

# OSLOMET

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**THE ASSOCIATION BETWEEN SOCIOECONOMIC  
CONDITIONS AND QUALITY OF PARTNER RELATIONSHIP**

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Oslo 2020

**ABSTRACT**

**Background:** Low quality of relationship is the reason for poor mental health and well-being of any individual. Research has often linked socioeconomic conditions to quality of partner relationship. Partners are struggling together regarding socioeconomic conditions and many relationships face dissolution due to low income and education.

**Objective:** The study on the association between socioeconomic conditions and quality of partner relationship has never been studied for older age groups in Norway. This paper examines 1. The association between income and education on quality of partner relationship of younger and older age groups. 2. The effect of age, gender and type of relationship on the association between socioeconomic conditions and quality of relationship.

**Methods:** This study uses data from Norwegian Life Course, Ageing and Generation (NorLAG) (N=10032). A cross-sectional study is carried out using Pearson's correlation to examine the association of income and education with quality of partner relationship, respectively. A stepwise linear regression analysis is carried out to examine the moderating effect of age, gender, and type of relationship on quality of partner relationship.

**Results:** There is an association of income and education with quality of relationship of both young and older age groups. Gender moderates the effect of education on quality of relationship among younger age groups.

**Conclusion:** Results conclude that higher income is associated with low quality of relationship among both the age groups. Education is also associated with low quality of relationship among older age groups but not among younger. Gender is the only interaction that moderates the effect of education on quality of partner relationship

**Keywords:** Quality of partner relationship, income, education, socioeconomic condition

**Acknowledgement**

I would like to express my gratitude to my supervisor Ms. Marja Aartsen, for her constant guidance and supervision during my thesis period. She has provided me with the necessary information and materials for the implementation on this study. I would like to express my gratitude towards her for her valuable time and feedbacks in successful conduction of this qualitative study.

I am thankful towards Statistics Norway and Norwegian Social Research (NOVA) for providing me with the NorLAG data, despite of which my study would not have completed.

I wish to thank everyone who has directly or indirectly motivated me to complete this study. I would also like to extend my thanks to all my friends and family for their constant support and motivation for completing this thesis.

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## 1. INTRODUCTION

Partner relationship quality is one of the most important aspects of any individual's health and well-being (Burke & Weir, 1977; Whisman & Bruce, 1999). However, not all relationships can be qualified as a good quality of relationship and studies have shown that low quality of partner relations has substantial health consequences (Proulx, Helms, & Buehler, 2007). People with low quality of partner relationships may more frequently seek professional health as a low relationship quality leads to stress, depression (Mitchell, Cronkite, & Moos, 1983), mental health issues (Maisel, 2010), insecurities and dissolution of marriage (Kinnunen & Pulkkinen, 1998). It also affects the emotional well-being of an individual (Whitton & Kuryluk, 2012). There is evidence suggesting that an individual with low quality of relationship will have 30% higher chance of having a physical illness, mental illness, acute illness and less social activity than an individual with high quality of partner relationship (Kiecolt-Glaser et al., 1987).

Most partner relationship problems are due to low socioeconomic conditions such as low income, low education, unemployment, and scarce economic resources (Conger et al., 1990; Rennison, 2000). Partners often argue and have frequent conflicts regarding income and financial hardships (Halliday Hardie & Lucas, 2010). Previous studies on socioeconomic conditions are mostly conducted on the younger population (Clark-Nicolas & Gray-Little, 1991; Halliday Hardie & Lucas, 2010; Orbuch, Veroff, Hassan, & Horrocks, 2002). Study on the older population is scarce and there is limited study on socioeconomic conditions and the quality of partner relationships in Norway. Apart from that, the differences in quality of partner relationships among cohabitant and married, gender and age has not been studied so far. Therefore, this study aims to determine the effect of socioeconomic conditions on the quality of partner relationships among young (18-40) and older (41-81) age groups in Norway and the moderating effect of age, gender and type of relationship on these associations. This study investigates the following research question:

‘Is there an association between the quality of partner relationships and socioeconomic conditions among younger and older age groups and are these associations moderated by age, gender and type of relationship?’

Sub questions.

1. Is higher income associated with a higher quality of partner relationship?
2. Is higher education associated with a higher quality of partner relationship?

3. Is the association between income and quality of partner relationships moderated by gender, age, and type of relationship?
4. Is the association between education and quality of partner relationships moderated by gender, age, and type of relationship?

Following are the hypothesis for this study:

### **Principle hypothesis**

- The quality of relationships will be higher if the socioeconomic conditions are better.

It is believed that socioeconomically disadvantaged individuals will have low quality of relationships with their partner (Conger & Conger, 2002).

### **Secondary hypothesis**

- Higher income is associated with a higher quality of relationship.

Lack of proper income to look after the family, and provide food and basic needs causes economic hardship in the family which directly impacts the quality of partner relationships (Benson, Fox, DeMaris, & Van Wyk, 2003). Majority of studies presented results indicating that higher income would lead to a higher quality of partner relationship. Therefore, this study is also expected to get similar results.

- Higher education is associated with a higher quality of relationship.

High education provides a platform for better employment and income. It also boasts one's self-esteem and communication skills (Amato & Booth, 2009; Ross & Wu, 1995). This study is also likely to produce similar findings.

- The association of income and quality of partner relationship is different for gender, age type of relationship.
- The association of education and quality of partner relation is different for gender, age and type of relationship.

It is a quantitative study based on the second wave data of the Norwegian Life Course, Aging, and Generation (NorLAG). This article is written for the 'Journal of Marriage and Family'.

## **2. PREVIOUS STUDIES**

### **Quality of partner relationships**

Quality of relationship refers to the positive, negative, or neutral attitude of an individual towards their relationship. Some people are delighted while others are dissatisfied with their

relationship (Morry, Reich, & Kito, 2010). Social scientists have defined the quality of relationships using measures such as 'relationship stability,' 'relationship adjustments,' 'satisfaction,' 'happiness and integration' (Spanier, 1979). Relationship harmony, affection, intimacy, and commitment are other approaches to access the quality of relationships (Thompson & Spanier, 1983). According to Spanier and Lewis (1980), 'Quality of partner relationship is associated with good adjustment, adequate communication, a high level of marital happiness, integration, and a high degree of satisfaction with the relationship.' Robles et al. (2014) defined high quality of partner relationship as the satisfaction and positive behavior of a partner towards co-partner, while the low quality of partner relationship is the dissatisfaction, hostile behavior, and attitudes of partner towards their co-partner (Robles, Slatcher, Trombello, & McGinn, 2014). High quality of partner relationship is happiness, love, affection, sexual satisfaction, and the way partners agree with each other (Perry, 2016). Intimacy (Yan, Schoppe-Sullivan, & Feng, 2020), a balance between rewards and costs (Boertien & Härkönen, 2018), generosity (Dew & Bradford Wilcox, 2013) are other dimensions of the quality of partner relationships. Most of the definition presented above has common attributes such as happiness, satisfaction, and attitudes. We hereby define the high quality of relationship for this study as the relationship where partners think alike, are satisfied, understand, have less conflict, and respect each other. In contrast, the low quality of partner relationships being opposite of all the attributes mentioned above.

### **Socioeconomic conditions**

Social scientists have defined socioeconomic conditions in terms of social class, social stratification, or socioeconomic status. These terms are interchangeable though they have different interpretations (Galobardes, Lynch, & Smith, 2007). Critical indicators of socioeconomic conditions are education, income, occupation, and net wealth (Back & Lee, 2011; Demakakos, Nazroo, Breeze, & Marmot, 2008; Pickett & Pearl, 2001).

