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# **Connected. Can the differences in subjective well-being between migrants and natives be explained by social networks?**

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## **Abstract**

Contributing to the debate on older migrants in Europe, the present study has a double purpose: firstly, to examine whether aged migrants differ from their native counterparts in subjective well-being and secondly whether characteristics of their social networks mediate the assumed relationship between migration status and subjective well-being, also taking socio-demographic and immigration-related characteristics into consideration. Theoretical concepts and study findings form a foundation for the presumption that migrants would report smaller social networks as well as less satisfaction, interaction and exchange of goods and services with their social networks and therefore rate their well-being, as indicated by quality of life, depression and life satisfaction, lower than natives. Data from the fourth wave of the Survey of Health, Ageing and Retirement in Europe (SHARE) were used. The sample ( $n = 21,502$ ) included migrant and native respondents aged 50 and older across ten European countries. The same result pattern was found for each of the three well-being indicators: migrants suffer from lower subjective well-being than natives. No mediating effects became evident for the social network characteristics social network size, interaction or exchange in the relationship between migration status and subjective well-being in late life. However, social network satisfaction emerged as a significant mediator indicating that migrants' lower well-being might be buffered by being satisfied with their social networks. Further implications for policy practice and research are discussed.

*Keywords:* immigrant-native gap, SHARE, ageing, social network, satisfaction, subjective well-being

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## 1 Introduction

*“Get thee out of thy country, and from thy kindred [...] unto the land that I will show thee [...], and I will bless thee” – Jehovah (Gen 12:1.2 King James Version)*

When Jehovah told Abram to leave Haran, Abram was 75 years old. Abram obeyed, left his home, quit the majority of his social network and set off for the land of Canaan (Gen 12:4.5). Indeed his descendants have become great nations but loads of challenges and problems arose in the course of the relocation and afterwards. Certainly, it would have been interesting to let Abram rate his subjective well-being at a later point.

Turning to present-day Europe after the societal modernization process of the last half-century which implied socio-demographic changes in population aging and international migration, older migrants are becoming a group of increasing importance (Warnes, Friedrich, Kellaher & Torres, 2004). Centuries before, Europe’s dominant experience was sending people to other continents instead of receiving migrants. However, the direction of the migration flow has changed, particularly due to increasing work migration after World War 2. The millions of labor migrants constitute the largest percentage of the older migrant population who moved either within or into Europe and subsequently aged in place. In general, Europe is facing a continuing influx of people having left their homeland voluntarily or involuntarily because of countless different reasons and who will be ageing in their new country of residence. No end of this trend is in sight and therefore Europe’s population structure will further change in age and ethnic composition. Older migrants are more and more likely to represent a great proportion within society in the near future (Warnes et al., 2004).

Thus, the well-being of a great number of European residents who have reached or are on the threshold of old age might be influenced by a migration experience across an international border. Both migration experience and old age involve several challenges which pose potential threats to subjective well-being (Amit & Litwin, 2010). Hence, Sand and Gruber (2016) examined the subjective well-being of older migrants in comparison to their native counterparts across Europe using data from the Survey of Health, Ageing and Retirement (SHARE; Börsch-Supan et al., 2013). Their results showed a significant subjective well-being gap between migrants and natives. The present study seeks to expand the inquiry by clarifying if older migrants indeed report lower levels of subjective well-being than natives and identifying the underlying mechanisms.

Since “no man is an island” (Donne, 1975, p. 83), it stands to reason that an individual’s companions constitute a major potential mechanism that affects well-being. The effect of social networks on subjective well-being has been documented by multiple studies which widely agree that the interpersonal environment in which one is embedded plays a major role in shaping the quality of late life (e.g., Litwin, 1996; Pinguart & Sorensen, 2000).

Despite this broad base of knowledge, little research exists on the differences in the nature of older migrants’ and natives’ social networks and how these differences might possibly account for differences in their well-being (Silveira, Skoog, Sundh, Allebeck & Steen, 2002). Geographical relocation usually comes with changes in the nature of one’s social network, mostly including the processes of uprooting and reestablishing (Litwin, 1995). Therefore, it is highly probable that the social networks of the migrant population differ from the social networks of the native population and thus affect their well-being differently.

To the best of my knowledge, no prior research has analyzed if specific components of social networks are mediating the relationship between being a migrant versus being a native and subjective well-being based on SHARE data. Hence, the present study will address this empirical void by investigating the pathways from migration status to well-being via the social network characteristics of social network satisfaction, social network interaction, social network size and exchange within the social network, controlling for socio-demographic and migration-specific features. The analyses are run across ten European Union member states and seek to provide novel findings the implications of which could inform public policy. Policies regarding migrant integration or social welfare should be constantly modified by the Union or the respective states if a basic objective of the state is to guarantee the well-being of the population. Considering the fact that the state is facing the challenge of offering adequate health and social service provision to all residents, regardless of age or migration background, this is particularly important from a preventive point of view (Aichberger et al., 2010).

## 2 Theoretical Background

### 2.1 Subjective Well-being

“Well-being is the central goal of human activity” (Ormel, Lindenberg, Steverink & Verbrugge, 1999, p. 62). The nature and sources of well-being have intrigued social scientists, policymakers, and laypeople for the last several decades. Dozens of studies have been conducted and a myriad of theories have been formulated. Recent reviews of the scientific and theoretical work on well-being point out disagreements in the many different ways of conceptualization and measurement of the concept. Formerly, particularly in psychological research, the focus had been on human misery, that is, the negative aspects of well-being like mental disorders. The emergence of positive psychology led to the inclusion of positive aspects and thus to a holistic examination of well-being (Myers & Diener, 1995). In the current study, the concept of well-being is based on the work of the utilitarian Jeremy Bentham (1996), who assumed that presence of pleasure and absence of pain are the basis of “the good life”, and refers to an individual’s valuation of his or her life situation in general – the totality of pleasures and pains (Diener, 1984; Ormel et al., 1999).

An individual’s well-being can be appraised by him or herself or by someone else, for example by the spouse or a researcher. The individual’s own appraisal is called “subjective well-being” (Helliwell & Barrington-Leigh, 2010; Ormel et al., 1999). Self-reported well-being is mostly used in order to assess the concept. Studies have shown that self-evaluation of well-being is a reliable measure of actual well-being (e.g., Helliwell & Barrington-Leigh, 2010).

Diener, Emmons, Larsen and Griffin (1985), who reviewed theoretical and empirical contributions to subjective well-being, identified three components of the construct: positive affect, negative affect, and cognitive appraisal. Frequent positive affect, infrequent negative affect, and a global sense of positive life evaluation indicate high subjective well-being. According to Helliwell and Barrington-Leigh (2010), these three components approach human experience differently and as a consequence they tell different stories. Affect includes the variety of emotional states and frequency of mood changes, the ups and downs of daily life, and is usually captured by recall. Cognitive evaluation of an overall situation is the result of a cognitive-judgmental process which takes place or is updated at the time the individual is asked about their appraisal. In order to draw a comprehensive picture of well-being, the systematic collection of all three components in one study is required (Helliwell &

Barrington-Leigh, 2010). Amit and Litwin (2010) suggest that quality of life represents the positive affective component of well-being, depression the negative affective component, and life satisfaction represents the cognitive component.

Quality of life, the positive affective element of subjective well-being, is defined by the World Health Organization (WHO) as “an individual’s perception of their position in life in the context of the culture and value systems in which they live and in relation to their goals” (World Health Organization Quality of Life Group, 1998, p. 1570). In the present study, the definition of quality of life refers to perceived life quality in the sense of a pleasurable feeling at a certain moment in time.

