Intersectionality and labour migrants' experiences

An intersectionality perspective on labour migrants' working experiences and subjective well-being: gender and education

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Abstract

This study uses the intersectionality perspective and the Psychology of Working Theory to examine how the intersection of educational achievement and gender relates to labour migrants' subjective well-being and what role precarious working conditions embody in this relationship. Based on cross-sectional survey data and the analysis of two samples of 277 and 1626 labour migrants, the findings reveal no significant intersections of gender and education related to precarious working conditions and subjective well-being. However, the findings show that lower-educated labour migrants face more precarious working conditions and have lower subjective well-being than middle- and higher-educated labour migrants. Furthermore, the results of the sample of 1626 labour migrants show some evidence that men experience less precarious working conditions and lower levels of material well-being than women. Finally, recommendations for future research are proposed, and several implications are presented.

Keywords: *labour migrants, educational achievement, precarious working conditions, subjective well-being, intersectionality, The Psychology of Working Theory, gender*

Introduction

High-income countries attract migrants who hope to find a better income or career opportunities than in their home country. Migrants' educational achievements range from none to post-academic degrees (Blanpain, 2005). There is a growing interest in the well-being of migrants as the value of migrant labour for local labour markets is recognised (King & Kuschminder, 2022). Incidents of migrant exploitation raise concerns about unequal treatment of educated and uneducated migrants. Furthermore, these differences appear to be more pronounced for women than for men (Paraskevopoulou, 2020; Spadavecchia & Yu, 2021). In this thesis, I examine how education and gender demographics relate to migrants' experience of precarious employment and subjective well-being, consisting of people's evaluations and appraisals of their live in various domains (Diener et al., 2018). In particular, the intersectionality of gender and education is central.

Although evidence shows that working conditions and subjective well-being can differ based on gender and educational achievement (Kristoffersen, 2018; Lee et al., 2014), findings on gender differences in subjective well-being have been inconsistent (Batz & Tay, 2018). An intersectional lens might contribute to understanding what demographic factors relate to these inconsistencies. Intersectionality highlights the importance of interplay between multiple demographic factors in relation to experiences of inequality and its consequences (Else-Quest & Hyde, 2016). Migrant labour research shows that working conditions and subjective well-being are related, especially when working conditions are precarious; this could negatively impact a labour migrant's well-being (Gray et al., 2020). Precarious working conditions or employment include insecurity or safety concerns about various aspects of one's job, leaving workers with little control over their wages, hours, and working conditions (Campbell & Price, 2016). Studies show that lower-educated people, women, and migrant labour are more likely to experience precarious employment and point to the interconnection between education, gender, and migrant status in relation to precarious employment and well-being (Kretsos & Livanos, 2016; Paraskevopoulou, 2020). The Psychology of Working Theory (Duffy et al., 2016) captures contextual and psychological variables, which influence the ability to secure decent work and experience work fulfilment and well-being, and explains the mediating role of precarious working conditions between the intersection of gender and education of migrant labour and subjective well-being. Moreover, the Psychology of Working Theory is built on intersectionality, which emphasises the importance of considering the intersection of social demographics and, as a result, serving as a construct of privilege or constraint in the processes of securing decent work (Duffy et al., 2016).

Recently, intersectionality was introduced as a lens to provide a multidimensional understanding of how gender is constructed in the context of migrant labour to comprehend their perspectives (Kaushik & Walsh, 2018; Rodriguez & Scurry, 2019). However, studies from an intersectional perspective on labour migrants' experiences in relation to precarious working conditions and subjective well-being remain scarce, and the role of gender and intersectionality in migrant labour studies is often under-investigated (Donato et al., 2006; Paraskevopoulou, 2020). This thesis contributes to the literature by gaining more insight into a gender and intersectionality perspective on labour migrants' work experiences in high-income countries. Moreover, the practical implications presented could serve as a starting point for policymakers and organisational decision-makers to respond to intersectionality issues related to labour migrants' work experiences in high-income countries. By taking the Psychology of Working Theory (Duffy et al., 2016) into account and considering that there is little knowledge of an intersectionality perspective on labour migrants' work experiences, the following research question has been developed: "*To what extent does labour migrants' educational achievement relate to their subjective well-being, and to what extent is this relationship mediated by precarious working conditions and moderated by gender?*"

Theoretical Framework

Relationship gender, educational achievement, and subjective well-being

Central in this section is the relationship between the intersection of labour migrants' educational achievement and gender, and their subjective well-being. From an intersectionality perspective, it is important to specify how individuals who belong to one diverse group (e.g., women) differ from each other when another diversity variable (e.g., education) is included. The concept of intersectionality describes how systems of inequality based on gender, race, ethnicity, sexual orientation, gender identity, disability, education, class, and other forms of discrimination 'intersect' to create unique dynamics and effects and, in turn, are linked to constraints imposed upon them by these effects and their linked inequities (Else-Quest & Hyde, 2016). Intersections of diversity variables create different social categories that society views differently and could result in unequal treatment and its consequences. For example, a migrant woman is often more vulnerable to discrimination and gender stereotypes than a migrant man (Batz & Tay, 2018).

The intersectionality perspective explains the interplay between multiple factors shaping subjective well-being (Else-Quest & Hyde, 2016; Kern et al., 2020). Diener's (1984) widely adopted definition of subjective well-being will be used, stating that subjective well-being consists of people's evaluations and appraisals of their own lives in its various domains, such as health, work, family, housing, income, or people's actual feelings, both positive feelings such as happiness, pleasure, or negative emotions such as pain, worry, and anger (Diener et al., 2018). Being a member of multiple marginalised groups, such as lower-educated women labour migrants, puts people at risk of being treated unequally, making them more vulnerable to negative experiences, discrimination, and a decrease in well-being. In contrast, membership in multiple privileged groups, such as higher-educated non-migrants, increases the likelihood of positive experiences and well-being (Rosenfield et al., 2006).

Labour migrants with a higher education experience fewer job limitations, as they get more opportunities and have a higher social status than less-educated migrants (Prilleltensky, 2008). There are mixed empirical findings on gender differences in subjective well-being, as some studies find that men report significantly higher subjective well-being (Stevenson & Wolfers, 2009; Haring et al., 1984), while others have shown that women experience significantly higher levels of subjective well-being (Fujita et al., 1991). Batz and Tay (2018) also explain that women can experience lower subjective well-being than men due to limited opportunities to fulfil their needs. It is therefore important to consider whether individual (e.g., education), social, and environmental factors play a role in explaining gender differences in subjective well-being. Also, gendered societal norms and expectations about the role of men and women could play a role since skilled women migrants are often making shifts in identity, from career women to housewives, and are less likely to be part of the official workforce than men (Meares, 2010). Gender role stereotypes might play a role in these differences. According to Spadavecchia and Yu (2021), migrant men have more opportunities on the labour market, whereas women migrants are often seen as dependent on their men, with a disadvantaged position on the labour market, and with fewer opportunities. Their study shows that high-skilled migrant women experience lower well-being than high-skilled migrant men in career dimensions. Building on this, the next hypothesis is formulated:

H1: Intersectionality between educational achievement and gender relates to subjective well-being, such that high-educated migrant men report the highest and that low-educated migrant women report the lowest subjective well-being.

The mediating role of precarious working conditions

Central in this section is how precarious working conditions mediate between intersectional differences (gender and education) and subjective well-being in the context of labour migrants. Precarious work is defined as uncertain, unstable, and insecure work in which employees endure work risks instead of the organisation or government and receive limited social benefits and statutory protections (Kalleberg & Vallas, 2018). Examples of precarious working conditions include low wages, casual contracts, job insecurity, safety risks, poor regulatory protection, a lack of investments in employee training and development, no employee representation, leaving workers with little control over their wages, hours, and working conditions (Campbell & Price, 2016).

The Psychology of Working Theory can be used to explain the mediating role of precarious working conditions (Duffy et al., 2016). The Psychology of Working Theory states that based on contextual and psychological variables, some people are more vulnerable to end up in precarious working conditions, which, in turn, lead to lower work fulfillment and well-being. This theory also builds on the concept of intersectionality as a condition for risking precarious working conditions. It explains the work experiences of people who are close to or in poverty, people who face discrimination and marginalisation in their lives, and people who are going through difficult work-related transitions in which contextual factors are frequently primary drivers of their (in)ability to secure decent work (Andriessen et al., 2012; Duffy et al., 2016). Moreover, intersectional differences significantly contribute to the vulnerability of becoming a worker that experiences a higher degree of precarious working conditions (Duffy et al., 2016), which leads to lower subjective well-being (Lee et al., 2014).

