothek ausgeliehen werden.

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