**Education:** Education is the indicator that determines knowledge-related resources (Galobardes et al., 2007). It is an essential indicator that reveals the transition from childhood to adolescence and adult. It presents the socioeconomic condition of the past (socioeconomic condition of the family) and frames one in the future (individual's self-socio-economic condition) (Lynch & Kaplan, 2000). Education influences other indicators, such as income and employment. Probability of getting better jobs and adequate income increases by gaining a higher level of education. Hence, it is the most crucial indicator of socioeconomic condition (Lynch & Kaplan,

2000). The benefit of using education as the indicator is that it accounts for all gender and can be obtained autonomously of age (Galobardes et al., 2007).

**Income:** Income directly measures material means (Galobardes et al., 2007; Lynch & Kaplan, 2000). Income is the source of accessibility to all kinds of basic needs like food, shelter, clothing, and health. High income in society develops self-confidence and participation in social activities leading to a better life. Unlike education, it changes on a short-term basis. A limitation of using income as an indicator is people may be hesitant to provide correct income information, and falsification of income may occur. It is a sensitive indicator of socioeconomic condition (Galobardes et al., 2007; Lynch & Kaplan, 2000; Nadal Sala, 2015).

### **Economic condition (Income) and quality of relationship**

'A Family Stress Model' by Conger et al. (1990) suggested that economic hardships and adversity influence marital interactions in a negative way that means low economic conditions result in lower marital quality (Conger et al., 1990; Conger, Rueter, & Elder Jr, 1999). Supporting the 'family stress model', Haliday and Lucas (2010) suggested an association between economic conditions and the quality of relationships among partners. Hardie et al.'s study on younger people who may be at higher risk of financial insecurities found that the economic hardship and insecurities led to more conflicts, dissolution of marriage, and physical violence. Prior study has found that economic problems arising from low income are a more important source of stress among couples than any other problem (Conger et al., 1999). Other studies found that couples argue over 'money' and 'finances' more than anything else and hence experience hostility, quarrels, disputes, and violence over money conflicts (Dew, 2007; Papp, Cummings, & Goeke-Morey, 2009). A US study found similar results for low annual income and quality of relationships (Cunradi, Caetano, & Schafer, 2002). Insufficient income to feed the family caused economic distress, which developed anxiety and stress on both partners, causing partner violence and stress among the partner relationship (Benson et al., 2003). A study using data from Norway and Sweden has found that respondents with higher income had 24% more chances of having a greater quality of relationships than those with lower income (Wiik, Bernhardt, & Noack, 2009).

### **Gender roles and quality of partner relationship**

A study has suggested a higher standard of living is associated with higher income, and men's ability to earn more has lessened the dissolution of relationships (Lehrer, 1988, 2008). Another research put forward the need for higher social class and income for a higher quality of partner



relationships in men. The study further suggested that with the increase in income and economic adequacy among low-status men, there was an increment in marital satisfaction and relationship quality in men's perspective (Clark-Nicolas & Gray-Little, 1991). Conger et al.'s (1990) 'Family Stress Model' also explains gender and income's impact on partner relationship quality. His theory suggests that economic hardships such as low income and unemployment decreased men's support towards women and negatively impacted the relationship's quality. Further, men's such behavior was associated with the inability to provide adequate resources to the spouse. Similarly, women were also found showing unfriendliness but primarily only because of such actions from men rather than because of economic strains (Conger et al., 1990).

### **Effect of age on quality of partner relationship**

Age has primarily not been accepted to modify partner relationship quality (Watson, Hubbard, & Wiese, 2000). However, few studies indicate the differences in perception of relationships among younger and older age groups (Laursen & Williams, 1997). Prior studies suggest that younger people are less attached to their partners and have less intimacy than the older people (Brendgen, Vitaro, Doyle, Markiewicz, & Bukowski, 2002; Zimmer-Gembeck & Petherick, 2006). Zimmer et al. (2006) found that older people were more satisfied with their relationship with their partners. When socioeconomic conditions were considered, Hardie and Lucas's (2010) study on 'Economic factors and relationship quality among young couples: cohabitation and marriage' has presented higher conflict and low quality of relationship among young couples due to economic factors. Young couples who are often at greater risk of financial insecurities and struggling over stable careers suffer from low-quality relationships (Halliday Hardie & Lucas, 2010).

### **Education and quality of the relationship**

Education is associated with the quality of relationships as reported by social scientists (Amato, Johnson, Booth, & Rogers, 2003). High education boosts communication skills, personal control, and higher income (Amato & Booth, 2009; Ross & Wu, 1995). Kenny and McLanahan (2006), in their study found that couples who had less education were having a violent relationship with their partners. They also found that partners with high socioeconomic conditions were more likely to have less violence and conflict in their relationship for both married and cohabiting partners (Kenney & McLanahan, 2006). Another research about marital adjustment also suggests similar findings. When both men and women were highly educated, partners were socially adjusting and satisfied with their co-partners and marriage (Singh, Thind,

& Jaswal, 2006). Malcoe et al. (2004) gave a strong proof of socioeconomic condition being responsible for deteriorating the partners' relationship. His study suggests that women with low-socioeconomic conditions and low education had 42.8% higher chances of having low quality of relationship (Malcoe, Duran, & Montgomery, 2004). Contradicting study about the association between education and quality of partner relation another study found little or no association between education and low quality of relationships (Brown, 2003, 2004).

### **Partner Status and quality of the relationship**

Partner relationship has undergone sociodemographic transformations from marriage to cohabitation. More people today are interested in cohabitation rather than marriage. Hence, marital rates have significantly decreased from previous years. Such changes still have effects on the quality of relationships (Robles et al., 2014). Another study suggests that cohabiting partners are usually enjoying their individualism rather than married partners and economic hardship might lower stress levels in cohabiting partners than in married partners (Blumstein & Schwartz, 1983). Contradicting this finding, Brines and Joyner (1999) have found that a decrease in the quality of relationship is more likely to happen among the cohabitants with a higher income than those with poor income. He has supported this finding through the 'principle of equality.' When the cohabitant plays by the rule of equality, they tend to share resources and income equally. The partner with high income can usually own the resources for themselves than their partner (Brines & Joyner, 1999).

## **3. METHODOLOGY**

### **3.1. Study Design**

This study uses data from the second wave of the Norwegian Life Course, Ageing, and Generation Study (NorLAG), a multidisciplinary longitudinal study commenced in 2001. NorLAG is planned to have five waves of data collection, of which three waves have been carried out so far. The first wave was collected in 2002-2003, which included people aged 40 years and older. The second wave was collected in 2007-2008, which included 18 years and over (Slagsvold et al., 2012). The third wave was collected in 2017.

For the first wave, total population sample of 8,298 was drawn from the population registers in Oslo and Akershus, Agder, Nord-Trøndelag, and Troms. Data were collected primarily by computer-assisted telephone interviews (CATI) followed by questionnaires sent through mails. The secondary data collection source was administrative register data. For the second wave, the

entire sample of the first wave, including those moved out to different municipalities, was contacted. Out of the total population sample from the first wave, 264 respondents were dead, and 25 were emigrated, meaning only 71.6% of the first wave population sample participated in the second wave. Thus, a total sample of 14,884, including 3774 participants from the first wave, was included in second wave data (Slagsvold et al., 2012).