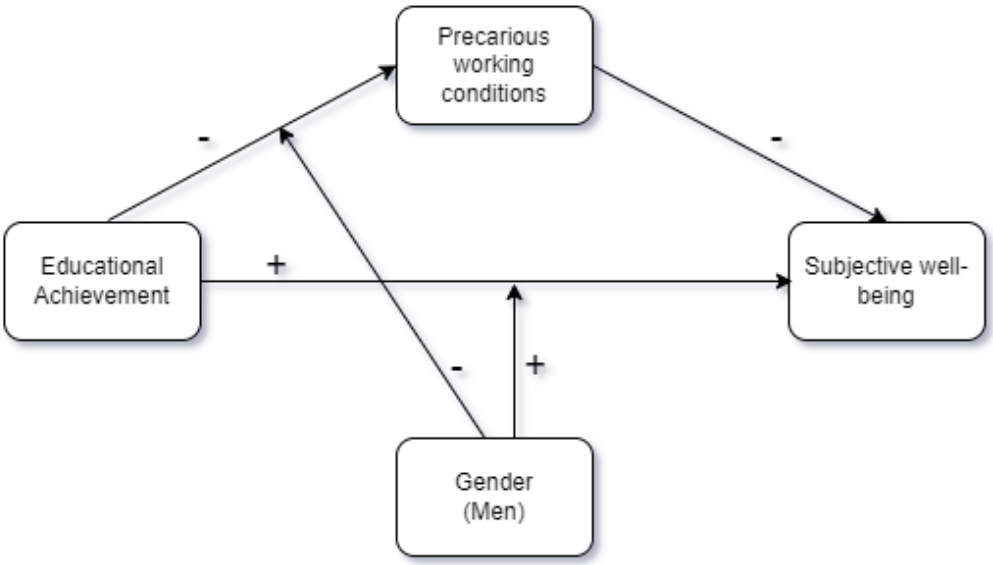
Gender role stereotypes provide an explanation for intersectional differences between men and women migrants since it causes differences in expectations of men and women migrants as women migrants are exposed to twice the hazards of precarious work and insecurities of migration as men (ILO, 2003; Spadavecchia & Yu, 2021). A study of over two million workers of vulnerable groups demonstrated the probability of experiencing precarious employment. Especially lower-educated people, being a woman and being a migrant increase the risk of experiencing precarious employment, negatively affecting their well-being (Kretsos & Livanos, 2016). Intersectionality theory predicts that combinations of these factors increase the probability of experiencing precarious employment (Anthias, 2012). Previous research supports that the interconnection between education, gender, and being a migrant is important to consider in the context of precarious employment and well-being (Paraskevopoulou, 2020). In particular, Paraskevopoulou (2020) finds that women have a higher risk of precarious employment than men in general, that the risk of precarious employment increases with lower qualifications, and that the gender gap closes significantly for those with higher qualifications regarding education. Another study found that labour migrants' experiences are associated with their working conditions. Building on these findings and the Psychology of Working Theory, the following hypothesis is formulated:

H2: precarious working conditions mediate the relationship between educational achievement, gender, and subjective well-being of labour migrants, such that high-educated men report the least precarious working conditions and low-educated women the most precarious working conditions.

Figure 1 presents the conceptual model.

Figure 1

Conceptual model



Method

Research design

This study uses a quantitative and cross-sectional research design, with the latter implying that data were collected from individuals chosen to represent a specific target population at one point in time (Straits & Singleton, 2018). The data used in this study are collected from the Share My Voice panel via questionnaires of Het Kenniscentrum Arbeidsmigranten (Cremers & van den Tillaart, 2021), which is the knowledge centre for labour migrants in The Netherlands. By explaining the intersectionality between labour migrants' gender and educational achievement in relation to subjective well-being, partially explained by precarious working conditions, the design of this study is explanatory (Straits & Singleton, 2018).

Population & sample

The datasets for the study were gathered through questionnaires developed by 'Het Kenniscentrum Arbeidsmigranten'. The Share My Voice Panel is made up entirely of labour migrants, and focusses on their experiences in the Netherlands (Cremers & van den Tillaart, 2021). The sample is composed by using non-probability sampling based on convenience because the cases are chosen nonrandomly (Straits & Singleton, 2018). The number of respondents in the surveys is 1.626 (Cremers & van den Tillaart, 2021) and 609 (Cremers, 2021); the number of respondents participating in both surveys is 277. Since the respondents are not selected for the research panel but can volunteer to fill in the questionnaire, this type of design is potentially biased (Cremers & van den Tillaart, 2021; Straits & Singleton, 2018). The analyses in this study will be conducted in two parts, first using the combined sample of 277 respondents (Wave 1 & 2) and secondly, the sample of 1626 respondents (Wave 1). Table 1 shows the demographics of both datasets, with the combined dataset having slightly higher overall education than the Wave 1 data.

Table 1 *Descriptive statistics Sample*

Combined dataset (Wave 1 & 2):	N	%	Data Wave 1:	N	%
Gender					
Men	133	48%		758	46,6%
Women	142	51,3%		843	51,8%
Prefer not to say	2	,7%		25	1,6%
Educational achievement					
Lower education	13	7%		182	11,2%
Middle education	99	35,7%		639	39,3%
High education	159	57,4%		722	44,4%
Missing	6	2,2%		83	5,1%
Age					
18-24	1	,4%		61	3,8%
25-34	105	37,9%		621	38,2%
35-49	130	46,9%		708	43,5%
50-64	34	12,3%		210	12,9%
65+	7	2,5%		20	1,2%
Missing	-	-		6	,4%
Country of origin					
Within Europe	126	45,5%		931	57,3%
Outside Europe	151	54,5%		695	42,7%
Total	277	100%		1626	100%

Procedure

Respondents were recruited through a campaign in which Het Kenniscentrum Arbeidsmigranten used various channels (e.g., newsletters, media) provided by multiple stakeholder groups. The survey was distributed as an online survey. Participation in the panel and subsequent research was entirely voluntary and completely confidential. The waves of data collection included different measures. In Wave 1, participants answered questions about their experiences regarding working, living, and life situations (Cremers & van den Tillaart, 2021). In Wave 2, participants filled in a questionnaire regarding health care and occupational health and safety (Cremers, 2021). Both surveys are used here to measure the variables.

Educational achievement, precarious working conditions, gender, country of origin, and age were measured in Wave 1 (N=1626), and subjective well-being was measured partly in Wave 1 (N=1626) and partly in Wave 2 (N=277).

Subjective well-being

Measurements of subjective well-being include measures in the domains of health, work, housing, happiness, and overall life satisfaction (Andrews & Robinson, 1991). To ensure validity, the selected measurements of well-being were comparable or in line with Andrews and Robinson's (1991) domains to measure subjective well-being. The items used from the survey included the domains: job satisfaction, health, the happiness of the stay in the Netherlands, housing satisfaction and health changes after arriving in The Netherlands. Additionally, the validity of well-being was assessed using factor analysis to check whether there were any underlying constructs in the various domains, and the reliability of combining the five items was tested using Cronbach's alpha. Five different questions were used to construct one well-being measure, with some having different answer formats, potentially influencing the validity and reliability of this measure. The items used to construct the concept of well-being were measured using two surveys at two different points in time, with six months between the measurements. All five items have equal weight in forming this study's subjective well-being construct.

First, to measure the happiness of labour migrants with their stay in the Netherlands, one question from Wave 1 was used: "In general, how satisfied are you with your stay in the Netherlands?" with six response options Likert scale 1-5 (ranging from very dissatisfied to very satisfied) and 6 being no opinion (Cremers & van den Tillaart, 2021).

Secondly, in line with Andrews and Robinson's (1991) domains to measure subjective well-being, housing satisfaction was used to measure subjective well-being in this study. The question from Wave 1 to measure housing satisfaction states: "In general, how satisfied are you with your current living situation?" Respondents were asked to give a score ranging from 1 (very good) to 10 (very bad) or don't know/no opinion (Cremers & van den Tillaart, 2021). The scores were recoded and reverse-coded to ensure that this item had equal weight to the other items and that the answer options were formulated correctly. Scores 1 and 2 were recoded into 5, scores 3 and 4 into 4, scores 5 and 6 into 3, scores 7 and 8 into 2, and scores 9 and 10 into 1.

The third item used to measure subjective well-being was job satisfaction. Job satisfaction was measured in Wave 1 with the statement: "I am satisfied with my current job and working conditions," which provides a general overview of overall job satisfaction. To measure general job satisfaction, single-item measures of overall job satisfaction have previously been used and are statistically significant when formulated correctly (Nagy, 2002). The answer options were given in a Likert scale 1-5 format (ranging from completely agree to completely disagree), and the option don't know/no opinion (Cremers & van den Tillaart, 2021). The question was recoded from negative to positive, such that completely disagree is coded as 1 and completely agree as 5.