Depression, the negative affective element of subjective well-being, is characterized by low mood and aversion to activity. Depressive mood is usually accompanied by symptoms such as irritability, loss of interest and enjoyment, suicidality, pessimism, et cetera. Therefore, depression is mostly measured by the presence of its symptoms (American Psychiatric Association, 2013).

Life satisfaction, the cognitive-judgmental element of subjective well-being, is the way people evaluate their lives as a whole. Life satisfaction is more a favorable attitude towards life than an appraisal of current feelings. It results from global assessment of one’s life according to chosen criteria, or in other words, from comparison to the standard that each person sets for him or herself (Diener et al., 1985). It is a frequently used measure for well-being and best captured by asking individuals to rate their satisfaction with life in general, as opposed to summing their satisfaction across different areas of life (Diener, 1984; Kahneman & Krueger, 2006).

Due to the fact that subjective well-being is a complex and multi-faceted issue, a multitude of studies has analyzed actual and potential determinants of subjective well-being (e.g., Bonini, 2007; Helliwell, 2003). The process of ageing is a crucial determinant which poses various possible threats to the subjective well-being of an individual: suffering from a medical condition or disability, the loss of close persons, work, and independence and therefore a decrease in social interaction and social participation (Croezen, Avendo, Burdorf & Van Lenthe, 2013). In the following, two essential sources of subjective well-being will be outlined in combination with old age: social networks and migration experience which is a central event in the life course of the respective individual.

## **2.2 Migration**

As portrayed above, geographical relocation of human beings has been of significance since ancient times and with respect to the contemporary political centrality of the issue within the European Union, migration has become, yet again, the subject of heated discussion in the academy and beyond. The act of migration is defined as the movement by an individual or a group of individuals from one place to another without having a date of return in mind (Tinghög, 2009). The present inquiry focuses on international migration, i.e., migrating from one country to another, in contrast to internal migration, i.e., migrating within a state (International Organization for Migration, 2011). The area from which the individuals start the process of migration is the country of origin, and the area where the process of migration ends is the host country (Litwin, 1995).

The dynamics and motives of relocation are manifold, and they are often analyzed in terms of the “push-pull model” introduced by Everett Lee (1966) who divided the factors influencing migration into push and pull factors. Push factors drive people to leave an area and pull factors attract people to an area such as socio-economic, political or ecological benefits. According to a study conducted by Büttner and Sticks (2014) on behalf of the German Federal Agency of Migration and Refugees (BAMF), the social networks of migrants constitute a pull factor of particular importance, especially having a spouse in the host country. Most of the migrants settled down in a place where points of contacts already exist. Some migrants may be pushed out, for example deported or displaced in the course of war and therefore forcefully separated from their country of origin, whereas others may leave their homeland in joyful anticipation of a bright future in the host country. The dynamics of every individual migration experience are unique apart from one important commonality: the act of migration itself. Since the present study sought to focus on the consequences of the migration act, only first-generation migrants who experienced being uprooted and replanted in their life course were included. The experience of uprooting and replanting comes with a number of significant changes and consequences in the life of the immigrant, like psychological and social changes which might influence the quality of their late life (Litwin, 1995).

## **2.3 Migration and Subjective Well-being**

“Uprooting depression” is a theoretical concept which draws a connection between the act of migration and the level of subjective well-being. It was brought up by the

psychiatrist Emil Kraepelin (1921) who first recognized uprooting as a social-psychological problem. Zwingmann and Pfister-Ammende (1973) took up the subject of uprooting depression in their book “Uprooting and after...” and described it as an adaptation disorder which may arise in the course of being uprooted from an environment and being transplanted into another.

Geographical relocation is a life changing event and not all migrants are able to adjust properly. Since many of them do not manage to establish satisfactory links within the host country, the migration experience may lead to loss of connectedness, mostly in a social sense, which in turn may result in low subjective well-being or depression. In extreme cases, the maladaptation results in a return to the country of origin where again the problem of readaptation might emerge (Barrett & Mosca, 2013).

Numerous researchers have attempted to study the consequences of migration movements in their psychological significance by comparing the foreign-born to the native-born. Some of the conducted studies indicate that there are no significant well-being differences between migrants and natives (e.g., Tucci, Eisnecker & Brücker, 2014), however, the clear majority of them suggest significant subjective well-being disparities supporting the above mentioned theoretical considerations. In the course of his dissertation, Petter Tinghög (2009), for example, found a higher prevalence of ill mental health among immigrants in Sweden than among native-born Swedes. Sylvia Kämpfer (2014) analyzed the life satisfaction of migrants in Germany and indicated a disadvantage in life satisfaction of the immigrant population compared to the native population. In line with this, findings from a cross-European study using data from the European Social Survey (ESS; Jowell, Roberts, Fitzgerald & Eva, 2007) demonstrated lower levels of subjective well-being among first-generation migrants than among natives (Hadjar & Backes, 2013). Levecque and Van Rossem (2015) also used ESS data and looked into the mental health differences between native, first-generation and second-generation migrants. They showed that natives and second-generation migrants do not differ significantly in their mental health state but first-generation migrants had lower levels of mental health. This finding gives more reason to the assumption that the uprooting experience and its related consequences are likely to impair subjective well-being.

A recently burgeoning body of research has been focusing upon the well-being discrepancies between elderly European migrants and natives of which a few works will be outlined in the following. According to Aichberger, Neuner, Hapke, Rapp, Schouler-Ocak and Busch (2012), there is a significant association between migrant status and depressive

symptoms among the older population in Germany. Ladin and Reinhold (2013) demonstrated an existent difference in depression rates between older migrant and non-migrant men, using cross-European SHARE data. Moreover, it could be shown based on SHARE data that elderly first-generation migrants in general suffer substantially higher depression rates (Aichberger et al., 2010; Lanari & Bussini, 2012) and have lower quality of life (Sand & Gruber, 2016) than elderly natives across Europe, even after controlling for numerous different variables, such as socio-demographic characteristics.

Most of the studies that have concerned themselves with migration and subjective well-being make a long story short: the act of migration seems to produce outcomes that heighten the risk of low subjective well-being, especially in late life. It is therefore expected that migrants will report lower quality of life, higher levels of depression and lower life satisfaction.

*H1: Migrants will report lower subjective well-being than natives.*

#### **2.4 Social Networks, Migration and Subjective Well-being**

The term “social network” is defined as the set of interpersonal relationships that people of all ages maintain (Mitchell, 1969), and encompasses different aspects, such as social network structure, social network interaction and social network quality (Litwin, Stoeckel & Schwartz, 2015). Social network support or exchange is an additional aspect that is gaining in significance with increasing age due to providing financial and especially practical benefits (Litwin, 1996). A social network comprises a person’s closest companions, such as family members, friends, neighbors, work associates, or service personnel (Litwin, 2000).

The interpersonal attachments within a social network enhance one’s sense of belonging. Based on an extensive literature review, Baumeister and Leary (1995) concluded that human beings have the fundamental need of belonging to other human beings, and described the “need to belong” as a desire to form and keep at least a minimum of lasting, positive, and significant interpersonal relationships. Neediness to belong is evolutionary and universal; nevertheless, there are cultural as well as individual variations in how people express and meet this need. According to the authors, satisfying the need of belonging involves maintaining stable reciprocal social bonds, frequent interactions with and an affectively pleasant feeling of attachment towards the network of intimates. The authors further suggested that belongingness is highly linked to well-being, whereby high

belongingness is related to high well-being and a lack of belongingness to low subjective well-being.