### **3.2. Study Sample**

For the present study, respondents participating in second wave/LOGG who have a partner are selected. This includes the following groups: ‘unmarried-live together with cohabitant’, ‘married-living together with spouse/registered partner’, ‘widow/widower living together with cohabitant’, ‘divorced/separate living together with cohabitant’ and ‘unclear relationship status-living together with cohabitant/ spouse’, resulting in a study sample of 10032 respondents. Out of 10032, there are 5070 men and 4962 women respondents.

### **3.3. Variables**

#### **Dependent Variable**

##### **'Quality of partner relationship.'**

Agreeing to the definition of quality of partner relationship by Robles et al. (2014), I operationalized the quality of partner relationship with the scales measuring overall satisfaction, behavior, and attitude of a partner to their co-partner. The quality of partner relationships has been measured with a multidimensional indicator of the partner relationship from NorLAG data.

Following questions were used to compute the dependent variable ‘quality of partner relationship’:

- IF COHABITING PARTNER, SPOUSE OR REGISTERED PARTNER IN THE HOUSEHOLD, think of the relationship you have to your [cohabiting partner/spouse/registered partner]. On a scale from 0 to 10, where 0 means “strongly disagree” and 10 means “strongly agree”, how much do you agree with the following statements?
  - A. We agree on what is important in life.
  - B. We have frequent conflicts
  - C. (he/she) often criticizes me
  - D. Understands me when I have problems

- IF COHABITING PARTNER, SPOUSE OR REGISTERED PARTNER IN THE HOUSEHOLD On a scale from 0 to 10, where 0 means “Not satisfied at all” and 10 means “completely satisfied”, how satisfied are you with your relationship to your [cohabiting partner/spouse/registered partner]?

The values are recorded for the variables ‘We agree in what is important in life’, ‘Understands me when I have problems’ and ‘how satisfied are you with your relationship to your [cohabiting partner/spouse/registered partner]’ to have the same directions for each variable. A new variable called ‘Quality of partner relationship’ is computed with the mean of all the variables mentioned above. ‘Quality of partner relationship’ has values from 0 to 10 where 0 is high quality, and 10 is the low quality of relationships.

Of all respondents in the study sample, 29 are missing for ‘quality of relationship’. Since the number of missing answers is less than 0.5%, it is ignored. Overall, Cronbach's Alpha of quality of partner relationship, after recoding the variable, has a value of 0.789. Hence, the scale ‘quality of relationship’ has good reliability. Further, the mean value for newly formed scale is 1.88, range is 0 to 10, the standard deviation is 1.39, skewness is 0,946, which is between 2 and -2, and kurtosis is 1.141, which is less than 7. It means that the constructed variable is normally distributed.

### **Independent Variables**

#### **‘Education Level’:**

Education level is an ordinal variable with values 0=‘no education and preschool education’, 1=‘primary school education’, 2=‘secondary school education’, 3=‘high school, undergraduate school’, 4=‘high school closing education’, 5=‘extension to high school’, 6=‘University and college education lower level’, 7=‘University and college education higher level’ and 8=‘researcher’. Since the education level has 9 values and we have a large sample size, it is treated as an interval variable (Tabachnik & Fidel, 1996). Out of 10032, answers from 44 respondents are missing. The missing number is less than 0.5%; hence it is ignored.

#### **‘Income’:**

Income has values ranging from -1370000 to 6530000 NOK per year. The values smaller than 5000 are recoded as missing as these are not likely to be an adequate description of the level of income. Accounting these values in this study as the real value would shift the mean of the total value from the actual mean providing wrong information of the whole population's mean. Hence, they are excluded and the remaining values are recorded as deciles where the

lowest to 100000 is Q1, 100001 to 140000 is Q2, 140001 to 180000 is Q3, 180001 to 220000 is Q4, 220001 to 260000 is Q5, 260001 to 300000 is Q6, 300001 to 340000 is Q7, 340001 to 380000 is Q8, 380001 to 420000 is Q9 and 420001 to Highest is Q10. Deciles are made instead of using real values because the real values provided highly peaked and skewed data that did not meet normality criteria. After the deciles are made, this variable have a normal distribution. In this variable, there are no missing respondents hence, the total respondents are 10032.

### **Moderators:**

**‘Age’:** Age is an interval variable measured in years and has values 18-81 years.

**‘Gender’:** Gender is a categorical variable with categories of male and female as values. We dichotomized it into 0=male and 1=female

**‘Type of relationship’:** Type of relationship is a reconstructed variable where values for ‘type of relationship’ is classified into two categories: 1=cohabitant and 2= married. Cohabitant consists of values such as : ‘unmarried-live together with cohabitant’, ‘widow/widower living together with cohabitant’, ‘divorced/separate living together with cohabitant’ and ‘unclear relationship status- living together with cohabitant/ spouse’ and married consists of ‘married-living together with spouse/registered partner’. Since 'type of relationship' is constructed as a categorical variable, we again dichotomized it into 0=cohabitant and 1=married.

## **4. STATISTICAL ANALYSIS**

SPSS program is used for the analysis of data in this paper. Descriptive and univariate analysis of all the study variables was conducted first. Pearson’s correlation was carried out to conduct the bivariate correlation as the dependent variable (quality of relationship), and both independent variables (income and education) are interval variables.

Stepwise regression analysis was carried out to analyze variables used in the association between socioeconomic conditions and relationship quality. Association of income with quality of partner relationship is presented in model. Education is introduced in model 2. Model 3 is controlled for age, gender, and type of relationship. In model 4 interaction terms age, gender, and type of relationship are included. Results were expressed by numbers, percentages, standard deviations, ratios, and means. The two-tailed p-value represented the significance of the statistical tests.

## **5. FINDINGS**

Pearson’s correlation analysis of income with quality of relationship resulted in a significant relationship between income and quality of partner relationships in all the samples as  $p < 0.01$

for the entire sample and older sample whereas  $p < 0.05$  for the younger sample. Similarly, for education,  $p < 0.01$  for the entire sample and older sample hence the association is significant. But the association is not significant for the younger population as  $p > 0.05$ . For income and education,  $r < 0.19$  for all samples, hence, the association's strength is low. However, a positive sign on 'r' suggests a positive association of income with the quality of partner relationships in all samples, that is, higher the income lower the quality of partner relationship. Similarly, negative 'r' suggests a negative association between education and the quality of partner relationships in the younger sample, that is, higher the education higher is the quality of partner relationship.

Multiple linear regression analysis for the entire sample, younger and older sample shows that income is significantly associated with quality of partner relationship for all samples ( $p \leq 0.001$  for entire and older sample and  $p < 0.05$  for younger sample). Model 1 for 'entire sample' has 1.69 mean value for quality of partner relationship (constant=1.69) when income is equal to 0. B for income is .035, which means that with 1 unit increase in income, the value of quality of partner relationship increases by .035. Model 2 has 1.65 mean value of quality of partner relationship when income and education level is at 0. Since B is .032 and .009 for income and education, with 1 unit increase in each of income and education level, the value for the quality of relationship increases by .032 and .009, respectively. The P-value for education level is not significant ( $p = .171$ ). The standard coefficient effect ( $\beta$ ) is higher for income (.15) than education level (.015), which indicates that income has a higher impact on the quality of relationships than education.  $R^2$  is .004 for both models 1 and 2. This indicates that 0.4% of variance in quality of relationship is explained by income in both model 1 and 2 and education level in model 2 has either little or no additional effect in model 2. In model 3, controlling for age, gender, and type of relationship, the regression coefficient decrease for both income and education level, but the value is still significant for income ( $p \leq 0.001$ ) but not significant for education ( $p > 0.05$ ). Also, the effect of age ( $p \leq 0.01$ ), gender ( $p < 0.05$ ) and type of relationship ( $p < 0.01$ ) is significantly different for zero. Negative signs on age, gender and type of relationship indicate that with an increase in 1 unit for the respective variable, there is a decrease equal to the value of the B in the score on the quality of relationships scale. 1.2% of the variation in quality of partner relationships for model 3 is explained when age, gender, and type of relationship is added. Lastly, adding the moderators in model 4, shows that B and  $\beta$  increased for income and education level. Since income has a higher ' $\beta$ ' than education, income has a

higher impact on the quality of partner relationships. P-value is .013 for income hence, there is a significant association between income and quality of partner relationship. The association of quality of partner relationship with education is not significant. For model 4, the mean for the partner relationship's quality is 2.144 when income and education are moderated. 1.3% of the variation in quality of relationships is explained by model 4 when moderators are added. Education\*gender is the only significant interaction in model 4. Hence, gender moderates the association between education and quality of partner relationships.