Fourthly, to measure the health aspect, the following question from Wave 2 was used: "How would you generally describe your health?" and gives the answer options in a Likert scale 1-5 format (ranging from

very good to very poor), and the option prefer not to say, these options are reverse-coded to align them with the other items (Cremers, 2021).

Lastly, changes in health status after arriving in the Netherlands was added to measure subjective well-being because research shows that changes in self-rated health following migration may be influenced by precarious employment (Lubbers & Gijsberts, 2019). Additionally, changes in health conditions might explain changes in subjective well-being following migration (D'Isantio et al., 2015). To measure changes in health after arriving in the Netherlands, the next question from Wave 2 was used: "Has your health improved, deteriorated or remained the same since you arrived in the Netherlands?" The answer options were listed in a Likert scale 1-5 format (ranging from strongly improved to strongly deteriorated), and an option prefer 'not to say' recoded as a missing value (Cremers, 2021).

The items were recoded, meaning that they all have five answer options (negative to positive) and a sixth, which are the options: "don't know/no opinion" and "prefer not to say" that were recoded into missing values. To get to one score for well-being, the scores of the five items (job satisfaction, health, the happiness of stay in the Netherlands, housing satisfaction and health changes after arriving) were combined, and the mean score of these five items was calculated for each respondent, resulting in a scale score ranging from 1, indicating very low levels well-being to 5, indicating very high levels of well-being.

Consequently, a factor analysis for the combined dataset assessed the validity of subjective well-being (See Appendix B: Figure 1). Regarding validity, the Kaiser Meyer-Olkin Measure of Sampling Adequacy (Kaiser, 1974) recommends accepting values greater than 0.6, and Bartlett's test should be significant (Bartlett, 1954). The KMO score was adequate at (.681), Bartlett's test of sphericity significant ($p < .001$), and the mean inter-item correlation (.250). The results showed two different components were measured (See: Appendix B: Figure 2). Hence, analyses were done with 1) subjective well-being as one construct, and 2) a two-factor solution wherein one component includes housing satisfaction, job satisfaction, and happiness with living in the Netherlands (material well-being) and the other health and health status change (health well-being). The KMO score of material well-being was adequate (.624), Bartlett's test of sphericity significant ($p < .001$), and the mean inter-item correlation (.329). For the material well-being measure of wave 1, The KMO score was adequate (.621), Bartlett's test of sphericity was significant ($p < .001$), and the mean inter-item correlation (.339).

The reliability of the well-being constructs was determined by measuring Cronbach's alpha. Since Cronbach's alpha can be quite small on a scale with fewer than ten items, the mean inter-item correlation was calculated, which should be between the range of .2 and .4 to be optimal (Briggs & Cheek, 1986). To increase the internal consistency of the scale, the expectation-maximization method was used in SPSS. After applying this method, for the combined dataset, the internal consistency of the five-item subjective well-being variable was satisfactory at (α =.619); excluding one of the items would decrease the reliability. The three-item scale had lower reliability than the five-item scale at (α =.588). Health status and health status change had a moderately significant correlation (r =.323, $p < .001$). The internal consistency of the material well-being scale for Wave 1 was slightly higher than the three-item scale in the combined dataset (α =.594).

In terms of answering the hypotheses, the results of the analyses when separating the well-being variable into two components did not differ significantly from the results of the five-item well-being scale in the combined dataset (wave 1 & 2) and were thus excluded from the results. However, analyses with the material well-being scale on Wave 1 data revealed other significant results when compared to the results of the well-being scales in the combined dataset. As a result, it was decided to include Wave 1 in the results.

Precarious working conditions

Precarious working conditions were measured by combining two questions from Wave 1, one about the labour contract and the other about the wage, as these are two core indicators to measure precarious work, often used by other researchers to measure precarious working conditions (Mai, 2007; Olsthoorn, 2014). The first question is: "Do you have an employment contract?" In which participants have 9 options to answer: (1) Yes, a temporary contract (2) Yes, a permanent contract (3) Yes, an employment agency contract (4) No, I am self-employed (5) No, I have an informal contract (6) Other (7) I don't know (8) I do not have a job (9) Prefer not to say. A temporary contract, a self-employed, employment agency contract, and an informal contract indicate precarity, while a permanent contract does not, as permanent contracts are not seen as precarious conditions (Olsthoorn, 2014; Pérez et al., 2016). The remaining options were recoded as missing values.

The second question used to indicate precarity in wages was determined by one item: "What is your personal monthly gross salary? In this case defined we mean the amount before tax has been deducted, based on a full-time job. You can provide an estimate if you do not know the exact amount." This item and the related answer options were separated by age, meaning that migrants younger than the age of 30 had different answer options than migrants of 30 years and older. For the individuals below the age of 30, this item gave the following response options: (1) less than €1,000, (2) €1,000 - €1,499, (3) €1,500 - €1,999, (4) €2,000 - €2,499, (5) €2,500 - €2,999, (6) €3,000 - €3,380, (7) €3,381 or more, and (8) prefer not to say. Individuals of 30 years and older had these answer options: (1) Less than €1,000, (2) €1,000 - €1,499, (3) €1,500 - €1,999, (4) €2,000 - €2,499, (5) €2,500 - €2,999, (6) € 3.000 - € 3.499, (7) € 3.500 - € 3.999, (8) € 4.000 - €4.611, (9) € 4.612 or more, and (10) prefer not to say. Wages are considered precarious when they fall below 60% of the median wage (Pérez et al., 2016). 60% of the median wage in the Netherlands is €1.885. (CBS, 2022). Both questions had equal weight in forming the extent to which someone experiences precarious working conditions. Both items were recoded into dummy variables.

Table 2 *Descriptive statistics precarious working conditions*

Combined dataset (Wave 1 & 2):	N	Percentage	Data Wave 1:	N	Percentage
0	124	44,8%		596	36,7%
1	73	26,4%		442	27,2%
2	38	13,7%		330	20,3%
Missing	42	15,2%		258	15,9%
Total	277	100%		1626	100%

Note. Higher levels indicate more precarious working conditions.

First, the option permanent contract was recoded in 0, and all other types of contracts were recoded as 1. Second, wage options 4, 5, and 6 were recoded into 0 (high income), and options 1, 2, and 3 were recoded into 1 (low income). These items were used to calculate a sum score, ranging from 0 to 2, in which the higher the score, the higher the experienced precarity. The option "prefer not to say" was recoded as a missing value. To check if income and type of contract were sufficient as indicators of precarious working conditions, the Phi coefficient was calculated for the combined dataset ($\Phi = .370$, $p < .01$) and for

wave 1 ($\Phi = .377$, $p < .01$), indicating a moderate correlation. Although the sample distribution of precarious working conditions is heavily left-skewed in both datasets (Appendix C: Figure 1 & 4), the central limit theorem states that if the sample size is large enough (N > 30), the sampling distribution of a sample mean is approximately normal even though the precarious working conditions variable is not normally distributed (Warner, 2020). Hence, the analyses included precarious working conditions as a scale variable. The missing data were excluded listwise. Table 2 provides descriptive statistics on precarious work conditions.

Educational achievement

Educational achievement is defined as the highest degree a person has achieved (Harjoto et al., 2019). Educational achievement was measured with the question: "Could you use the categories below to indicate the profession for which you were qualified in your country of origin?" in Wave 1, with the following answer options: (1) advanced intellectual or liberal profession (e.g., architect, doctor, scientific researcher, university lecturer, engineer, etc.), (2) advanced managerial profession (e.g., manager, director, owner of a large company, senior civil servant, etc.), (3) secondary intellectual or liberal profession (e.g., teacher, artist, nurse, social worker, policy officer, etc.), (4) secondary managerial or commercial profession (e.g., sales manager, department manager or retailer), (5) other non-manual labour(e.g., administration officer, accountant, salesman, family carer, etc.), (6) qualified and supervisory manual labour(e.g., car mechanic, foreman, electrician, etc.), (7) semi-trained manual labour(e.g., driver, factory worker, carpenter, baker, etc.), (8) unqualified and self-learned manual labour(e.g., cleaner, packer, etc.), (9) agricultural profession, (10) I don't know and, (11) Not applicable/not working.