In fact, an impressive body of evidence has demonstrated a significant connection between social relationships and well-being. Even though some studies cite limited effects (e.g., Bowling, Farquhar, Grundy & Formby, 1993) or even negative effects (e.g., Krause & Rook, 2003), generally a strong positive association across different settings has been found (e.g., Barger, Messerli-Bürgy & Barth, 2014; Diener & Seligman, 2004; Gray, 2009). Furthermore, the connection between social networks and well-being in later life has been widely studied. For example, Baldassare, Rosenfield and Rook (1984) looked into social network characteristics that affect well-being among elderly respondents in Northern California and found that perceived companionship is a major predictor of well-being. More recently, the value of social networks for life satisfaction of older people has been confirmed (Tomini, Tomini & Groot, 2016). Pinquart and Sorensen (2000) conducted a meta-analysis in order to summarize the sources of subjective well-being in late life, and identified social networks as a significant positive one. Seeing the strong association between social networks and subjective well-being, the question concerning direction of effects arises – which of the factors might be endogenous, i.e. explained or predicted by other variables in the model, and which exogenous, i.e. explaining or predicting other variables. Most studies that have provided causal evidence have consistently identified social relationships as the causal factor (Baumeister & Leary, 1995; Tomini et al., 2016).

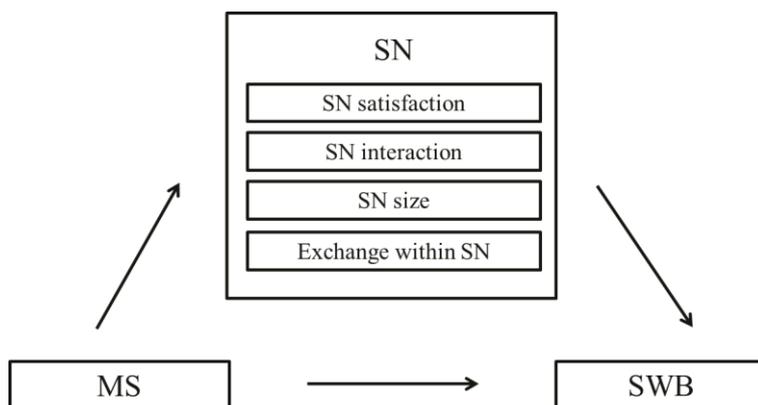
Turning to migration, it has to be noted that the process of being uprooted and transplanted mostly takes place in a social sense. Rivka Bar-Yoseph (1986) termed these complementary processes as desocialization and resocialization. More precisely, migrants leave their social networks in whole or in part in the country of origin and form new social relationships in the host country. Tucci and colleagues (2014) alluded that establishing attachment bonds within the host country is a major challenge to face for migrants. Studies point out the risk of dissolution of social ties in the course of migration which may lead to social deprivation and isolation (Narchal, 2012; Ponizovsky & Ritsner, 1998). Moreover, Silveira and colleagues (2002) found that elderly non-Swedish born people rated their depression levels significantly higher than their Swedish born counterparts inter alia due to feelings of dissatisfaction with their social life and isolation. Kuo and Tsai (1986) conducted a study among migrants who had been living in the host country for about 15 years on average, and concluded that active cultivating of social networks within the host society

significantly decreases psychological distress and the detrimental effects of the uprooting process.

Taking into consideration that migration comes with social uprooting and that interpersonal relationships are critical to well-being, there is reason to suppose that the expected relationship between migration status and subjective well-being could be explained by social networks, i.e. by the sum of the respective social network aspects that comprise the phenomenon (*Figure 1*). It is presumed that migrants might be less well “connected” than natives which might contribute to a lower well-being in comparison with natives.

*H2: The relationship between migration status and subjective well-being will be mediated by social networks.*

Baldassare and colleagues (1984) claimed that further research should concentrate on the impact of specific social relationships characteristics on elderly well-being. A few studies focused on individual social network components (e.g. Barger et al., 2014; Litwin, 2009; Litwin et al., 2015) and found indeed that social networks can impact well-being in several ways. The following sections will analyze four different characteristics which make up the nature of social networks: social network satisfaction, social network interaction, social network size and exchange within the social network.



*Figure 1.* The relationship between migration status and subjective well-being mediated by social network characteristics.

The present study aims to find out if there are significant differences concerning the social network aspects between migrants and natives and if the particular aspects account for the expected subjective well-being disparities between the two groups.

#### 2.4.1 *Social Network Satisfaction*

People who migrate leave their social network wholly or partially behind in the country of origin and establish new social ties upon their arrival in the host country. The loss of associates and the not yet established intimacy and connectedness can lead to social dissatisfaction. Migrants claim lower levels of satisfaction with their general social situation as well as with their family situation, i.e., their most immediate interpersonal environment, than natives (Silveira et al., 2002). Prior research has illustrated the importance of satisfaction with one's social bonds for late life well-being: The perceived quality of one's social ties appeared to be an important predictor of a good old age (Carstensen, 1991; Litwin & Shiovitz-Ezra, 2006) and decreasing morality (Birditt & Antonucci, 2008). Furthermore, social network satisfaction has been shown to be associated with fewer depressive symptoms (Litwin et al., 2015). Based on these findings, it is assumed that migrants will be less satisfied with their current social network situation than non-migrants and hence rate their well-being lower.

*H3a: Migrants will report lower subjective well-being than natives due to lower social network satisfaction.*

Thomas Nagel (1974) broached the issue of subjective reality in his paper "What is it like to be a bat?" to clarify the distinction between subjective perception and objective actuality. He explained that each situation is perceived and evaluated in a different, unique way by every living being. Therefore, a social network reality characterized by a certain structure, interaction and exchange rate is perceived differently. For example, having a social network consisting of ten people living under the same roof with whom one interacts and exchanges goods and services on a daily basis could delight one person and yet drive another into depression. For one's subjective well-being one's subjective perception of the social network situation is crucial, rather than the objective features it consists of (Goldstein, Ritter & Herbst, 2002). Particularly when looking into the social networks of elderly or migrant individuals, which might be more networks of necessity than networks of choice (Litwin,

1995), the subjective evaluation will probably have a higher influence on their well-being than structural, interactional or instrumental aspects.

Litwin and colleagues (2015) examined the relationship between different social network characteristics and depressive symptoms among old Europeans using SHARE data and found social network satisfaction to have a stronger association with depression compared to the other social network components structure and interaction. Litwin (1995) had found out already before in a different setting that the degree of satisfaction with social ties is more influential on mental health than other examined social network characteristics. In line with this, a meta-analysis by Pinquart and Sorensen (2000) concluded that the perceived quality of social contacts is more strongly related to subjective well-being than the quantity.

Thus, it is assumed that the subjective social network satisfaction is a stronger predictor for subjective well-being than the objective social network features of size, interaction and exchange.

*H3b: Social network satisfaction will have a higher relative influence on the relationship between migration status and subjective well-being than the other social network characteristics.*

#### 2.4.2 Social Network Interaction

The interaction between an individual and his or her social network members can be expressed by means of the frequency of contact with and the geographical proximity to those in the network among other variables (Litwin et al., 2015). Gerstel and Gross (1982; 1984) conducted research on commuter and long distance couples, but extended their findings also to prisoners and migrants. They found that less interaction with the closest associates due to being in absentia is related to a lower subjective well-being. Furthermore, Kiilo, Kasearu and Kutsar (2016) showed that first-generation migrants have less frequent contact with their social network than natives. The authors claimed that this could be explained by the proximity factor. Living apart, i.e. in a different country, from at least a part of one's social network leads to lower average geographical proximity to the whole social network and to less frequency of personal contact with them. Despite rapid development of information and communications technologies that make keeping in touch transnationally at relatively low cost possible, living apart might also lead to lower average contact frequency with the social network in general, particularly among the older population, due to a lack of digital skills.