Tables 5 and 6 show that the association of income with quality of partner relationship is higher for the older sample than younger as 'B' is higher for older than the younger sample in models 1,2 and 3. Since  $p \leq 0.001$  and  $p \leq 0.05$  in older and younger samples, the association between income and quality of partner relationship is significant.  $R^2$  for younger population in Model 1 shows that 0.2% of the variance in quality of partner relationship is explained by income. Similarly, for older samples, 0.5% of variance in quality of partner relationship is explained by income. In model 2, socioeconomic condition accounts for 0.2% and 0.6% of variance in quality of partner relationship in younger and older sample respectively. For the younger sample, with the increase in 1 unit of education level, there is a decrease in the value of quality of partner relationship. There is an increase in the value of partner relationship for 1 unit increase in education for older sample. But  $p > 0.05$  for both the samples, hence there is no significant association between education and partner relationship quality. When controlled for age, gender, and type of relationship in model 3, the association is not significant for income and education with quality of partner relationship for both the samples. Model 3 explains for 1.5% and 1.4% of the variance in quality of partner relationship for younger and older sample respectively. Age, gender, and type of relationship have a significant association for the younger sample, whereas only age has a significant association with the older sample's quality of partner relationships.

Comparing model 4, when socioeconomic condition is moderated by age, gender, and type of relationship, none of the variables moderates the association of socioeconomic conditions with the quality of partner relationships for older samples. In contrast, only gender interacts significantly with education for younger sample. Model 4 explains for 2.0% and 1.5% of the variance in quality of partner relationship for younger and older samples, respectively.

## 6. DISCUSSIONS

The results of this analysis are mixed regarding previous studies. Pearson's correlations found a positive association of income and the quality of partner relationship for all the samples. Education level is not significant for younger samples but there is a significant positive association of education level with quality of partner relationship for entire and older sample. Regression analysis presents similar results. Interaction between education and gender is the only significant interaction which moderates the quality of partner relationships.

Our Primary hypothesis is the quality of the partner relationship will be higher if the socioeconomic conditions are better. We reject this hypothesis as we found that high income and education resulted in a lower quality of relationship. Regression analysis however, suggested that the association of education level is not significant. Our result contrasts with Jalovaara's (2013) results about a lower level of education and low income being associated with low quality of relationships. The result supports Jorgensen (1979)'s findings of higher socioeconomic conditions are not necessarily the reasons for the higher quality of relationship. Our secondary hypothesis is higher income is associated with higher quality of relationship. We reject this hypothesis as we found that the quality of relationship is low for higher income among both younger and older samples. The findings are in contrast to previous studies suggesting a low income resulting in low marital satisfaction and low quality of relationships (Spanier, 1976).

Our next hypothesis is higher education is associated with higher quality of relationship. We reject this hypothesis as we found higher the education level, lower was the quality of partner relationship. The findings contrasted with Amato and Booth (2009).

Our final hypothesis is the association of income and education with quality of partner relationship is moderated by gender, age, and type of relationship. Our findings show that the association of education with quality of partner relationship is moderated by gender. It is found that when having a higher level of education, women experiences higher quality of partner relationship in all the population samples except older. Prior study suggested that the effect of income effects the quality of partner relationship differently for married and cohabitant (Sassler, 2004). Sassler's study found that low quality of relationship was found among cohabitant with low quality of relationship. We did not find interaction effect of income and type of relationship on quality of partner relationship.

Hence, this study suggests an association between the quality of partner relationships and socioeconomic conditions if income and education is studied separately. This study supports



Conger and Conger (2002)'s findings about quality of partner relationships may be influenced by socioeconomic conditions. Though, when income and education is studied together, income is more associated with quality of relationship among younger and older age groups. The association is not moderated by any of the presented moderators for older age groups but the association between education and quality of partner relationship is moderated by gender for younger age groups.

Previous research found that partner relationship quality decreased with increasing age (Knoke, Burau, & Roehrl, 2010). In contrast to this finding, our results show that increasing age instead leads to a high quality of relationships for the entire population and older population. Though, this finding is not correct in case of younger people. Among younger people, as age increases quality of relationship decreases. Coming to gender, women reported a higher quality of relationship than men in all the samples. It means that comparatively, women are more satisfied, happy and report less conflict than men. Considering the type of relationship (married or cohabitation), our study found that married participants reported higher quality of relationships than the cohabitant counterparts for all the samples. This result is supported by previous findings (Brown & Booth, 1996). When we controlled for age, gender, and type of relationship, we found that socioeconomic conditions still negatively correlated with quality of relationship for entire sample and older sample. But it had a positive effect on younger samples. Younger samples reported a high quality of relationship when age, gender and type of relationship were controlled.

This study's limitations is we could not include other aspect that would moderate the quality of relationship, for example, duration of cohabitation or marriage, total family income, number of children, sexual satisfaction with the partner, drinking problems, work stress, family relations and more as it was beyond the scope of our research. Another limitation of this study is the involvement of only one of the partners. This study is based on the information provided by one of the partners hence, it may be biased from the perspective of another partner. Involving both partners might change the result. Lastly, this paper is a cross-sectional study hence, we got partial information about the participants. A longitudinal study would facilitate more understanding of the reasons and effects that moderate socioeconomic conditions on quality of partner relationship.

This analysis of the Norwegian population has confused our expectations about the association between socioeconomic conditions and partner relationship quality. We found a positive

association between income and education with the quality of relationships among the entire, younger, and older samples. Norway itself is a country with better social welfare programs (Kuhnle, 2000) hence, a comparison between other countries with similar social welfare strategies is necessary for the future to have more reliability on the association between socioeconomic conditions and quality of partner relationship.

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**ABSTRACT**

**Background:** Low quality of relationship is the reason for poor mental health and well-being of any individual. Research has often linked socioeconomic conditions to quality of partner relationship. Partners are struggling together regarding socioeconomic conditions and many relationships face dissolution due to low income and education.

**Objective:** The study on the association between socioeconomic conditions and quality of partner relationship has never been studied for older age groups in Norway. This paper examines 1. The association between income and education on quality of partner relationship of younger and older age groups. 2. The effect of age, gender and type of relationship on the association between socioeconomic conditions and quality of relationship.

**Methods:** This study uses data from Norwegian Life Course, Ageing and Generation (NorLAG) (N=10032). A cross-sectional study is carried out using Pearson's correlation to examine the association of income and education with quality of partner relationship, respectively. A stepwise linear regression analysis is carried out to examine the moderating effect of age, gender, and type of relationship on quality of partner relationship.