The different professions were recoded into two dummy variables with the categories low level of education, middle level of education, and high level of education, wherein low-skilled jobs are linked to low education because the requirements for low-skilled jobs are no more than a high-school education (Maxwell, 2007). Lower education includes options 7, 8, and 9; these professions were recoded as 0 (reference category), while options 3, 4, 5, and 6 were recoded as 1 in the middle-education dummy and as 0 in the higher-education dummy variable. Options 1 and 2 were recoded as 1 in the high-education dummy variable and 0 in the middle-education dummy, indicating a higher educational achievement. Answer options 10 and 11 were recoded into missing values. Lower education was chosen as the reference category because, during the analysis of the combined dataset, the One-way ANOVA analysis revealed that the lower education group significantly differed from the other education groups in terms of experiencing precarious working conditions.

Gender

Gender was measured with the question "What is your gender?" in Wave 1, in which a participant had four answer options: man, woman, other, and prefer not to say. Answers were recoded as man (1), woman (0), and the other options as missing; the latter responses were removed listwise during the data cleaning as the analyses were done only with cases that completed the questions with regard to the variables used in this study (Warner, 2020).

Control variables

To test possible spurious relationships, age was added to the analyses as this variable could influence well-being to some extent (Ramsey & Gentzler, 2014). Moreover, older workers stand at a greater risk of precarious employment (McKay et al., 2012). Since age could have an influence on both well-being and precarious employment, this was controlled. Although age was shared as a categorical variable to maintain the privacy of respondents, the histogram (Appendix C: Figure 3 & 6) shows a normal distribution, hence age was included as a scale variable with the answer options: (1) 18-24, (2) 25-34, (3) 35-49, (4) 50-64, and (5) 65+. The "prefer not to say" option was recoded as a missing value.

Secondly, the country of origin was included. Country of origin was measured with the question: "What is your country of origin?" Answer options were recoded in 2 categories: migrants from Europe were recoded as 0, and migrants from outside Europe were recoded as 1. Workers from CEE countries are overly represented in the low-paid sector, even though they have relatively high qualifications, which in turn can lead to labour exploitation and uncertainties related to health and housing. Moreover, labour migrants from outside Europe need a work permit to be allowed to work in The Netherlands, while EU labour migrants don't need one, which makes them more vulnerable to labour exploitation (McGauran et al., 2016). Besides, except for highly skilled 'knowledge workers,' the majority of immigrants from non-European countries who arrive in Europe are not granted access (Kremer & Schrijvers, 2013). All control variables were measured in wave 1.

Analysis

The datasets were analysed and processed using the IBM SPSS Statistics 28 program. First, irrelevant data were removed, and missing values were checked (coded as 999). Following data cleaning, some variables were recoded into the model variables to ensure adequate analysis. Dummies were created for gender, education, income, and type of contract. Next, analyses were performed to check if there was no violation of normality, linearity, and homoscedasticity assumptions. To examine the validity of the subjective and material well-being measures, a principal component analysis (PCA) was conducted. Before the model was tested, a correlation table was calculated, and multiple one-way ANOVA tests were conducted to provide insights into the model variables' associations. Besides, a linear regression analysis was conducted to detect multicollinearity.

Finally, Hayes's (2017) PROCESS models 1 and 8 were used to execute the regression analyses and test the moderated mediation effect. In the regression analyses, the dependent variable was the scale variable subjective well-being (interval level measure), which was also subdivided into material and health well-being. The dummy variable educational achievement was used as the independent variable (reference category = low education), and the scale variable precarious working conditions, was used as the mediator (interval level). During these analyses, age and country of origin were included as control variables to increase the internal validity of the analysis.

Results

The model was tested twice: once with the combined dataset (N=277) and once with Wave 1 data (N=1626) and the material well-being variable instead of the subjective well-being variable.

Results Combined Data, Overall Subjective Well-being (N=277)

Descriptives and correlations

To examine whether there were any meaningful correlations, a correlation table was created, including all model and control variables. Moreover, various one-way ANOVA analyses were performed to further examine the associations between educational achievement and both continuous dependent variables. Table 3 presents the means, standard deviations, and correlations of the variables used in this research. The results in the table showed that a higher amount of experienced precarious working conditions is associated with a lower amount of experienced subjective well-being (r = -.268, p < .01). Besides, the results show that higher educated migrants are associated with experience less precarious working conditions (r = -.221, p < .01) than lower educated migrants. Additionally, the country of origin showed a significant negative relationship with precarious working conditions (r = -.139, p < .05), indicating that migrants from outside Europe experience less precarious working conditions. Also, country of origin is associated with middle-educated migrants (r = -.226, p < .01) and higher-educated migrants (r = .312, p < .01), indicating that migrants from outside of Europe are less likely to be middle-educated than migrants from Europe and more likely to be higher educated.

Table 3 *Means, standard deviations, and correlations*

Measures	N	M	SD	1.	2.	3.	4.	5.	6.	7.
1. Subjective well-being	277	3,695	,599	1						
2. Precarious working conditions	235	,634	,747	-,268**	1					
3. Gender (Men)	275	,484	,501	,018	-,070	1				
4. Middle education	271	,365	,482	-.085	,087	-,101	1			
5. High education	271	,587	,493	,108	-,221**	,105	-,904**	1		
6. Age	277	2,787	,758	,067	-,067	,117	,072	-,057	1	
7. Country of Origin (Outside Europe)	277	,545	,499	,002	-,139*	,058	-,226**	,312**	-,113	1

Note. Precarious working conditions (0-2), Subjective well-being (1-5). Gender (0 = women, 1 = men),
Age (1 = 18-24, 2 = 25-34, 3 = 34-49, 4 = 50-64, 5 = 65+), Middle education (0= no middle education, 1 = middle education), High education (0= no high education, 1 = high education),
Country of Origin (0 = within Europe, 1 = outside Europe)
**. Correlation is significant at the 0.01 level (2-tailed). *. Correlation is significant at the 0.05 level (2-tailed).

In addition to the regression analyses, various ANOVA analyses were performed to examine if there were any differences in subjective well-being and precarious working conditions across educational levels. The results of the ANOVA analysis showed no significant differences between educational levels and subjective well-being. However, an ANOVA with educational achievement as the independent variable and precarious working conditions as the dependent variable did reveal a significant relationship; ($F(2,226) = 14{,}024$, $p < .001$). Indicating at least one significant difference in group means of educational achievement in experienced precarious working conditions. A Bonferroni test was conducted to find out which group(s) significantly differed, which indicated that lower-educated migrants experienced more precarious working conditions compared to middle-educated and high-educated migrants. However, the homogeneity of variance test was violated because Levene's test was significant, indicating that the variance was not equal between the groups.

After completing the ANOVA analyses, a linear regression analysis was conducted to check for multicollinearity. Since none of the discovered VIF values exceeded 10, it can be concluded that there is no multicollinearity between the model's variables.

Model and hypothesis testing

To test both hypotheses for the combined dataset, model 1 and model 8 of Hayes's (2013) PROCESS macro were used. The results can be found in tables 4 and 5.

To test hypothesis 1, PROCESS macro model 1 was used (Hayes, 2013). Hypothesis 1 stated that intersectionality between educational achievement and gender relates to subjective well-being in a way high-educated men migrants report the highest and that low-educated women migrants report the lowest subjective well-being. The results of testing hypothesis 1 are shown in table 4. The findings indicated that this model's R^2 value is non-significant at a significance level of ($p = .05$), suggesting that the model's variables cannot explain a significant amount of variance in subjective well-being. Thus, hypothesis 1 cannot be supported.

Table 4 *Results of analyses to test the hypotheses, performed by PROCESS macro model 1 (N = 269)*

Predictor variable	*B*	*SE*	*t*	R^2
Model 1: effect on subjective well-being (Y)				
F (7) = ,799				.021
Constant	3.418	.258	13.265	
Middle education	.054	.225	.225	
High education	.171	.241	.710	
Gender (Men)	-.081	.334	-.243	
Middle education x Men	.054	.355	.152	
High education x Men	.105	.348	.301	
Country of Origin (Outside Europe)	-.030	.079	-.376	
Age	.068	.050	1.311	

Note 1: Bootstrap sample size = 5,000. LL = lower limit; CI = confidence interval 95%; UL = upper limit. Unstandardised regression coefficients are reported. ** $p < .01$, * $p < .05$ (2-tailed)

Hypothesis 2 stated that precarious working conditions mediate the relationship between educational achievement, gender, and subjective well-being, such that high-educated men report the least precarious working conditions and low-educated women the most precarious working conditions. To test this hypothesis, model 8 of PROCESS macro was used (Hayes, 2013). The results in table 5 showed that middle education (B = -1.132, p < .01) and high education (B = -1.200, p < .01) had a negative statistically significant effect on experienced precarious working conditions. Suggesting that lower-educated migrants are more likely to experience precarious working conditions than higher-educated and middle-educated migrants. Besides, the results showed that precarious working conditions negatively significantly affected subjective well-being (B = -.171, p < .01). However, both interactions of educational achievement and gender were not significant. Additionally, the index of the moderated mediation for middle education (index =-.101 95% CI = [-.294/.047]) and high education (index =-.055 95% CI = [-.229/.089]) both included zero, indicating that there is no significant moderated mediation effect of educational achievement on subjective well-being through precarious working conditions, moderated by gender, meaning that gender does not change the effect of educational achievement on precarious working conditions. As a result, it can be concluded that hypothesis 2 was not supported by the findings. Finally, age has a significant effect on subjective well-being (B = .115, p < .05) when all other variables are controlled for, implying that older labour migrants experience higher subjective well-being.