It has been found that interacting frequently with social ties (Angel & Angel, 1992; Gray, 2009) as well as high frequency of visual contact with relatives (Zunzunegui, Alvarado, Del Set & Otero, 2003) are positively associated with high subjective well-being among elderly people. However, contact frequency with the social network has also been shown to be associated to a greater extent of depressive symptoms among respondents aged 80 and older. Closer geographic proximity was demonstrated to be related to having fewer depressive symptoms among respondents aged 65 to 79, however, above the age of 80 the effect disappeared (Litwin et al., 2015). These age effects might be due to a shift from network of choice to network of necessity with increasing age and frailty.

Based on the assumptions that, on the one hand, migrants live geographically further away from and have lower contact frequency, especially in person, with their closest companions on an average than natives, and that, on the other hand, overall higher interaction level is connected to higher subjective well-being, it is expected that migrants will rate their subjective well-being level lower.

*H4: Migrants will report lower subjective well-being than natives due to lower social network interaction.*

### 2.4.3 Social Network Size

As mentioned previously, migration severs old social ties and requires establishing new ones. The migration act involves a multitude of social changes in the life of an individual, and it is argued by Angel and Angel (1992) that the change in the size of the migrant's social network is one of the most significant changes experienced. For instance, a study in the Norwegian context which compared Norwegian natives to Pakistani immigrants showed that the latter reported significantly fewer "good friends" (Syed et al., 2006)

The size of migrants' close circles has been demonstrated to be associated with depression. In other words, the more intimate and personal relationships the migrants maintain, the lower their depression level is (Kuo & Tsai, 1986). Furthermore, existing research on the interplay between social network size and well-being in late life points out that larger personal networks are associated with greater life satisfaction and fewer depressive symptoms (Fuller-Iglesias, Sellars & Antonucci, 2008; Litwin, et al., 2015; Tomini et al., 2016).

Since social network size seems to differ by migration status and individuals with a large social network fare better than those who have few social bonds (Levitt, Antonucci, Clark, Rotton, & Finley, 1986), it is expected that:

*H5: Migrants will report lower subjective well-being than natives due to smaller social network size.*

#### 2.4.4 Social Network Exchange

Interpersonal transactions are emotional or instrumental in nature (Litwin, 1996). The present study focuses on the exchange of instrumental aid, i.e., giving and receiving material or practical help. According to the “convoy model”, people move through life together with significant others with whom they exchange goods and services. The social convoy helps them to cope with the stresses of life and leads to positive well-being (Kahn & Antonucci, 1980; Antonucci & Akiyama, 1987). Being embedded in a frequently exchanging network is particularly beneficial for older people due to greater necessity of receiving social support compared to other age categories (Antonucci & Akiyama, 1987) and to willingness to provide social support in order to feel in control and to perceive life as meaningful (Krause, Herzog & Baker, 1992).

Voluminous social network research that deals with the subject of providing and receiving social support has been done. Certainly, to give and receive assistance can have both positive and negative consequences for well-being in old age (e.g., Liang, Krause & Bennett, 2001). However, the evidence for a positive association between social support and well-being prevails: Getting provided with support by one’s social network is correlated with decreased incidence and severity of depression (Lin & Dean, 1984), whereas a lack of receiving social support is connected to a higher level of elderly depression (La Gory & Fitzpatrick, 1992). Giving help to network members in late life has also been shown to be associated with positive outcomes (Chen & Silverstein, 2000).

The presumed loss of intimate connectedness in the course of migration might be accompanied by reduced social exchange of goods and services. And according to Walsh and Walsh (1987), the perceived amount of social support contributes significantly to immigrants’ well-being. Moreover, Silveira and Ebrahim (1998) examined social determinants of well-being in elderly migrants and natives in the United Kingdom, and found that inequalities in social support may partly explain differences in life satisfaction between the two groups.

Seeing firstly the existing evidence for the relationship between exchange within the social network and well-being and secondly the presumable social exchange inequalities between migrants and natives allows for the supposition that social network exchange might mediate the relationship between migration status and subjective well-being.

*H6: Migrants will report lower subjective well-being than natives due to less social network exchange.*

### 3 Methodology

#### 3.1 Sample

Data were derived from the fourth wave of SHARE, collected in 2010 (Börsch-Supan, 2013). The SHARE survey was started in 2004 and is administered biennially via computer-assisted personal interviews (CAPI). It is a multidisciplinary panel study which collects micro data on health, socio-economic status, and social and family networks of persons aged 50 and older (plus their spouses regardless of age) across most European Union countries and Israel (Börsch-Supan et al., 2013). The present study did not make use of the longitudinal structure of SHARE, but rather of a cross-sectional design, because the migration act occurred in all cases before the survey. In the event that relevant information of the respondents was only provided in previous waves such as details on immigration characteristics, the required data were merged to the wave 4 data.

The SHARE data are based on nationally representative samples, drawn from population registries or from multistage sampling. Respondents who met the inclusion criteria of being born 50 years ago or before, speaking the official language of the country and not living in an institution or abroad at the time of the interview, were eligible and interviewed in their homes by trained interviewers. The ethical standards of SHARE were reviewed by the University of Mannheim's internal review board. Malter and Börsch-Supan (2013) provide a more detailed description of the project's methods and sampling.

The current study addressed the data of ten countries across Europe, which became the most important receiving European countries after World War 2 over the last half century (Lanari & Bussini, 2012) and/or contain at least 100 cases of migrants within SHARE (Sand & Gruber, 2016): Denmark and Sweden representing Northern Europe, Austria, Belgium, France, Germany, Switzerland and the Netherlands representing Central Europe, and Spain and Italy representing Southern Europe. Eastern European countries were mainly countries of out-migration for the studied period, and hence were not included in the present study.

Cases with missing data on one or more of the variables of interest were excluded from the analysis. The final analytical sample comprised 21,502 respondents. The sample included 9,740 men (45.3 %) and 11,762 women (54.7 %) aged 50 to 101 ( $M = 66.0$ ,  $SD = 10.2$ ). 19,739 of all observations were natives (91.8%) and 1,763 were migrants (8.2%). The two groups did not significantly differ in age or sex distribution. The migrant sample, of which 69.4% hold the citizenship of the host country and 63.2% migrated after the age of 18, lived for 42.8 years ( $SD = 17.7$ ) in the country of destination on average.

## 3.2 Measures

### 3.2.1 Dependent Variables

As mentioned above, the dependent variables of this study reflected the three components of subjective well-being: positive affect, negative affect and cognition. The corresponding measures in SHARE were quality of life, depression and life satisfaction. Thus, high subjective well-being was indicated by high quality of life, a low depression level and high life satisfaction.