**Results:** There is an association of income and education with quality of relationship of both young and older age groups. Gender moderates the effect of education on quality of relationship among younger age groups.

**Conclusion:** Results conclude that higher income is associated with low quality of relationship among both the age groups. Education is also associated with low quality of relationship among older age groups but not among younger. Gender is the only interaction that moderates the effect of education on quality of partner relationship

**Keywords:** Quality of partner relationship, income, education, socioeconomic condition



## **1. INTRODUCTION**

Partner relationship is one of the most important social relations and, high quality of partner relationship is a crucial element for the quality of life. People with a partner and a high quality of partner relationship lives a healthy life both physically and mentally (Amato & Booth, 2009). High quality of partner relationship provides emotional and psychological support thereby, reducing mental stress (Gove, Hughes, & Style, 1983), depressions (Mitchell, Cronkite, & Moos, 1983) and, chronic health problems (Proulx, Helms, & Buehler, 2007; Wyke & Ford, 1992). However, the partners' lower socioeconomic conditions have led to a low quality of relationship thus, causing stress in relationships, dissolution of marriage (Kinnunen & Pulkkinen, 1998), and divorce (Jalovaara, 2003). Lower socioeconomic conditions are also the cause of intimate partner violence (Reichel, 2017). There are various studies about the effect of socioeconomic conditions on the quality of relationships of younger people (Clark-Nicolas & Gray-Little, 1991; Halliday Hardie & Lucas, 2010; Orbuch, Veroff, Hassan, & Horrocks, 2002) but the study on older people is scarce. In this study, we explore how the socioeconomic conditions are associated with the quality of partner relationships among Norwegians and the association between socioeconomic conditions and the quality of partner relationships modified by age, gender and type of relationship.

Norway is an interesting context for us as it is a country with a social-democratic welfare state. Every individual in the country is benefitted from universal health coverages (Esping-Andersen, 1990), unemployment benefits, old-age pensions and, social support (Kuhnle, 2000). With the increment in better socioeconomic conditions within the country, it is difficult to predict whether the socioeconomic condition is responsible for the quality of relationship in Norway. Apart from socioeconomic conditions, the increasing elderly population than younger in Norway (Michael & Astri, 2020) has also interested us in studying the association between socioeconomic condition and quality of relationship in two age groups: 18-40 (younger population) and 41-81 (older population).

## **2. PREVIOUS RESEARCH**

The prior study suggests that older people show greater positive behavior towards their partner than younger people (Zimmer-Gembeck & Ducat, 2010). Contradicting this finding, a study based on individuals with the median age of 39 years found that the quality of relationship decreases with increasing age (Knoke, Burau, & Roehrl, 2010). The previous study on the

quality of partner relationship among older people is very scarce. Most of the studies mentioned in this section include young people.

### **Socioeconomic conditions and quality of partner relationship**

Previous studies suggest that higher socioeconomic conditions minimize the risk of a partner relationship (Conger, Conger, & Martin, 2010; Karney & Bradbury, 2005). On the other hand, lower socioeconomic conditions mainly, financial turmoil, causes stress among the couples and hence increase conflicts, insecurity, and the disbanding of the relationship of younger partners (Hoffman & Duncan, 1995; Ono, 1998). A Finnish study on ‘Socioeconomic resources and the dissolution of cohabitations and marriages’ shows that lower levels of education, unemployment and, low income were associated with low quality of relationships among younger partners (Jalovaara, 2013). Halliday Hardie and Lucas’s (2010) study in the context of the United States found that younger people with financial problems, economic hardships were having more conflicts, physical violence and, dissolution of marriage than those with financial stability (Halliday Hardie & Lucas, 2010). Higher rates of marital problems, unhappiness in marital relationship and higher instability due to lower income, lower education, and occupational prestige were presented in another study (Amato, Booth, Johnson, Johnson, & Rogers, 2007). The study of the family stress model by Conger et al. (1990) suggests a strong link between the economic conditions and quality of relationships. Economic hardships caused stress among couples, leading to lower quality of partner relationships (Conger & Conger, 2002; Conger et al., 1990; Conger, Rueter, & Elder Jr, 1999). A prior study found that couples argue mostly over money than anything else. The argument over money is usually intense and leads to conflict (Papp, Cummings, & Goeke-Morey, 2009). The results from another study indicate that household income has effects on partner violence. The partner with low household income is found to be subjected to partner violence (Cunradi, Caetano, & Schafer, 2002).

Further, education is found to be associated with marital satisfaction. Higher level of education was related to higher marital satisfaction (Dakin & Wampler, 2008). Education is observed to be related to individual and family well-being. A higher level of education is associated with better opportunities of employment and income. Thus, higher education is related to better quality of relationships (Amato & Booth, 2009; Ross & Wu, 1995) Another study on cohabiting and married partners found that low education, lower incomes, and occupational prestige were the reason for higher male violence (McLanahan, 2009). A study on ‘Socioeconomic rewards and perceived marital quality: a re-examination’ however, presented a contradicting result about

the effects of socioeconomic conditions. The study did not support the idea that higher socioeconomic conditions lead to a higher quality of relationship (Jorgensen, 1979).

### **Gender and quality of relationship**

Apart from socioeconomic conditions, gender difference plays a vital role in the quality of partner relationships. A prior study suggests evidence supporting the idea that marital conflict arises due to differences in men' and women' perception of money (Zagorsky, 2003). Husband's marital satisfaction is often linked with financial strength and how they treat their wives relative to financial success (Aniol & Synder, 1997; Conger et al., 1990). Contradicting these findings a longitudinal study presented the results supporting women being more concerned about money management problems and thereby resulting in conflicts and dissatisfaction in relationships (Amato & Rogers, 1997). Hoffman and Duncan (1995) presented the importance of men's income in the quality of relationships. Low quality of relationships was visible among the couples where men earned less income (Hoffman & Duncan, 1995). A Finnish study explained that the relationships where both the partners have the lowest educational level, had a positive attitude towards the quality of partner relationships (Jalovaara, 2003). In support of this argument, another study suggests that socioeconomic homogamy (mainly education) among both genders increases the quality of partner relationships (Mäenpää & Jalovaara, 2014). High quality of partner relationships are associated with higher income of men whereas higher income of women partners in respective of men was associated with low quality of relationship (Jalovaara, 2003).

### **Type of relationship and quality of relationship**

Norway is a country with an increasing number of cohabitations. More than 90 percent of Norway's first partnership is reported as a cohabitant partnership (Wiik, 2009). Cohabiting partners are considered similar to married partners and have similar rights and obligations, social securities and taxations (Noack, 2001). However, the study suggests that the two-relationship type differs in some aspects. Cohabitants are usually 'individualistic' in nature and hence put self needs before partner's (Brines & Joyner, 1999). Also, most of the cohabitation occurs out of financial needs therefore, low economic conditions would lead to a low quality of relationship among cohabitants (Sassler, 2004).

On the other hand, married individuals have a 'joint resource management', which helps them cope well during low economic situations (Brines & Joyner, 1999). Prior studies suggest cohabitators have lower relationship quality than married counterparts (Brown & Booth, 1996).