Table 5 *Results of analyses to test the hypotheses, performed by PROCESS macro model 8 (N = 227)*

Predictor variable	*B*	*SE*	*t*	R^2
Model 1: effect on precarious working conditions (MED)				
F (7) = 4,680				.130**
Constant	2.083	.340	6.129	
Middle education	-1.132**	.310	-3.649	
High education	-1.200**	.308	-3.897	
Men	-.463	.411	-1.127	
Middle education x Men	.591	.439	1.345	
High education x Men	.318	.430	.741	
Country of origin (Outside Europe)	-.066	.102	-.646	
Age	-.096	.070	-1.365	

Model 2: effect on subjective well-being (Y)				
F (8) = 3,448				.112**
Constant	3.675	.265	13.869	
Middle education	-.114	.230	-.494	
High education	-.035	.229	-.151	
Precarious working conditions	-.171**	.049	-3.517	
Men	-.248	.297	-.836	
Middle education x Men	.154	.318	.486	
High education x Men	.297	.310	.959	
Country of Origin (Outside Europe)	-.042	.074	-.573	
Age	.112*	.051	2.202	

	B	*SE*	*LLCI*	*ULCI*
Indirect effect moderated mediation middle education	-.101	.085	-.294	.047
Indirect effect moderated mediation high education	-.055	.077	-.229	.089

Note 1: Bootstrap sample size = 5,000. LL = lower limit; CI = confidence interval 95%; UL = upper limit. Unstandardised regression coefficients are reported. ** $p < .01$, * $p < .05$ (2-tailed)

Note 2: Due to estimation problems, some bootstrap samples had to be replaced. The number of times this happened was: 19

Results Wave 1 Data, Overall Material Well-Being (N=1626)

Descriptives and correlations

Table 6 shows the means, standard deviations, and correlations of the variables used. As the table shows many significant correlations, the most important ones will be discussed.

Firstly, the table shows a significant negative correlation between precarious working conditions and material well-being ($r = -.343$, $p < .01$). The table also shows that middle-educated migrants are associated with experiencing lower material well-being than lower-educated migrants ($r = -.074$, $p < .01$), and that higher-educated migrants are associated with experiencing higher material well-being than lower-educated migrants ($r = .150$, $p < .01$).

Furthermore, precarious working conditions is negatively related to gender ($r = -.155$, $p < .01$), implying that men experience less precarious working conditions. Furthermore, precarious working conditions are positively related to middle education ($r = .153$, $p < .01$) and negatively to high education ($r = -.351$, $p < .01$), as compared to lower education. Third, as compared to women, men have less often middle education ($r = -.130$, $p < .01$) and more often high education ($r = .123$, $p < .01$).

Table 6

Means, standard deviations, and correlations

Measures	N	M	SD	1.	2.	3.	4.	5.	6.	7.
1. Material well-being	1626	3,788	,779	1						
2. Precarious working conditions	1368	,806	,800	-,343**	1					
3. Gender (Men)	1601	,473	,499	,011	-,155**	1				
4. Middle education	1543	,414	,493	-,074**	,153**	-,130**	1			
5. High education	1543	,468	,499	,150**	-,351**	,123**	-,788**	1		
6. Age	1620	2,70	,788	,131**	-,139**	,038	-,002	,026	1	
7. Country of Origin (Outside Europe)	1626	,427	,495	,089**	-,256**	,070**	-,157**	,313**	,011	1

Note. Precarious working conditions (0-2), Material well-being (1-5). Gender (0 = women,

1 = men), Age (1 = 18-24, 2 = 25-34, 3 = 34-49, 4 = 50-64, 5 = 65+), Middle education (0= no middle education, 1 = middle education), High education (0= no high education, 1 = high education), Country of Origin (0 = within Europe, 1 = outside Europe)

**. Correlation is significant at the 0.01 level (2-tailed).

Besides the correlation table, various ANOVA analyses were conducted to examine if there were any differences in material well-being and precarious working conditions across educational levels. The results of the analyses showed a significant relationship between material well-being and educational achievement ($F(2,1540) = 22,090$, $p < .001$), and the Homogeneity of Variance test ($p > .05$), indicating that the homogeneity of variance test was not violated. According to the Bonferroni test, the means of educational levels differed significantly in terms of material well-being. According to the test, lower-educated migrants had the lowest levels of material well-being, while higher-educated migrants had the highest levels of material well-being. Furthermore, there was a significant relationship between precarious working conditions and educational achievement ($F(2,1296) = 124,322$, $p < .001$). According to the Bonferroni test, the means of all groups differed significantly, with lower-educated migrants experiencing the most precarious working conditions and higher-educated migrants experiencing the least precarious working conditions. However, the homogeneity of variance test was violated because Levene's test was significant, indicating that the variance between the groups was not equal.

After completing the ANOVA analyses, a linear regression analysis was conducted to check for multicollinearity. Since none of the discovered VIF values exceeded 10, it can be concluded that there is no multicollinearity between the model's variables.

Model and hypothesis testing

To test both hypotheses, model 1 and model 8 of Hayes's (2013) PROCESS macro were used. The results can be found in Tables 7 and 8.

Table 7 *Results of analyses to test the hypotheses, performed by PROCESS macro model 1 (N = 1516)*

Predictor variable	*B*	*SE*	*t*	R^2
Model 1: effect on material well-being (Y)				
F (7) = 11,133				.049**
Constant	3.239	.103	31.408	
Middle education	.163#	.089	1.833	
High education	.278**	.092	3.032	
Gender (Men)	-.078	.113	-.690	
Middle education x Men	-.024	.129	-.189	
High education x Men	.129	.127	1.018	
Country of Origin (Outside Europe)	.048	.042	1.140	
Age	.131**	.025	5.237	

Note 1: Bootstrap sample size = 5,000. LL = lower limit; CI = confidence interval 95%; UL = upper limit. Unstandardised regression coefficients are reported. ** $p < .01$, * $p < .05$ # $p < .10$ (2-tailed)

To test the first hypothesis, PROCESS macro 1 was used (Hayes, 2013). Hypothesis 1 stated that intersectionality between educational achievement and gender relates to material well-being in a way high-educated men migrants report the highest and that low-educated women migrants report the lowest material well-being. Contradicting the results of the combined dataset, the data of wave 1 shows some significant results testing the first hypothesis. Firstly, the model indicates that the variables used in this model explain 4.9% of the total explained variance in material well-being (R^2 = .049, p < .01). Secondly, the findings show that middle-educated migrants experience higher levels of material well-being than lower-educated migrants (B = .162, p < .10). Moreover, higher-educated migrants experience higher levels of material well-being than lower-educated migrants as well (B = .278, p < .01). Lastly, well-being also seems to get higher when labour migrants' age increases (B = .131, p < .01). Despite the significant results, the moderation effect was not significant. Therefore, the results provide no support for hypothesis 1. Table 7 shows the results of the analysis.

Hypothesis 2 states that precarious working conditions mediate the relationship between educational achievement, gender, and material well-being, such that high-educated men report the least precarious working conditions and low-educated women the most precarious working conditions. To test this hypothesis, model 8 of PROCESS macro was used (Hayes, 2013). The first model in table 8 showed that both middle-educated (B = -.488, p < .01) and higher-educated (B = -.832, p < .01) labour migrants experience less precarious working conditions than lower-educated migrants. Moreover, the results show that men experience a little less precarious working conditions than women (B = -.201, p < .10). Additionally, Country of Origin also has a statistically significant effect on precarious working conditions (B = -.193, p < .01), suggesting that labour migrants from outside Europe experience less precarious working conditions than labour migrants from Europe. Lastly, the results indicate that older labour migrants experience less precarious working conditions (B = -.121, p < .01).