Quality of life was measured by the CASP-12, an abridged 12-item version of the original CASP-19 scale (Hyde, Wiggins, Higgs & Blane, 2003), which was designed to quantify the perceived quality of life in older age. The CASP includes three questions in each of the following four domains: *control* (e.g. “How often do you feel that what happens to you is out of your control?”) *autonomy* (e.g. “How often do you think that you can do the things that you want to do?”), *self-realization* (e.g. “How often do you feel that life is full of opportunities?”) and *pleasure* (e.g. “How often do you look forward to each day?”). The items are assessed on a four point Likert scale from “never” (1) to “often” (4), respectively. Thus, the score ranges from 12 to 48, whereby a high score indicates high quality of life. The reliability score obtained for the 12 items in the present sample was acceptable ( $\alpha = 0.80$ ). The complete questionnaire can be found in Appendix I.

Depression was measured by the EURO-D scale (Prince et al., 1999), which was developed for the purposes of comparing depression across European countries. The EURO-D measures late-life depressive symptoms, and therefore includes questions about feelings of depression, pessimism, suicidality, guilt, sleeping troubles, loss of interest, irritability, loss of appetite, fatigue, reduction in concentration, loss of enjoyment, and tearfulness over the last month. The answers of the respondents were coded as “present” (1) or “absent” (0). The sum score equals a summary count of the symptoms and ranges from 0 to 12, with a high score indicating higher levels of depression. The reliability for the 12-item scale of the study sample was acceptable ( $\alpha = 0.70$ ). The complete scale can be found in Appendix II.

Life satisfaction was assessed on the single item “On a scale from 0 to 10 where 0 means completely dissatisfied and 10 means completely satisfied, how satisfied are you with your life?” There is ongoing discussion whether capturing life satisfaction by single-item or multi-item scales is preferred. The measurement of life satisfaction in surveys by one global question was discussed by Kahneman and Krueger (2006) who state the single probe as sufficient.

### 3.2.2 *Independent Variable*

The explanatory variable of interest, migration status, was determined on the basis of current country of residence/country of interview and country of birth. Respondents were asked to answer the question “Were you born in [country of interview]?” Those who were born outside their current country of residence were defined as migrants (1), whereas respondents who were born inside their current country of residence were defined as natives (0). The present study refers to first-generation migrants only.

### 3.2.3 *Mediator Variables*

The mediator variables were a range of characteristics of respondents’ self-reported social networks. The fourth wave of SHARE came with the major innovation of a name generated social network module of which the current analysis took advantage (see Litwin, Stoeckel, Roll, Shiovitz-Ezra & Kotte, 2013). This name generator asked respondents to identify up to six persons with whom they discussed personal matters within the last twelve months and one additional person who was important for any reason. This approach also follows Phillip Mayer (1962) who advised to capture migration in a social sense “by mapping out their networks of relations from the personal or egocentric point of view” (p. 577). These persons to whom the respondent referred by first name could be family members, friends, neighbors, or other acquaintances. The named persons were considered as the respondents’ closest interpersonal milieu, their “social network”.

Social network size (from 0 to 7) was measured as the number of people the respondents named. The respondents were asked a set of questions on every sited social network member. Social network interaction was reflected by geographical proximity (“Where does [social network member] live?”) and frequency of contact (“During the past twelve months, how often did you have contact with [social network member] either personally, by phone or mail?”). The proximity score ranged from “in the same household” (1) to “more than 500 km away” (8). The contact score ranged from “daily” (1) to “never” (7). Social network satisfaction was assessed by the item “Overall, how satisfied are you with the relationship that you have with the person/relationships that you have with the persons we have just talked about?” on a ten point Likert scale from “completely dissatisfied” (0) to “completely satisfied” (10). The analysis employed mean scores for each of the aforementioned network indicators. Exchange within social network was addressed by means of four measures: *financial help given* (“Please think of the last twelve months. Not counting

any shared housing or shared food, have you given any financial or material gift or support to any person inside/outside this household amounting to [...] or more?”), *financial help received* (“Please think of the last twelve months. Not counting any shared housing or shared food, have you received any financial or material gift or support from anyone inside/outside this household amounting to [...] or more?”), *practical/personal help given* (“In the last twelve months, have you personally given personal care or practical household help to a family member living inside/outside your household, a friend or neighbor?”) and *practical/personal help received* (“In the last twelve months, has any family member from inside/outside the household, any friend or neighbor given you personal care or practical household help?”). For each of the four measurements, there was coded either a positive response (1) or a negative response (0).

678 respondents named no network members. Thus, the following variables of additional information on social network members were coded as “not applicable”. To avoid the risk of biased results due to their exclusion from the analysis, the following procedures were applied: For the continuous variables, firstly, the mean value of all the other respondents’ answers was calculated. Secondly, the answers of the no network cases were set on this mean value and a “no network” category was added to the control variables. For the categorical variables concerning exchange within social network, the values for the no network cases were coded as 0.

### 3.2.4 Control Variables

There is evidence for possibly confounding factors concerning the abovementioned variables and their inter-relationships. Factors on a micro-level like socio-demographic (Pinquart & Sorensen, 2000) and migration-specific characteristics (Berry, Phinney, Sam & Vedder, 2006; Sand & Gruber, 2016; Tucci et al., 2014) as well as the macro-level factor country of destination (Bonsang & Van Soest, 2012; Böhnke, 2008; Lanari & Bussini, 2012) had been identified as possible sources of variation and therefore had to be controlled. The control variables in the present analysis included the following measures: age at the time of the interview, sex (male/female), country of destination/interview (due to the given heterogeneity, country fixed effects were employed in the model), no network (to control for the cases which named no social network members) and the immigration characteristics length of residence (number of years since migration), citizenship status and age of migration (binary variable generated for migration below/above 18).

### 3.3 Statistical Analysis

The analyses were performed using Stata statistical software version 14.1 and proceeded in three stages.

First, the socio-demographic and immigration characteristics of the sample as well as the social network characteristics were described by migration status, using sample means and standard deviations for the continuous variables and percentages for the categorical variables. Additionally, two-sample t-tests were conducted to compare the scores of the social network characteristics for migrants and natives.

In the second stage of the analysis, multiple regression was carried out in order to test Hypothesis 1. The effect of migration status on subjective well-being including the control variables was calculated by running the regression three times, changing for the three indicators of the dependent variable subjective well-being.

Finally, mediation analyses were executed by means of the KHB method (Breen, Karlson & Holm, 2013) for each of the three dependent variables in order to test Hypotheses 2 to 6. The KHB method decomposes the total effect of the model into the direct effect of migration status on the subjective well-being indicator and the indirect effects via the mediator variables social network characteristics. KHB allows for adding numerous mediator variables the effects of which get disentangled and moreover, provides a significance test of the indirect effects, the Sobel test (Sobel, 1982).

## 4 Results

### 4.1 Social Network Characteristics

Before performing the confirmative analyses, the present study first sought to gain an overview of the social network characteristics separately for migrants and natives. *Table 1* presents the social network characteristics by migration status. Mean scores and their standard deviations are displayed for the continuous variables, and percentage scores for the categorical variables. Unpaired t-tests were carried out on each network characteristic to check for significant differences between the two groups.

*Table 1.* Social network characteristics by migrant and native status.