Halliday and Lucas (2010) contradict the findings and suggest that there is no difference in the effect of socioeconomic conditions on married or cohabitants. Economic hardships are the reasons for conflicts among both married and cohabitant partners (Halliday Hardie & Lucas, 2010)

### **3. The Current Study**

This study aims to examine how socioeconomic factors are associated with the quality of partner relationships in Norway. This study investigates the effect of interaction of age, gender, and type of relationship with income and education on the quality of partner relationships. Studies have found that partners with high quality of relationship have better mental health and well-being (Gove et al., 1983) and if the socioeconomic condition is responsible for shaping the quality of partner relationships, it is important to conduct further study. We included both younger and older age groups for this study to compare the association between socioeconomic and quality of relationship among the two age groups.

We used cross-sectional data for the study. Cross-sectional data helped us compare the results among the younger and older age groups within the same timeframe. It also helped us to assess the mean association between socioeconomic conditions and the quality of partner relationships. Cross-sectional analysis is important for this study because it explains which groups are at higher risk of facing a low quality of relationships.

This study addresses the main research question: Is there an association between the quality of partner relationships? Are these associations moderated by age, gender, and type of relationship? We hypothesized that higher socioeconomic conditions would lead to high quality of partner relationship, and the associations are moderated by age, gender, and type of relationship.

### **4. METHODS AND MATERIALS**

NorLAG, a multidisciplinary longitudinal study commenced by Norwegian Social Research (NOVA) was used for this study. Primary data were collected through computer assisted telephone interviews (CATI) followed by questionnaires sent through mails. Secondary data were collected through administrative data such as Population register, Tax and income register, National database on education, Birth register and Statistics Norway's events data base.

NorLAG comprises validated data on sociological and psychological aspects and facilitates the analysis of life events, educational level, gender, and age (Slagsvold et al., 2012).

This study is based on the data from the second wave or the LOGG data of the Norwegian Life Course, Ageing and Generation Study (NorLAG). Second wave data were collected in 2007-2008 and comprised of 14884 participants including 3774 participants from the first wave (Slagsvold et al., 2012). The article focuses on the participants who live with their partner hence, we restrict our sample to 10032 participants aged 18-40 and 41-81 years. The population sample consists of 5070 men and 4962 women who are living with partner.

### **Dependent Variable**

**Quality of partner relationship:** Quality of partner relationship is defined by the level of satisfaction, adjustment, positivity and the level of agreement among partners (Perry, 2016; Robles, Slatcher, Trombello, & McGinn, 2014; Spanier, 1979). Keeping in mind the definition presented above, I operationalized the quality of relationships with the scales measuring overall satisfaction, behavior, and attitude of the partner to their co-partner. Following questions were adopted from NorLAG data to compute a new variable called ‘quality of partner relationship’:

- IF COHABITING PARTNER, SPOUSE OR REGISTERED PARTNER IN THE HOUSEHOLD, think of the relationship you have to your [cohabiting partner/spouse/registered partner]. On a scale from 0 to 10, where 0 means “strongly disagree” and 10 means “strongly agree”, how much do you agree with the following statements?
  - E. We agree in what is important in life.
  - F. We have frequent conflicts
  - G. (he/she) often criticizes me
  - H. Understands me when I have problems
- IF COHABITING PARTNER, SPOUSE OR REGISTERED PARTNER IN THE HOUSEHOLD On a scale from 0 to 10, where 0 means “Not satisfied at all” and 10 means “completely satisfied”, how satisfied are you with your relationship to your [cohabiting partner/spouse/registered partner]?

Values for the variables such as ‘We agree in what is important in life’, ‘Understands me when I have problems’ and ‘how satisfied are you with your relationship to your [cohabiting partner/spouse/registered partner]’ were recoded to have the same directions of all the variables used. ‘Quality of partner relationship’ has now the values 0 to 10 where 0 is high quality and

10 is a low quality of relationship. Cronbach's Alpha after recoding is 0.789 hence, it has good reliability. The skewness is 0,946, which is between 2 and -2, and kurtosis is 1.141 which is less than 7. It means that the constructed variable is normally distributed.

### **Independent variable**

The key indicators of socioeconomic conditions are income, education, occupation, and net wealth (Back & Lee, 2011; Demakakos, Nazroo, Breeze, & Marmot, 2008; Pickett & Pearl, 2001). For this study, we use income and education as the indicator of socioeconomic condition.

**Income:** Income is an interval variable having values from -1370000 to 6530000 NOK per year. Since the real values were highly peaked and skewed, the values are recoded into deciles where lowest to 100000 is Q1, 100001 to 140000 is Q2, 140001 to 180000 is Q3, 180001 to 220000 is Q4, 220001 to 260000 is Q5, 260001 to 300000 is Q6, 300001 to 340000 is Q7, 340001 to 380000 is Q8, 380001 to 420000 is Q9 and 420001 to Highest is Q10. A normally distributed variable with skewness 0.153 and kurtosis -0.706 was formed after recoding. The assumption is higher the income higher would be the quality of partner relationships.

**Education:** Education has 9 values: 0= 'no education and preschool education', 1='primary school education', 2='secondary school education', 3='high school, undergraduate school', 4='high school closing education', 5='extension to high school', 6='University and college education lower level', 7='University and college education higher level' and 8='researcher'. The skewness is 0.85, kurtosis is -1.235 hence, the variable is normally distributed. The assumption here is higher the value of education, the higher would be the quality of partner relationship.

### **Moderators:**

Age, Type of partner status and gender are the moderators that moderates the effect of income and education on the quality of partner relationship. Age is a scaled variable with values 18-81 years. Type of partner relations is also a categorical variable with values 'unmarried', 'married', 'widow', 'divorced', 'separated', 'registered partner', 'divorced partner', 'surviving partner'. Type of relationship is recoded into a different variable with two categories cohabitant and married. Gender is also a categorical variable with categories of male and female. Since both gender and type of relationship have two values, it is dichotomized where the values for type of relation is 0=cohabitant and 1=married. Similarly, for gender, 0=male and 1=female.

### **Analytical Strategy**

We used Pearson’s correlation tests to analyze the correlation between the ‘income and quality of partner relationship’ and education and ‘quality of partner relationship’ for both the age groups. We later computed a stepwise multiple regression analysis to check if age, gender, and type of partner relationship moderates the effect of socioeconomic conditions on quality of partner relationship.

## 5. RESULTS

Descriptive statistics of all the variables used in this study (N= 10032 for the entire sample, N=3474 for the younger sample and N= 6558 for the older sample) is presented in table 1. There are missing participants who answered questions regarding the quality of partner relationships and education level. Since the missing values are less than 0.5% in both the variables, we ignored missing values. The mean value for the quality of partner relationship is 1.89 for the entire sample which means that more participants agreed they have a high quality of partner relationship. Table 1 shows that both the younger and older participants also agreed on having a high quality of partner relationship. The entire sample’s average income lies at 5.58 which is closer to the sixth value of the income variable. Hence, most of the participants in the entire population earned around 260001 to 300000 NOK per year. Similar results are found when we divided the sample into two age groups. However, younger participants earned slightly more than older.

Regarding the education level, more participant has higher education. Younger participants are seen to have more education level than older. The mean age for the entire sample is 48.31, and there are more male participants. There is an average of 33.02 years of younger participants and 56.41 years of older participants in the sample. There are more female participants in younger sample whereas more male participants in older sample. Married participants report majority in all the samples.