The second model in table 8 shows that labour migrants who experience more precarious working conditions experience lower levels of material well-being (B = -.299, p < .01). Moreover, the table displays that men experience less material well-being than women, that precarious working conditions negatively significantly affected material well-being (B = -.207, p < .01), and that older people experience significantly higher levels of material well-being (B = .109, p < .01). Despite these results, the interactions in this model were not significant. Additionally, the index of the moderated mediation for middle education (index = -.015 95% CI = [-.092/.059]) and high education (index = -.004 95% CI = [-.076/.067]) both included zero, indicating that there is no significant moderated mediation effect of educational achievement on material well-being through precarious working conditions, moderated by gender, meaning that gender does not change the effect of educational achievement on precarious working conditions. As a result, it can be concluded that hypothesis 2 was not supported by the findings. However, the results do show support for the mediation effect of precarious working conditions and some small gender differences in experienced precarious working conditions and experienced material well-being.

Table 8 *Results of analyses to test the hypotheses, performed by PROCESS macro model 8 (N = 1286)*

Predictor variable	*B*	*SE*	*t*	R^2
Model 1: effect on precarious working conditions (MED)				
F (7) = 45,465				.199**
Constant	1.871	.107	17.463	
Middle education	-.488**	.093	-5.263	
High education	-.832**	.095	-8.722	
Men	-.201#	.114	-1.762	
Middle education x Men	.049	.130	.373	
High education x Men	.014	.129	.107	
Country of origin (Outside Europe)	-.193**	.044	-4.382	
Age	-.121**	.026	-4.619	
Model 2: effect on material well-being (Y)				
F (8) = 25,411				.137**
Constant	3.861	.118	32.619	
Middle education	-.046	.093	-.498	
High education	-.027	.097	-.280	
Precarious working conditions	-.299**	.028	-10.761	
Men	-.207#	.114	-1.825	
Middle education x Men	.035	.130	.270	
High education x Men	.168	.128	1.315	
Country of Origin (Outside Europe)	.034	.044	.772	
Age	.109*	.026	4.179	

	B	*SE*	*LLCI*	*ULCI*
Indirect effect moderated mediation middle education	-.015	.038	-.092	.059
Indirect effect moderated mediation high education	-.004	.037	-.076	.067

Note 1: Bootstrap sample size = 5,000. LL = lower limit; CI = confidence interval 95%; UL = upper limit. Unstandardised regression coefficients are reported. ** $p < .01$, * $p < .05$ # $p < .10$ (2-tailed)

Discussion

The purpose of this study was to look into intersectionality in the context of labour migrants, specifically how gender and educational achievement relate to precarious working conditions and subjective well-being (general subjective well-being, health well-being, and material well-being). Analyses were conducted on two datasets, first on the dataset containing 277 labour migrants living in the Netherlands, in which the data was collected at two moments in time, and then on another dataset, consisting of 1626 labour migrants in which the data was collected at one moment in time.

Main findings

Remarkably, the findings of this study contradict expectations, as they showed no differences in subjective well-being and precarious working conditions when intersecting educational achievement and gender of labour migrants, and since the moderation effects were not significant, they were not investigated. Although no significant interactions were found, significant relationships provided new insights into the relationship between educational achievement, gender, precarious working conditions, and subjective well-being. These will be addressed in more detail below.

First, in both datasets, the results showed that when precarious working conditions increased, general subjective well-being and material well-being levels decreased. This is consistent with the findings of Gray et al. (2020), stating that migrants experiencing components of precarious employment were found to be at greater risk of poor health outcomes. However, the experienced precarious working conditions were highly left-skewed, meaning that both groups experienced a relatively low amount of precarious working conditions. According to the findings of this study, approximately 15% of respondents had missing values in relation to precarious working conditions, excluding unemployed migrants. Many migrants lost their jobs and housing during the corona outbreak (Aanjaagteam Bescherming Arbeidsmigranten, 2020), and research shows that unemployment makes people more vulnerable to precarious working conditions (Leopold et al., 2017). Hence, this could imply that the experienced precarious working conditions are higher than shown in this study and that participation in these questionnaires by migrants with a short temporary contract is questionable.

Secondly, in terms of the role of gender and educational achievement in relation to the intersectionality perspective and subjective well-being (hypothesis 1), the findings revealed no gender differences when relating educational achievement and subjective well-being. This contradicts the intersectionality perspective, which predicts that multiple disadvantageous conditions multiply negative effects on subjective well-being (Else-Quest & Hyde, 2016; Kern et al., 2020). However, these findings only focused on the intersection of education and gender of labour migrants, including only a few of the many possible social and demographic factors. Furthermore, the results of Hypothesis 1 are contradictory to previous research (Spadavecchia & Yu, 2021). According to their findings, high-skilled migrant women had lower well-being than high-skilled migrant men in career dimensions. Nevertheless, their study only focused on high-skilled migrants with at least a bachelor's or college degree. Important to note that their study partially measured similar dimensions of well-being (career well-being, family well-being, health), but also considered safety and discrimination in the well-being variables. Still, the results were measured through a qualitative research design, giving more in-depth explanations about migrants' experiences, but, at the same time, making it harder to generalize the findings as only 20 respondents participated in their study (Spadavecchia & Yu, 2021), which could have led to different results.

Thirdly, regarding hypothesis 2, low-educated migrants faced more precarious working conditions than middle- and high-educated migrants; but no significant differences were found when educational achievement and gender were intersected. These findings contradict previous research that found that women with lower educational qualifications are more likely than men to be in precarious employment, especially women migrants (Paraskevopoulou, 2020). At the same time, this study shows that higher

educational qualifications significantly close the gender gap; the difference in experienced precarity becomes smaller the higher the educational qualifications of women are (Paraskevopoulou, 2020). Here lies a potential explanation for only small gender differences and no intersectional differences, as the samples of this study were composed of primarily higher-educated and middle-educated labour migrants. In addition, the findings of this study are consistent with those of Prilleltensky (2008) and Kretsos and Livanos (2016), who show that lower-educated migrants experience more limitations regarding jobs than higher-educated migrants as they get fewer opportunities, have a lower social status and are more vulnerable to precarious employment, negatively impacting subjective well-being. This is also consistent with the Psychology of Working Theory (Duffy et al., 2016), which showed that people with lower education, or less favourable contextual factors, decrease the ability to secure decent work and, in turn, negatively affect general subjective well-being as well as material well-being. On the other hand, the results contradict the findings from McGauran et al. (2016), they stated found that workers from CEE countries, even though having high qualifications, are often overly represented in the low-paid sector, which in turn could lead to uncertainties in health and housing. This leads to the conclusion that a higher education lowers the probability of experiencing precarity. Nevertheless, it does not imply that higher-educated migrants do not experience high levels of precarity at all.

Fourthly, the results show that women experience more precarious working conditions than men. One explanation is that gender role stereotyping could lead to different expectations of men and women, making women more vulnerable towards experiencing limited opportunities and precarious employment (Paraskevopoulou, 2020; Spadavecchia & Yu, 2021). Remarkably, the results of this study not only show that men experience less precarious working conditions than women but also lower levels of material well-being, which contradicts the findings of Batz and Tay (2018) since they hypothesised that women could experience lower well-being due to limited opportunities to fulfil their needs. An explanation could be that men migrants migrate alone more frequently and, as a result, may experience more social isolation and loneliness, resulting in lower levels of well-being, whereas women migrate with their men and family more often, and this is where the difference may lie; however, it is important to note that this is not always the case; it is more likely for men (Kraler, 2010). In future research, family status could be controlled for.

Finally, the results show that migrants from outside of Europe face less precarity than migrants from Europe, which could be attributed to the fact that migrants from outside of Europe must be registered to work in The Netherlands. In contrast, migrants from Europe must only register themselves after working in The Netherlands for more than four months, and because they do not always register themselves, they do not have the same health and safety insurance as documented migrants (Aanjaagteam Bescherming Arbeidsmigranten, 2020; Kremer & Schrijvers, 2013).

Limitations and future research

This study has several limitations. The first limitation is the measure of educational achievement, measured by the question: "Could you use the categories below to indicate the profession for which you were qualified in your home country?" This question revealed information about educational achievement but not the actual level of education achieved, focusing more on Human capital as described by Becker (1964) since the question measures an indication of work experience and education.