Variables	Natives ( <i>n</i> = 19,739)		Migrants ( <i>n</i> = 1,763)	
	%	Mean (SD)	%	Mean (SD)
Social network size		2.7 (1.6)*		2.8 (1.7)
Social network satisfaction		8.8 (1.4)		8.9 (1.3)
Geographical proximity to social network		3.5 (1.5)***		3.7 (1.7)
Frequency of contact with social network		2.0 (1.0)***		2.1 (1.0)
Financial help given to social network	12.6		13.1	
Financial help received by social network	2.6***		4.0	
Practical help given to social network	10.6		10.6	
Practical help received by social network	10.2		9.2	

\*  $p < .05$ , \*\*\*  $p < .001$

The average social network of both migrants and natives comprised two to three meaningful persons, whereas migrants reported a slightly greater number. Respondents had a high level of satisfaction with their social network as a whole. The differences in mean satisfaction between the migrant and native respondents were not evident. As for the social network interaction variables, statistically significant differences between migrants and

natives emerged. Migrants reported higher geographical proximity to their social network than natives, and also the range in proximity among the migrant sample was wider. The frequency of contact score was higher among migrants than among natives, indicating that migrants have less frequent contact with their social network members than natives. When comparing the social network exchange characteristics of migrants and natives, the table does neither show significant differences in giving financial help to social network, nor in giving practical help to or receiving practical help from social network. The only difference emerged concerning receiving financial help from social network, indicating that migrants are more likely to receive financial help by their social networks than natives.

#### 4.2 Hypothesis 1: Migration and Subjective Well-being

In order to test Hypothesis 1 which proposed that migrants will report lower levels of subjective well-being than natives, multiple regressions were performed, as noted earlier, for each of the three indicators of the outcome measure subjective well-being. *Table 2* summarizes the effects of migration status on the subjective well-being variables.

*Table 2.* Quality of life, depression and life satisfaction by migration status including control variables.

Variables	$\beta$	SE	R <sup>2</sup>
Quality of life	-.84**	.25	.161
Depression	.38***	.09	.087
Life satisfaction	-.18**	.07	.082

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

Control variables: Age, sex, length of residence, age at migration, citizenship status, country

The regression revealed statistically significant differences between both groups on quality of life, depression and life satisfaction. Migration status had a significant effect on quality of life, indicating that natives ( $M = 38.1$ ,  $SD = 6.2$ ) reported higher quality of life than migrants ( $M = 37.6$ ,  $SD = 6.0$ ), and it explained 16% of the variance in quality of life including the control variables. Migration status also effected the level of depression significantly, showing that the native respondents ( $M = 2.4$ ,  $SD = 2.2$ ) reported lower levels of depression than the migrant respondents ( $M = 2.6$ ,  $SD = 2.2$ ), and made up 9% of the variance in depression including the controls. Migration status influenced life satisfaction significantly, revealing that natives ( $M = 7.9$ ,  $SD = 1.6$ ) showed higher life satisfaction than

migrants ( $M = 7.6$ ,  $SD = 1.8$ ), and accounted for 8% of the variance in life satisfaction, inclusively control variables. Thus, Hypothesis 1 was supported regarding all three indicators of subjective well-being, even after taking the control variables into account.

### **4.3 Hypotheses 2-6: Social Networks, Migration and Subjective Well-being**

In order to test Hypotheses 2 to 6, which focused on the indirect effect of migration status via social network characteristics on subjective well-being, mediation analyses were executed by means of the above mentioned KHB method. The KHB method allows for adding several mediator variables to one computation model, accounting for their interaction with each other. The results show both their effects altogether and disentangled from one another. The significance of the summed up indirect effect as well as of the individual indirect effects was given by the Sobel test. Mediation analyses were carried out for each of the three dependent variables quality of life, depression and life satisfaction.

#### *4.3.1 Subjective Well-being Indicator Quality of Life*

Starting with quality of life, the obtained results which are displayed in *Table 3* show that the total effect of the model and the direct effect of migration status on quality of life, as already shown above, were statistically significant. However, the indirect effect via the sum of all the social network characteristics applied within the present study was statistically insignificant what leads to rejection of Hypothesis 2. Social networks did not explain a substantial amount of shared variance between migration status and quality of life.

Turning to the individual social network characteristics, social network satisfaction had a significant mediating influence in the relationship between migration status and quality of life. However, it has to be pointed out that the revealed result was not of the nature stated in Hypothesis 3a. As mentioned, migrants indeed reported lower subjective well-being, but not due to lower social network satisfaction, because migrants did not differ significantly in their social network satisfaction from natives. The reversed algebraic sign of the indirect effect social network satisfaction compared to the direct and total effect alludes to another explaining mechanism. Therefore, Hypothesis 3a could be supported only partially. Even though social network satisfaction did not operate in the expected way, it had the highest relative influence on the migration status – quality of life relationship among all of the examined social network characteristics, which was in line with Hypothesis 3b. The mediation effect of both of the social network interaction indicators geographical proximity

to the social network and frequency of contact with the social network were not statistically significant. Hence, Hypothesis 4 had to be rejected. There was also no statistically significant indirect effect via social network size, thus Hypothesis 5 could not be confirmed. Since the mediation effects of financial help given, financial help received, practical help given and practical help received were not significant, the results failed to support Hypothesis 6 that postulated an effect of social network exchange.

*Table 3.* Decomposition of total effect of migration status on quality of life into direct and indirect effects via social network characteristics including control variables.

	$\beta$	SE
Total effect	-.846***	.238
Direct effect	-.897***	.238
Indirect effect	.051	.231
via SN satisfaction	.092*	.044
via geographic proximity	.001	.003
via frequency of contact	.010	.007
via SN size	-.014	.025
via financial help given	.016	.013
via financial help received	-.002	.006
via practical help given	.002	.005
via practical help received	-.056	.041

\*  $p < .05$ , \*\*\*  $p < .001$

#### 4.3.2 Subjective Well-being Indicator Depression

For the well-being indicator depression, another mediation analysis was carried out to test Hypotheses 2 to 6, leading to the results shown in *Table 4*. The total and direct effect, as noted earlier, were significant but the indirect effect of migration status via social networks on depression was insignificant. Hence, Hypothesis 2 had to be rejected.

Regarding the disentangled indirect effect of the social network characteristics, social network satisfaction appeared to be a significant mediator, but not to operate in the expected way as already mentioned above, so Hypothesis 3a could be confirmed only partially. Social network satisfaction had the strongest mediating effect from all analyzed social network characteristics, providing evidence for Hypothesis 3b. The two social network interaction indicators geographical proximity and frequency of contact did not have a significant effect

on the migration status – depression association, thus Hypothesis 4 could not be confirmed. Since the mediation effect via social network size was also not significant, Hypothesis 5 had to be rejected as well in terms of depression. The social network exchange indicators financial help given, financial help received, practical help given and practical help received did not explain a substantial amount of variance between migration status and depression. Hence, Hypothesis 6 could not be confirmed.

*Table 4.* Decomposition of total effect of migration status on depression into direct and indirect effects via social network characteristics including control variables.

	$\beta$	SE
Total effect	.380***	.090
Direct effect	.387***	.090
Indirect effect	-.006	.070
via SN satisfaction	-.023*	.011
via geographic proximity	-.003	.004
via frequency of contact	-.002	.005
via SN size	.004	.004
via financial help given	-.002	.002
via financial help received	.001	.002
via practical help given	-.001	.002
via practical help received	.021	.015

\*  $p < .05$ , \*\*\*  $p < .001$

#### 4.3.3 Subjective Well-being Indicator Life Satisfaction

Turning to the third well-being measure life satisfaction, *Table 5* shows the same result trends as in the previous two well-being measures quality of life and depression. There was a significant total effect of the model and, as abovementioned, a significant direct effect of migration status on life satisfaction. Yet, the indirect effect of social network characteristics was not significant. Hypothesis 2 had to be rejected.