Table 1. Descriptive statistics of all the variables involved in the study

Variables	Entire sample					Younger sample					Older sample				
	N	mean	mode	SD	Range	N	Mean	mode	SD	Range	N	mean	mode	SD	Range
Quality of Partner relationship	10003	1.89	-	1.39	0-10	3471	2.00	-	1.36	0-10	6532	1.83	-	1.40	0-10
Income	10032	5.58	-	2.51	1-10	3474	5.68	-	2.42	1-10	6558	5.52	-	2.56	1-10

Education Level	9988	4.37	-	1.66	0-8	3448	4.81	-	1.58	0-8	6540	4.14	-	1.66	0-8
Age	10032	48.31	-	14.18	18-81	3474	33.02	-	5.19	18-40	6558	56.41	-	10.19	41-81
Gender	10032	0.49	0	0.50	0-1	3474	0.544	1	0.50	0-1	6558	0.468	0	0.50	0-1
Type of relationship	10032	0.75	1	0.43	0-1	3474	0.52	1	0.50	0-1	6558	0.87	1	0.33	0-1

Tables 2 and 3 presents Pearson’s correlation. Table 2 shows that income and quality of partner relationship have a significant relationship in all the samples as p-values are <0.01 for the entire sample and older sample and p-value is <0.05 for the younger sample. However, the strength of the association is very low in all the samples as  $r < 0.19$ . The positive sign on Pearson’s r suggests a positive relationship between the quality of partner relationships and income.

Table 2. Pearson’s Correlation between quality of partner relationship and income

	Entire sample		Younger Sample		Older sample	
Quality of partner relationship	Quality of partner relationship	Income	Quality of partner relationship	Income	Quality of partner relationship	Income
Quality of partner relationship	1	0.062**	1	0.037*	1	0.072**
Income	0.062**	1	0.037*	1	0.072**	1

Note. N= 10032. Significance levels: \* $p < 0.05$ ; \*\* $p < 0.01$ ; \*\*\* $p < 0.001$ .

Table 3 shows that education and quality of partner relationship have a significant relationship in the entire sample and older sample as p-values are <0.01. The relation of quality of partner relationship and education is not significantly associated for the younger sample. The strength of the association is very low in all samples as  $r < 0.19$ . The positive sign on Pearson’s r suggests a positive relationship between quality of partner relationship and income in the entire sample and older sample. Negative sign on ‘r’ for the younger sample suggests a negative relationship between quality of partner relationship and education.



Table 3. Pearson’s correlation between quality of relationship and education level

	Entire Sample		Younger Sample		Older Sample	
	Quality of partner relationship	Education	Quality of partner relationship	Education	Quality of partner relationship	Education
Quality of partner relationship	1	0.036**	1	-0.017	1	0.045**
Education	0.036**	1	-0.017	1	0.045**	1

Note.  $N = 10032$ . Significance levels: \* $p < 0.05$ ; \*\* $p < 0.01$ ; \*\*\* $p < 0.001$ .

Tables 4, 5 and 6 present the results from multiple linear regression analysis for the entire sample, younger sample, and older sample, respectively. Table 4, shows that income is significantly associated with the quality of partner relationships ( $p \leq 0.001$ ). Constant on model 1 is 1.69, which means the mean value of the quality of partner relationships is 1.69 when income is equal to 0. B for income is .035 which means that with 1 unit increase in income, the quality of partner relationship increases by .035. In model 2, considering both (socioeconomic conditions) income and education level, the constant value is 1.65. This means that the mean value of quality of partner relationship 1.65 when income and education level is at 0. Since B is .032 and .009 for income and education, with 1 unit increase in each income and education level, the value for quality of relationship increases by .032 and .009 respectively. Since the P-value for education level is not significant ( $p\text{-value} = .171$ ) it cannot be generalized to the population. The standard coefficient effect ( $\beta$ ) is higher for income (.15) than education level (.015), which indicates that income has higher impact on the quality of relationships than education. The value for  $R^2$  is .004 for both models 1 and 2. This indicates that 0.4% variance in the quality of partner relationships is explained by income in both model and education has little or no additional effect. In model 3, controlling for age, gender, and type of relationship, the regression coefficients decrease for both income and education level. However, the value is still significant for income ( $p \leq 0.001$ ), but not significant for education. Also, the effect of age ( $p = 0.00$ ), gender ( $p < 0.05$ ) and type of relationship ( $p < 0.01$ ) is significantly different from zero. It means that there is an association of income, age, gender and type of relationship with the quality of partner relationships. Negative signs on age, gender, and type of relationship indicates that with an increase in 1 unit for the respective variables, there is a decrease equal to the value of the B in the score on the quality of partner relationship scale. The value of  $R^2$  is 0.12 for model three which means that 1.2% of the variation in the quality of partner relationships is

explained by model 3. Lastly, adding moderators to model 4, the value for B and  $\beta$  increased for income and education level. Since income has the higher  $\beta$  than education, income has higher impact on quality of partner relationship. P-value is .013, which means there is a significant association between income and the quality of partner relationships. The association of quality of partner relationship with education is not significant. When moderators are added to model 4, the constant value is decreased from model 3. Mean for quality of partner relationship is 2.144 when income and education are moderated by age, gender, and type of relationship.  $R^2$  in model 4 is 0.13, which shows that 1.3% of the variation in the quality of relationships is explained by model 4. The negative B for the interaction of income and age indicates the decrease in the value of quality of partner relationships. Hence, income\*age would result in high quality of relationship. But, since the p-value is .163, it is not significant. Similarly, the positive value on income\*gender shows there is a positive association with quality of relationships. P-value here is again greater than 0.05 hence, it is not significant. Education\*gender is the only significant interaction. It means that the quality of relationships is high if the level of education is high for women.

Table 4. Linear regression analysis for entire sample (N=10032)

	Model 1				Model 2				Model 3				Model 4			
	B	SE	$\beta$	p	B	SE	$\beta$	p	B	SE	$\beta$	p	B	SE	$\beta$	p
Income	.035	.006	.064	.000	.032	.006	.058	.000	.025	.007	.046	.000	.057	.023	.102	.013
Education Level					.012	.009	.015	.171	.003	.009	.003	.770	-.023	.035	-	.508
Age									-.007	.001	-.069	.000	-.008	.003	-	.010
Gender									-.069	.031	-.025	.026	.175	.089	.063	.050
Type of Relationship									-.099	.036	-.031	.006	-.108	.120	-	.366
Income*Age													-.001	.000	-	.163
Income*gender													.004	.013	.008	.768
Income*type of relationship													-.002	.016	-	.913
Education*Age													.001	.001	.075	.119
Education*gender													-.061	.018	-	.001
Education*type Of relationship													.004	.022	.006	.866
Constant	1.69			.000	1.65			.000	2.17			.000	2.144			.000
$R^2$	.004				.004				.012				.013			

Note: B=unstandardized B  $\beta$ =standardized coefficients Beta  
SE= coefficient standard error

Table 5 and 6 suggest that the association of income with quality of partner relationship is higher for older sample than younger as B is higher for older than younger sample in model 1, 2 and 3. There is a positive association between income and quality of partner relationship in model 1 for both samples. Since the p-value is 0.000 and .022 in the older and younger samples, the association between income is significant.  $R^2$  for the younger sample in Model 1 is .002, which means that 0.2% of the variance in quality of partner relationship is explained by income. Similarly, for older samples,  $R^2$  is .005 hence, income explains for 0.5% of the variance in quality of partner relationship. In the second model, when both the indicators of socioeconomic conditions are included,  $R^2$  is .002 for the younger and .006 for the older population. Hence, socioeconomic condition accounts for 0.2% and 0.6% of the variance in quality of partner relationship between younger and older sample, respectively. For younger sample, with the increase in 1 unit of education level there is a decrease in the value of quality of partner relationship. For the older sample, for 1 unit increase in education there is 1 unit increase in the value of partner relationship. But the p-value is more than 0.05 for both the samples hence, there is no significant association between education, and quality of partner relationship. When controlled for age, gender, and type of relationship in model 3, the association is not significant for income and education with quality of partner relationship for both the samples. Model 3 explains for 1.5% and 1.4% of the variance in quality of partner relationship for younger and older sample, respectively.