Secondly, the sample size used in this study is quite small, representing only a tiny portion of the total population of labour migrants in The Netherlands, limiting the generalizability of this research (Straits & Singleton, 2018). However, in the Netherlands, both men and women with a migration background have educational backgrounds that are somewhat consistent with the sample analysed. Migrants with bachelor's or college degrees make up the largest group of migrants, followed by those with middle-level

educations and those with lower levels of education. The fact that lower-educated migrants make up almost 29% of the total population, which is a higher percentage than either of the lower-educated groups examined in this study, is an important consideration (CBS, 2022). As a result, it is suggested that future research on labour migrants include a more evenly distributed sample. However, because the Netherlands has a large number of undocumented immigrants and because these statistics only include documented migrants, they may not be fully representative of the entire population. Furthermore, undocumented migrants in the Netherlands are more vulnerable to precarity because they do not have the same health and safety insurance as documented migrants (Aanjaagteam Bescherming Arbeidsmigranten, 2020; Kremer & Schrijvers, 2013).

A third limitation is that the measurements for this study were derived from previously collected data and then linked to theoretical definitions and measurements, thereby reducing the number of possible items that could be used to measure the variables. Developing scales to test the variables can reduce internal consistency and reduce the reliability of the research. This is especially important in relation to both the general subjective well-being measure (α =.619) and the material well-being measure (α =.594) since the reliability of both scales is lower than desired. Moreover, the subjective-wellbeing measure in the combined dataset was measured at two moments in time, with approximately six months between the measures. During this time, the respondents could have found a new job, or other things could have happened which could have affected their answers and, potentially, the effects in this study. The p-value can be lowered to ensure that the results are still significant. This is done in the study, which allows for a p-value of 0.10. A looser p-value, however, reduces the probability of correctly rejecting hypotheses (Warner, 2020).

Fourthly, the left-skewed distribution of precarious working conditions indicated that the largest group of participants experienced no precarious working conditions, which influences the relationships and effect sizes; had this variable been normally distributed, the results could have been different (Warner, 2020).

Lastly, the sample in this study was composed by using non-probability sampling. As a result, the probability of selecting any case is unknown, which may have influenced sample accuracy, and this design may have included self-selection bias (Straits & Singleton, 2018). Future research should use a probability design because it eliminates self-selection bias and makes the results more reliable (Straits & Singleton, 2018). Although, there lies a challenge as many migrants are temporary in The Netherlands and are often not registered, which makes it more challenging to create a representative sample with a probability design (Kremer & Schrijvers, 2013).

Implications

Despite these limitations, this study has some valuable implications. First, this study complements evidence from previous research (Kretsos & Livanos, 2016; Prilleltensky, 2008) that lower-educated migrants are more likely to face precarious working conditions and, in turn, experience lower subjective well-being. In addition, despite showing no intersection with gender, this study demonstrates the applicability of the Psychology of Working Theory (Duffy et al., 2016) in explaining the role of the contextual factor of education and how it influences precarious working conditions and makes migrants more vulnerable to exploitation, which in turn relates to experienced subjective well-being.

Second, this study has demonstrated the need for organisations to work toward providing more equal treatment to lower-educated migrants, such as by offering permanent contracts more frequently. The results indicate that lower-educated migrants experience the most precarity, implying that they are more vulnerable to unequal treatment, which lowers subjective well-being. Aside from the detrimental effects on migrants as individuals, this could have a negative impact on organisations as well because it can result in higher turnover, which is crucial when considering the current labour market shortages (Lodder,

2020). Moreover, in striving for equal treatment, organisations, particularly policymakers, should consider that lower-educated migrants are more likely to face precarious working conditions and often have less developed language skills (Zorlu & Hartog, 2018), and are likely to have less knowledge about laws and regulations in the Netherlands than more-educated labour migrants as they have more difficulties with learning the host country's language, and are therefore more vulnerable to exploitation.

Conclusion

The purpose of this study was to investigate the intersectionality of gender and educational achievement related to subjective well-being and precarious working conditions in the context of labour migrants. This study found that lower-educated migrants face more precarious working conditions and, as a result, have lower subjective well-being than middle- and higher-educated labour migrants. Therefore, it is important to focus on the more vulnerable groups in society. Furthermore, the findings revealed that women experience more precarious working conditions than men and show higher levels of material well-being. However, an intersection of gender and education has yet to be discovered in the context of Dutch labour migrants.

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Appendix A: items measuring the Concept of subjective well-being

Questions Wave 1 (Cremers & van den Tillaart, 2021)

1. In general, how satisfied are you with your current living situation? (Living situation)

Very Bad									Very Good	Don't know /No opinion
										Missing
1	2	3	4	5	6	7	8	9	10	value

2. I am satisfied with my current job and working conditions (Job satisfaction)

1 = Completely disagree 2 = Disagree 3 = Neither disagree or agree 4 = Agree 5 = Completely agree	Completely Disagree				Completely Agree	Don't know /No opinion Missing value
	1	2	3	4	5	

3. In general, how satisfied are you with your stay in the Netherlands?" (Satisfaction with living in The Netherlands)

1 = Very dissatisfied 2 = Dissatisfied 3 = Neutral 4 = Satisfied 5 = Vert satisfied	Very Dissatisfied				Very Satisfied	Don't know /No opinion Missing value
	1	2	3	4	5	

Questions Wave 2 (Cremers, 2021)

4. "How would you generally describe your health?" (Health)

1 = Very poor	Very				Very	Prefer	
2 = Poor	Poor				Good	Not to say	
3 = Not good, not poor							
4 = Good						Missing	
5 = Very good	1	2	3	4	5	value	

5. "Has your health improved, deteriorated or remained the same since you arrived in the Netherlands?"

(Health status change)

1 = Strongly deteriorated	Strongly				Strongly	Don't know	Not	
2 = Deteriorated	Deteriorated				Improved	/No opinion	Applicable	
3 = Remained the same								
4 = Improved						Missing	Missing	
5 = Strongly Improved	1	2	3	4	5	value	value	

Appendix B: Results Principal Component Analysis

Figure 1

Non-Rotated factor analyses subjective well-being of the combined dataset (α =.619)

Measure	Component 1
Satisfaction with living in The Netherlands	.755
Job satisfaction	.666
Satisfaction with living situation	.566
Health status change after migrating to The Netherlands	.657
Health status	.506

Figure 2

OBLIMIN rotated factor analysis subjective well-being of the combined dataset

Measure	Component 1	Component 2
Satisfaction with living in The Netherlands	.700	
Job satisfaction	.718	
Satisfaction with living situation	.771	
Health status change after migrating to The Netherlands		.734
Health status		.853

Figure 3

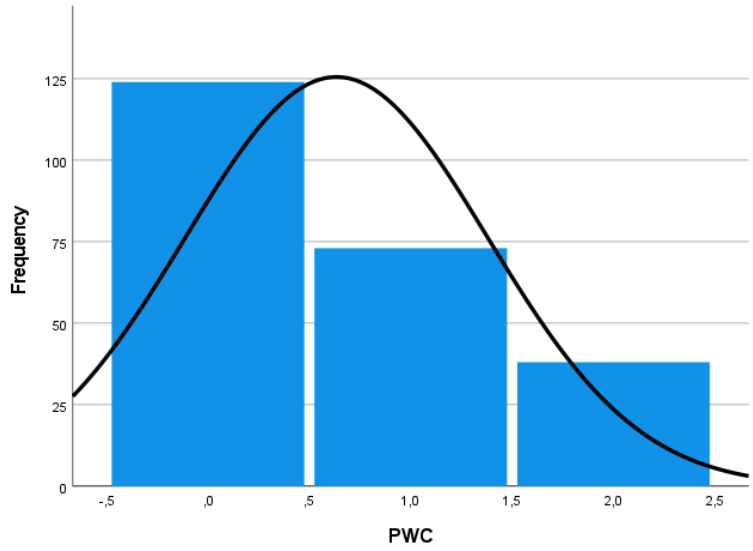
Non-Rotated factor analyses material well-being of the wave 1 data (α =.594)

Measure	Component 1
Satisfaction with living in The Netherlands	.789
Job satisfaction	.706
Satisfaction with living situation	.726

Appendix C: Histograms

Figure 1

Distribution precarious working conditions combined dataset

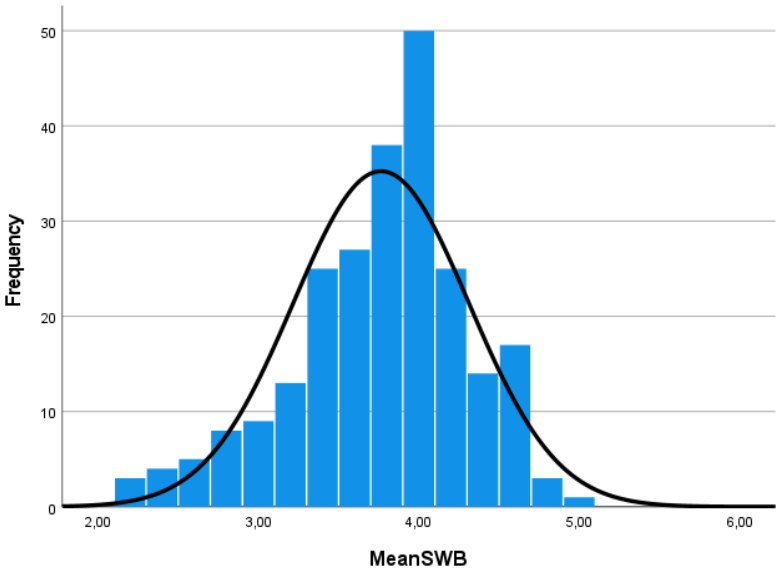


Note. $N = 235$. Mean = 0.63. Standard deviation = 0.747.