The social network characteristic satisfaction had a significant mediating influence, but it can be seen by the inverted algebraic sign and the non-existent differences in social network satisfaction between migrants and natives that the mediating effect was not of the assumed nature, leading to only partly confirmation of Hypothesis 3a. The result that social network satisfaction had the biggest effect of all the postulated social network characteristics

supported Hypothesis 3b. Since neither geographical proximity nor frequency of contact had a significant impact, Hypothesis 4 which postulated a social network interaction effect could not be confirmed. Social network size did not have a statistically significant effect in the relationship between migration status and life satisfaction. Hence, Hypothesis 5 had to be rejected. There was no significant mediation effect via the social network exchange indicators financial help given, financial help received, practical help given and practical help received, which lead to rejection of Hypothesis 6.

*Table 5.* Decomposition of total effect of migration status on life satisfaction into direct and indirect effects via social network characteristics including control variables.

	$\beta$	SE
Total effect	-.183**	.066
Direct effect	-.210**	.066
Indirect effect	.026	.074
via SN satisfaction	.034*	.016
via geographic proximity	.003	.005
via frequency of contact	.002	.001
via SN size	-.004	.007
via financial help given	.003	.002
via financial help received	-.001	.001
via practical help given	.001	.001
via practical help received	-.012	.008

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

## 5 Discussion

This study focused on older migrants across Europe and intended to explore if they differ from their native counterparts in subjective well-being and if characteristics of their social networks mediate the presumed relationship between migration status and subjective well-being. It was expected that due to social uprooting and reestablishing in the course of migration, the nature of migrants' social networks would differentiate from natives' social networks – it was assumed that migrants would have smaller social networks, would be less satisfied, interact less and exchange less goods and services with their social networks and therefore rate their subjective well-being, indicated by quality of life, depression and life satisfaction, lower than natives.

The same result pattern was found for each of the three well-being indicators quality of life, depression and life satisfaction: significant disparities between aged migrants and natives. However, the relationship between migration status and subjective well-being did not seem to be mediated either by the social network characteristics in sum or by the size, interaction or exchange level of the social network. Social network satisfaction appeared to be the only significant mediator and thus had the strongest influence on the migration status – subjective well-being connection from all the examined social network characteristics.

In the following paragraphs, each hypothesis with its respective results will be discussed in detail, providing possible explanations and implications for the obtained findings.

### 5.1 Summary and Interpretation of the Results

The first hypothesis queried in this analysis posited that migrants would rate their subjective well-being lower than natives. The findings indeed showed that migrants reported lower quality of life, higher depression levels and lower life satisfaction than natives, and are therefore consistent with the results by Sand and Gruber (2016) who demonstrated lower quality of life and by Aichberger and colleagues (2010) as well as Lanari and Bussini (2012) who found higher depression rates among migrants than among natives all based on cross-national European SHARE data. The current study is the first one to evince life satisfaction disparities on the one hand and subjective well-being disparities identified by positive affect, negative affect and cognition (Diener et al., 1985) between migrants and natives on the other hand, using data from SHARE.

Yet, the main interest of this study was to test if migrants' social networks differ from natives' social networks and therefore in turn explain their subjective well-being discrepancies. Unexpectedly, no evidence was found for the assumption that social networks, i.e. the examined social network characteristics in sum, mediate the relationship between migration status and subjective well-being. Furthermore, the findings concerning the individually analyzed social network characteristics were almost overall incongruent with what was expected and postulated beforehand. It is likely that study limitations (see 5.2) account for these unsuspected results.

The findings regarding the social network characteristic satisfaction draw an unexpected picture. It was assumed that migrants would report lower satisfaction with their social networks and therefore lower subjective well-being than natives. Indeed, migrants rated their subjective well-being lower, and social network satisfaction was found to be a significant mediator, however, not of the expected nature, because the migrant respondents did not differ significantly in their self-rated social network satisfaction from the native respondents. Both groups had a similarly high satisfaction level regarding their social networks. What stands out particularly is that the algebraic sign of the indirect effect social network satisfaction is reversed compared to the direct and the total effect. The result indicates that social network satisfaction is acting as a buffer for the immigration-related lower subjective well-being. Migrants appear to be very satisfied with their social network situation but not with their life situation at a whole. This may seem illogical but could be explained with what Robert Putnam (2000) termed the bonding vs. bridging phenomenon. He differentiated between *bonding social capital*, which is based on social networks within the ethnic group, and *bridging social capital*, based on social networks across ethnic boundaries, and he argued that bonding is good for "getting by" in contrast to bridging which is crucial for "getting ahead". Since the variables available in the SHARE data set do not allow to differ between these two types of social capital, it cannot be examined if the migrants' social networks are from the same origin or not. But seeing the present result and knowing of the existence of ethnic sub-communities (Büttner & Stichs, 2014), as well as considering that migration is often "a family-centered action" (Kiilo et al., 2016; p. 72) allows for the presumption that many migrants might dock to a community of the same ethnicity within the host country and persist there. They may be satisfied with their cozy "getting by" social networks which operate as a buffer against all their immigration-related stress. This again may lead to persisting in these less "functional" social networks instead of doing the effort to bridge and thus "get ahead" in the host society, which is strongly associated with overall life

satisfaction (Tucci et al., 2014). Additionally, studies which point out that the economic integration of migrants is a crucial factor for their well-being (e.g. Amit & Litwin, 2010; Aycan & Berry, 1996) substantiate the assertion that social networks which are getting migrants ahead within the host country foster their overall subjective well-being. In particular, this might apply to the elderly migrant population which grew up in the early stages of economic development, a time when the fulfillment of basic needs was the main issue and the economic situation was essentially accounting for differences in well-being (Diener & Seligman, 2004).

Nevertheless, social network satisfaction turned out to have – as postulated – the highest relative mediating influence on the relationship between migration status and subjective well-being from all the examined social network characteristics. As indicated by Litwin and colleagues (2015), it is less important with whom one is in late life, but more how people feel about the person or persons who surround them. The result of the present study provides evidence for this notion.

Turning to social network interaction, the hypothesis that migrants would rate their well-being lower than natives due to less interaction with their social networks could not be confirmed. Indeed, migrants live geographically further away from their social network and have less contact to their social network members than their native counterparts. However, the fact that older migrants have a lower contact frequency with their closest companions does not seem to influence their subjective well-being. The non-significance of this result can be explained by the shift from networks of choice to networks of necessity due to migration or old age (Litwin, 1995), and emphasizes the weight of social network satisfaction once more.

Social network size was presumed to be smaller among the migrant group than among the native group and therefore account for their lower subjective well-being, but it appeared to be the other way around – migrants reported larger social networks but lower well-being than natives. This unexpected finding might be explained by similar results of research conducted by Fung, Carstensen and Lang (2001) who point out the benefits of selective diminution of network ties in late life.

The final social network characteristic analyzed in the present study is social network exchange. Although prior research has provided evidence for a strong connection between migration, social support and well-being, the assumption that migrants would exchange less goods and services with their social networks than natives and thus rate their well-being lower could not be confirmed. The first explanation for this discrepancy might be that a great

part of the sample did not respond to the social exchange measure variables due to filter questions. Thus their variable values had to get filled up artificially and might have distorted the analysis. The second reason for the non-significance of the result may be that by means of the given variables in SHARE it was only possible to investigate if and how much someone was giving and receiving but not to measure the gap between someone's expectations for social exchange and the support actually given and received which is crucial for well-being. For example, two persons might get the same amount of social support but rate their well-being differently because one of them has minimal expectations of social assistance and the other one has high demands for support from his or her social network (Litwin, 1995). This gap should particularly be taken into account within migrant-native comparing research because as suggested by Bordone & De Valk (2016), there might be greater needs among migrants than among natives. Hence, SHARE should include a measure of fit between an individual's social exchange needs and the actual given and received amount of social exchange in order to find out how far these needs are met, for instance by applying questions like "Would you say that the help you receive meets your need?", which can be found at other points within the SHARE questionnaire.