Comparing model 4, when the socioeconomic condition is moderated by age, gender, and type of relationship, none of the variables and moderators have a significant association with quality of partner relationship for older samples. In contrast, only gender had a significant interaction with education among the younger sample. The study of model 4 for younger sample suggests that the quality of partner relationships is high when the education level is high for women. Model 4 explains for 2.0% and 1.5% of the variance in quality of partner relationship for younger and older samples, respectively.

Table 5. Linear regression analysis for younger sample (N=3474)

	Model 1				Model 2				Model 3				Model 4			
	B	SE	$\beta$	<i>p</i>	B	SE	$\beta$	<i>p</i>	B	SE	$\beta$	<i>p</i>	B	SE	$\beta$	<i>p</i>
Income	.022	.010	.039	.022	.026	.010	.046	.009	-.004	.012	-.007	.737	.063	.069	.113	.354
Education Level					-.024	.015	-.028	.110	-.013	.015	-.015	.441	-.168	.104	-	.105
															.194	

Age					.029	.005	.111	.000	.010	.016	.037	.549
Gender					-.140	.051	-.051	.006	.346	.172	.126	.045
Type of Relationship					-.214	.050	-.079	.000	-.151	.187	-	.420
Income*Age									-.002	.002	-	.401
Income*gender									-.006	.022	-	.774
Income*type of relationship									-.013	.022	-	.564
Education*Age									.006	.003	.271	.051
Education*gender									-.094	.031	-	.002
Education*type Of relationship									.001	.033	.002	.974
Constant	1.87		.000	1.970		.000	1.308		.000	1.672		.001
R <sup>2</sup>	.002			.002			.015			.020		

Note: B=unstandardized B     $\beta$ =standardized coefficients Beta  
 SE= coefficient standard error

Table 6. Linear regression analysis for older sample (N=6558).

	Model 1				Model 2				Model 3				Model 4			
	B	SE	$\beta$	p	B	SE	$\beta$	p	B	SE	$\beta$	p	B	SE	$\beta$	p
Income	.040	.007	.073	.000	.036	.007	.065	.000	.016	.009	.030	.055	.057	.046	.104	.220
Education Level					.015	.012	.018	.188	.015	.012	.018	.189	.070	.071	.082	.324
Age									-.012	.002	-.090	.000	-.005	.005	-	.358
Gender									-.064	.039	-.023	.098	.115	.106	.041	.277
Type of Relationship									-.095	.053	-.023	.072	-.230	.167	-	.169
Income*Age													-.001	.001	-	.131
Income*gender													6.114E-5	.017	.000	.997
Income*type of relationship													.030	.024	.065	.216
Education*Age													.000	.001	-	.709
Education*gender													-.043	.024	-	.066
Education*type Of relationship													-.010	.034	-	.772
Constant	1.607		.000	1.567		.000	2.487		.000	2.069		.000				.000
R <sup>2</sup>	.005			.006			.014			.015						

Note: B=unstandardized B     $\beta$ =standardized coefficients Beta  
 SE= coefficient standard error

## **6. Discussion**

The purpose of this study is to examine the association between socioeconomic conditions and the quality of partner relationships among younger and older individuals. Our general hypothesis is that the quality of partner relationship will be higher if the socioeconomic conditions are better for both age groups. Prior study has claimed that the quality of relationships may be influenced by socioeconomic factors (Conger & Conger, 2002). In this study, we have income and education as the indicator of socioeconomic conditions, and the results from Pearson's Correlation suggests an association between the quality of partner relationships and income. Jalovaara (2013) suggested that lower level of education level and low income were associated with low quality of relationship among younger partners. This study found a contradicting finding of the association of income and education with the quality of partner relationships. From Pearson's correlation, we found that high income and high education instead resulted in a low quality of relationships.

Our cross-sectional linear analysis of socioeconomic condition resulted in a small effect of socioeconomic conditions on quality of partner relationship. A study suggested that low-income predicted low marital satisfaction and low quality of relationship (Spanier, 1976). In contrast to this finding, our study found that when we account only for income, the quality of relationships is low for higher income. Similar results were found among both the younger and older samples. Jorgensen (1979) presented a result suggesting higher socioeconomic conditions are not necessarily the reasons for the higher quality of relationships. Our study supported Jorgensen's result. Accounting education and income together as a socioeconomic condition, we still found that higher socioeconomic conditions resulted in a low quality of relationship.

Previous research found that the quality of partner relationships decreases with increasing age (Knoke et al., 2010). In contrast to this finding, our results show that increasing age instead leads to a high quality of relationships for the entire population and older population. Though, this finding is not correct in case of younger people. Among younger people, as age increases the quality of relationships decreases. Coming to gender, women reported a higher quality of relationship than men in all the samples. It means that comparatively, women are more satisfied, happy and report less conflict than men. Considering the type of relationship (married or cohabitation), our study found that married participants reported higher quality of relationships than the cohabitant counterparts for all the samples. This result is in support of previous findings (Brown & Booth, 1996). When we controlled for age, gender, and type of relationship, we

found that socioeconomic conditions still had a negative correlation with the quality of relationships for the entire sample and older sample. Still, it had a positive effect on younger samples. Younger samples reported a high quality of relationship when age, gender and type of relationship were accounted.

Our next hypothesis was concerned with the moderating effects of age, gender, and type of relationship on income and education and the effect on quality of relationship. We found that the quality of partner relationship is moderated by gender only. A previous study suggested that a low quality of partner relationship was found among the cohabitants with low income (Sassler, 2004). The interaction of income and type of relationship was not significant for any samples in this study. Hence, this study contradicts Sassler. Jalovaara (2013) suggests that low education of each partner supports for higher quality of partner relationship. We found that gender moderates the effect of education on quality of partner relationship among younger age groups but not on older age groups. Women when have higher level of education experienced higher quality of partner relationship in all the population samples.

Hoffman and Duncan (1995) suggest that men's income is linked to higher quality of partner relationship. This study contrasts the argument as we found that women with higher income reported higher quality of relationship among younger population. However, the quality of partner relationships is not moderated by the interaction of gender and income.

This study's limitations are we could not include other expects that could moderate the quality of relationship for example, duration of cohabitation or marriage, total family income, number of children, sexual satisfaction with the partner, drinking problems, and family relations. Another limitation of this study is the involvement of only one of the partners. This study is based on the information provided by one of the partners hence, it may be biased from the perspective of another partner. Involving of both partners might change the result. Lastly, this paper is a cross-sectional study hence, we got partial information about the participants. Longitudinal study would facilitate more understanding of the reasons and effects that moderate the effect of socioeconomic conditions on quality of partner relationship.

Results from this analysis of the Norwegian population has confused our expectations about the association between socioeconomic conditions and quality of partner relationship. We found a positive association between income and education with the quality of relationships among the entire, younger, and older samples. Norway itself is a country with better social welfare programs (Kuhnle, 2000) hence, a comparison between other countries with similar social

welfare strategies is necessary in future to have more reliability on the association between socioeconomic conditions and quality of partner relationship.

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