0 = experiencing no precarity, 2 = experiencing high levels of precarity

Figure 2

Distribution subjective well-being combined dataset

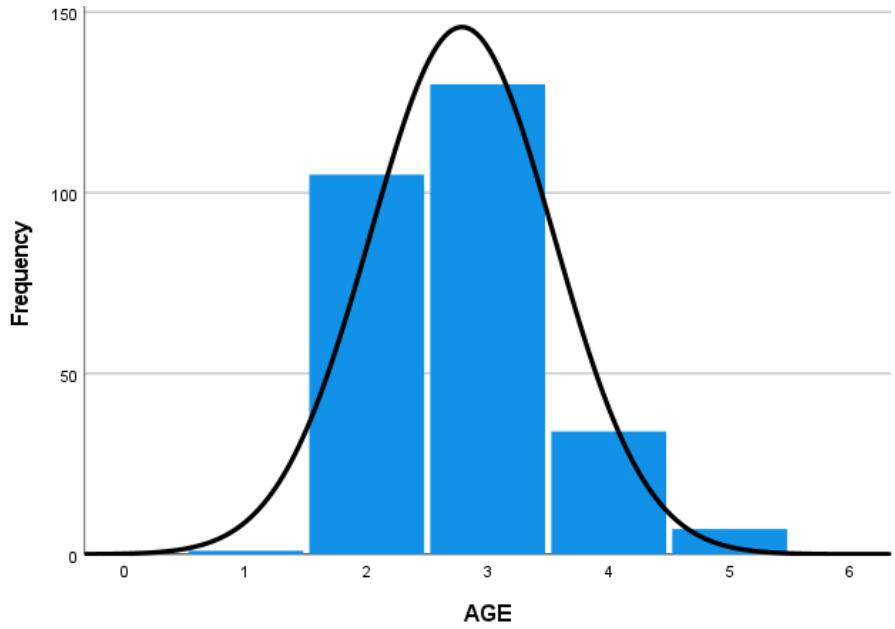


Note. $N = 242$. Mean = 3.75. Standard deviation = 0.548.

1 = lowest level of subjective well-being, 5 = highest levels of subjective well-being

Figure 3

Distribution age combined dataset

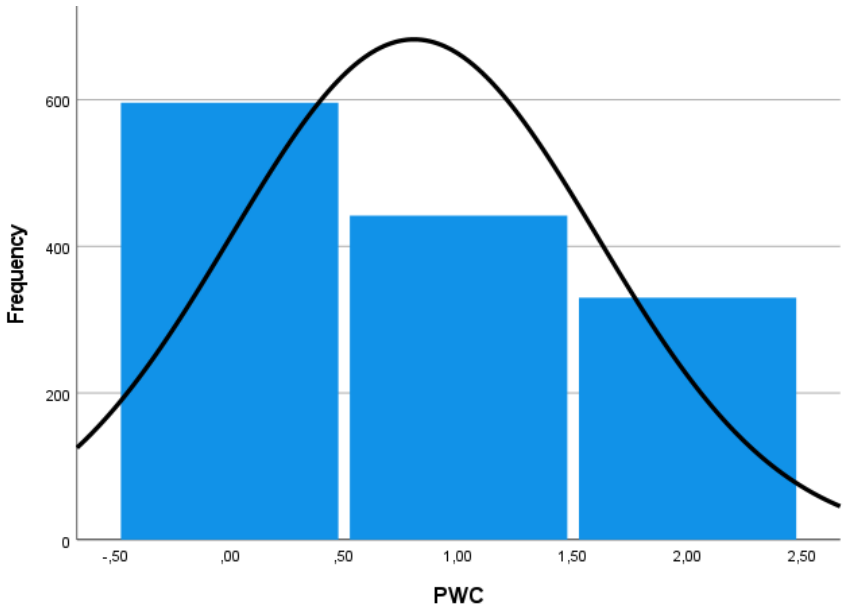


Note. $N = 277$. Mean = 2.79. Standard deviation = 0.758.

1 = 18-24, 2 = 25-34, 3 = 34-49, 4 = 50-64, 5 = 65+

Figure 4

Distribution precarious working conditions wave 1

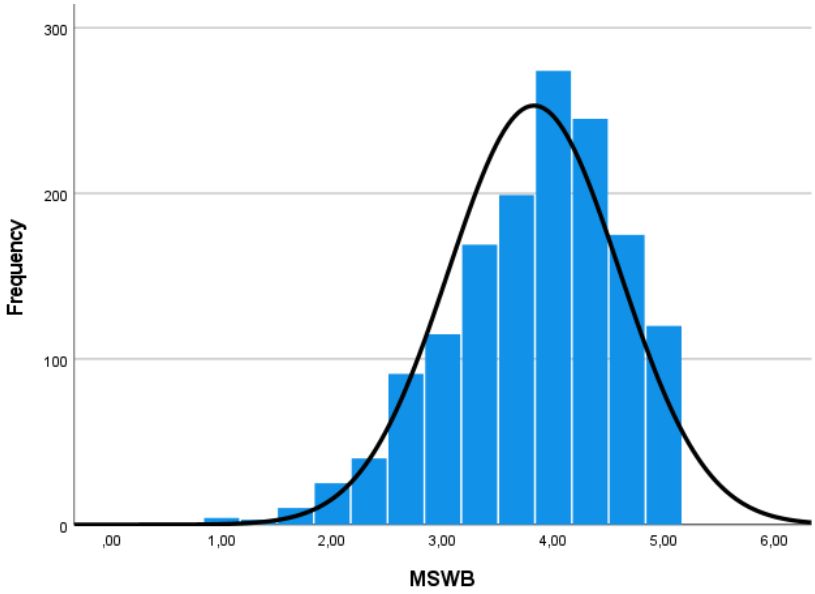


Note. $N = 1368$. Mean = 0.81. Standard deviation = 0.8.

0 = experiencing no precarity, 2 = experiencing high levels of precarity

Figure 5

Distribution material well-being wave 1

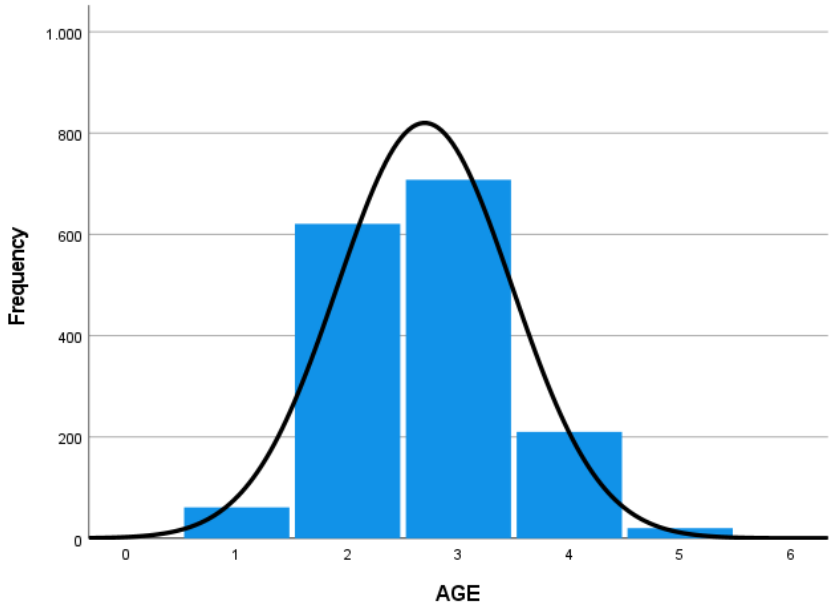


Note. N = 1470. Mean = 3.83. Standard deviation = 0.773.

1 = lowest level of material well-being, 5 = highest levels of material well-being

Figure 6

Distribution age wave 1



Note. N = 1620. Mean = 2.7. Standard deviation = 0.788.

1 = 18-24, 2 = 25-34, 3 = 34-49, 4 = 50-64, 5 = 65+