## **5.2 Limitations**

A number of limitations should be taken into consideration when interpreting the findings that this study was able to generate.

Even though the generally large sample of the present study must be acknowledged, it has been found that migrants made up only approximately eight percent of the total sample and thus the migrant sample is not only small, but also hardly a matching comparison group to the native sample.

Furthermore, the analysis revealed that among the migrant respondents the mean length of residence in the host country was around 43 years and that about 70 percent of them held the citizenship of the host country. Additionally, all the migrants were able to speak the corresponding language of the host country proficiently since SHARE is administered in the majority language(s) of the respective interview country. Language proficiency has been pointed out as a means for the ultimate attainment of integration in the host country (Amit & Litwin, 2010; Hunkler, Kneip, Sand & Schuth, 2015). Hence, the migrant population in SHARE appeared to be already well integrated and might not represent the trials and

tribulations of recently uprooted and transplanted migrants who are still in the process of restoration within the host society.

In addition, there was no information available in the wave 4 SHARE data about the personality traits of the respondents, which are crucial determinants of their well-being (Costa & McCrae, 1984), and thus it could not be controlled for them in the analysis. A particularly influential variable with regard to the present study might have been the trait extraversion which encompasses several factors that seem likely to enhance the tendency to form and maintain social ties and is strongly related to subjective well-being (Costa & McCrae, 1980). However, the “Big Five personality traits” (McCrae & Costa, 1987) will be retrieved within the data collection of the latest SHARE wave, allowing further research to control for personality characteristics.

Despite these limitations regarding the suitability of SHARE to examine the topic of migration, SHARE provides an unparalleled opportunity to study social networks and subjective well-being of older people in a comparative cross-European context.

### **5.3 Implications for Practice and Further Research**

Since depression is a globally leading cause of disease (Üstün, Ayuso-Mateos, Chatterji, Mathers & Murray, 2004), it poses a burden not only on the individuals concerned, but also on the European healthcare systems which are in charge of providing adequate services. Promoting well-being not only is valuable on a micro-level, because it makes people feel good, but also is valuable on a macro-level, because it has beneficial consequences for society. Thus, the findings that migration status effects subjective well-being across the European Union, as well as the revelation that social networks might buffer this effect, implicates a need for action on both the micro- and the macro-level.

Mental health practitioners who treat people need to be aware of their migration status and the entailed consequences as well as of the nature of the personal social network in which their clients are embedded (Stoeckel & Litwin, 2016) – how satisfactory it might be for them on the one hand and how functional on the other hand.

Turning to the interface between informal networks and the formal sector, an EU- or statewide large-scale tutoring program in which each incoming migrant gets assigned a personal, local tutor might be fruitful. Such a tutor could potentially become a part of the migrant’s personal social network in order to not only act as a buffer against the immigration-related stress, but also help the migrant to get ahead within the host society.

Across Europe, different integration policies make a difference regarding migrants' mental health (Malmusi, 2015). Sand and Gruber (2016) argued that migrants' subjective well-being could be improved by fostering an integrative receiving context by means of promoting the reunification of family members. The results of the present study support this suggestion for one thing, that migrants would be satisfied with their social situation and have a buffer around them. However, taking into consideration the bonding vs. bridging phenomenon, the family reunification may constitute an obstacle to successful integration and therefore overall well-being.

The mental health of immigrants is by no means a new research topic; nevertheless, it needs to be constantly empirically re-examined in its high complexity. Future research that addresses the inter-relationships between migration, social networks and subjective well-being should clarify the role of age. Firstly, the present research question should be revised with a younger sample in order to test if the results hold as well for youthful migrants. Secondly, Litwin and colleagues (2015) found that social network characteristics matter differently at different points in late life. This disparity might depend on the persons' frailty and health status which mostly determine if the social network surrounding them is freely chosen or needed but undesired. Researchers should be aware of age differences, especially when analyzing the social network characteristics contact frequency and geographical proximity.

Moreover, since single social network characteristics did not appear to have large effects, the composition of network characteristics should be taken into consideration for further research with regard to the present research question. "Network types" is a construct first coined in the gerontological context by Clare Wenger (1991) which combines characteristics of social networks, and has already been found to be associated with well-being (Litwin & Shiovitz-Ezra, 2011).

## **5.4 Conclusion**

In sum, the findings of the current study revealed that older migrants across Europe have lower quality of life, higher depression level and lower life satisfaction than their native counterparts. The association between migration status and subjective well-being in late life did not seem to be nuanced by the social network characteristics size, interaction or exchange. However, the migrants' lower well-being appeared to be buffered by being satisfied with their social networks. While the present research was able to offer additional

findings to the fascinating field of elderly immigrants, their subjective well-being and the social networks in which they are embedded, these inter-relationships should be addressed in future research for further clarification aimed at promoting the well-being of Europe's older population.

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## APPENDIX I

### CASP-12

Question text	Subscale
How often do you think your age prevents you from doing the things you would like to do?	Control
How often do you feel that what happens to you is out of your control?	Control
How often do you feel left out of things?	Control
How often do you think that you can do the things that you want to do?	Autonomy
How often do you think that family responsibilities prevent you from doing what you want to do?	Autonomy
How often do you think that shortage of money stops you from doing the things you want to do?	Autonomy
How often do you look forward to each day?	Pleasure
How often do you feel that your life has meaning?	Pleasure
How often, on balance, do you look back on your life with a sense of happiness?	Pleasure
How often do you feel full of energy these days?	Self-Realization
How often do you feel that life is full of opportunities?	Self-Realization
How often do you feel that the future looks good for you?	Self-Realization

## APPENDIX II

### EURO-D

Question text	Response options
In the last month, have you been sad or depressed?	Yes No
What are your hopes for the future?	Any hopes mentioned No hopes mentioned
In the last month, have you felt that you would rather be dead?	Any mention of suicidal feelings or wishing to be dead No such feelings
Do you tend to blame yourself or feel guilty about anything?	Obvious excessive guilt or self-blame No such feelings Mentions guilt or self-blame, but it is unclear if these constitute obvious or excessive guilt or self-blame
So, for what do you blame yourself?	Example(s) given constitute obvious excessive guilt or self-blame Example(s) do not constitute obvious excessive guilt or self-blame, or it remains unclear if these constitute obvious or excessive guilt or self-blame
Have you had trouble sleeping recently?	Trouble with sleep or recent change in pattern No trouble sleeping
In the last month, what is your interest in things?	Less interest than usual mentioned No mention of loss of interest Non-specific or uncodeable response
So, do you keep up your interests?	Yes No
Have you been irritable recently?	Yes No
What has your appetite been like?	Diminution in desire for food No diminution in desire for food Non-specific or uncodeable response
So, have you been eating more or less than usual?	Less More Neither more nor less
In the last month, have you had too little energy to do the things you wanted to do?	Yes No
How is your concentration? For example, can you concentrate on a television program, film or radio program?	Difficulty in concentrating on entertainment No such difficulty mentioned
Can you concentrate on something you read?	Difficulty in concentrating on reading

	No such difficulty mentioned
What have you enjoyed doing recently?	Fails to mention any enjoyable activity Mentions ANY enjoyment from activity
In the last month, have you cried at all?	Yes No