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Master thesis

Now I must do it myself… but how?

Self-sufficiency and life satisfaction in relation to mental health among unaccompanied minor refugees in the Netherlands

By

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Samenvatting

Alleenstaande minderjarige vluchtelingen (AMV’s) worden geconfronteerd met aanzienlijke uitdagingen die van invloed kunnen zijn op hun mentale gezondheid, wat cruciaal is voor hun welzijn op de lange termijn en succesvolle integratie. Deze studie onderzocht of zelfredzaamheid en levenstevredenheid verband houden met de mentale gezondheid onder AMV’s met een Nederlandse verblijfsvergunning ($N = 53$). Gegevens zijn verzameld op drie jaarlijkse meetmomenten. Zelfredzaamheid (gemeten via de SSM-D-UM) en levenstevredenheid (via de MQLI) zijn op elk meetpunt beoordeeld; de mentale gezondheid (via de MHI-5) is alleen gemeten op meetpunt 3. Geboortecontinent, woonsituatie, leeftijd bij aankomst en aantal maanden in Nederland zijn opgenomen als potentieel relevante demografische variabelen. Analyses omvatten chi-kwadraattoetsen, t-toetsen, ANOVA's, Pearson-correlaties en meervoudige regressieanalyses. De resultaten suggereren dat levenstevredenheid positief verband hield met mentale gezondheid, zelfs na correctie voor demografische variabelen. Daarentegen werd geen bewijs gevonden voor een verband tussen zelfredzaamheid en mentale gezondheid. Een jongere leeftijd bij aankomst was matig geassocieerd met betere mentale gezondheid. Woonsituatie en geboortecontinent lieten geen significante verbanden zien, echter benadrukken verschillen in woonsituatie de behoefte aan extra ondersteuning voor alleenwonende AMV’s. Deze bevindingen benadrukken het belang van levenstevredenheid voor de geestelijke gezondheid van AMV's en suggereren de noodzaak van verder onderzoek naar de rol van zelfredzaamheid en andere contextuele factoren. Inzichten uit dit onderzoek kunnen beleid informeren en hulpverleners ondersteunen bij het verbeteren van de mentale gezondheid van deze kwetsbare groep.

Trefwoorden: Alleenstaande Minderjarige Vluchtelingen, mentale gezondheid, zelfredzaamheid, levenstevredenheid, meervoudige regressieanalyse.

Abstract

Unaccompanied refugee minors (URM) face numerous challenges that may impact their mental health, which is crucial for their long-term well-being and successful integration. This study examined whether self-sufficiency and life satisfaction are related to mental health among URM with a Dutch residence permit ($N = 53$). Data were collected across three annual time points. Self-sufficiency (measured via the SSM-D-UM) and life satisfaction (via the MQLI) were assessed at each time point; mental health (via the MHI-5) was measured only at time point 3. Continent of birth, living situation, age upon arrival and number of months in the Netherlands were included as potentially relevant demographic variables. Analyses included chi-square tests, *t*-tests, ANOVAs, Pearson correlations and multiple regression analysis. Results suggest that life satisfaction was positively related to mental health, even after adjusting for demographic variables. In contrast, no support was found that self-sufficiency relates to mental health. Younger age upon arrival was moderately associated with better mental health outcomes. Living situation and continent of birth did not show significant associations, though differences in living situation emphasize the need for additional support for URM living alone. These findings highlight the importance of life satisfaction for URMs mental health and suggest the need for further research into the role of self-sufficiency, and other contextual factors. Insights from this study can inform policies and support guardians in improving the mental health of this vulnerable group.

Keywords: Unaccompanied Refugee Minors, mental health, self-sufficiency, life satisfaction, multiple regression analysis.

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Introduction

According to the United Nations High Commissioner for Refugees (UNHCR, 2024) at the end of 2023, 117.3 million people had been forcibly displaced people around the world through persecution, conflict, violence and/or human rights violations. High levels of global conflict and poor socio-economic and environmental conditions are leading to the migration of an increasing number of young refugees and migrants to and within Europe (Spaas et al., 2023). These adolescents are called unaccompanied refugee minors (URM) and are defined as a person "who was under the age of 18 on arrival in the host country, whose country of origin is outside the European Union, and who traveled without a parent or other legal caregiver" (Rijksoverheid, n.d.). In this study the term URM will be used to refer to this group. In 2020, a total of 13.590 URM asked for asylum in the European Union. Three years later, in 2023, this number increased to 40.405 (Eurostat, n.d.). These adolescents face significant challenges, such as traumatic experiences, stigmatization, and problematic living conditions, which may negatively impact their mental health (Emmelkamp, 2023b; Earnest et al., 2015). Mental health is a critical factor in their long-term well-being, successful integration into the host society and development towards adulthood (Earnest et al., 2015, Emmelkamp, 2023a). Self-sufficiency and life satisfaction are believed to play a vital role in this process (Fassaert et al., 2013, Willroth et al., 2021), yet limited studies have focused on the relation between self-sufficiency, life satisfaction and mental health among URM. Understanding how these factors interact can provide valuable insights for policymakers, social workers and organizations, supporting this vulnerable group.

URM face a double transition: a life transition to adulthood, and a legal transition to a new country without their parents (Taverna, 2023). Since they arrive in a foreign country and often have to become adults quickly, self-sufficiency is important for these adolescents (Ruitenburg et al., 2022). This period of transitioning to adulthood is one of much importance and change (Tuenter et al., 2022), but one of the least studied periods in the lives of URM (Gimeno-Monterde et al., 2021). Life satisfaction is linked to mental health outcomes in refugee adolescents and tends to decline between ages 17 and 21, possibly reflecting challenges in the transition to adulthood (Willroth et al., 2021). It is important to note that the concept of 'adulthood' is a social construct, and its definition depends on cultural, social and economic factors (Mary, 2014). Differences in cultures could lead to confusion about identity and belonging (Tamis-LeMonda et al., 2008), which may contribute to development of mental health problems (Emmelkamp et al., 2023a). Previous research suggests that URM have a

high vulnerability for developing mental health problems (Bean et al, 2007; Emmelkamp, 2023a; Keles et al., 2016; Tuenter et al., 2022; Kalverboer et al., 2017; Carswell et al., 2011).

URM often lack the familial support that normally helps adolescents transition into adulthood. As a result, they frequently rely on government assistance for housing, education, health care, income and guidance (Rijksoverheid., n.d.; Osgood et al., 2010). These matters are arranged before the age of eighteen, but not after passing this age (Wade, 2011). Limited self-sufficiency can hinder successful integration into the host country (Taverna, 2023), as it may affect the ability to successfully follow an education, earn money and support their family (Ruitenburg et al., 2022). Moreover, research suggests that the level of self-sufficiency plays a key role in shaping the overall well-being of URM (Ruitenburg et al., 2022).

Mental health

According to the World Health Organization (WHO, 2025) Mental health is a state of mental well-being that enables people to cope with the stresses of life, realize their abilities, learn well and work well, and contribute to their community. According to Müller et al. (2019), URM experience more psychological problems impacting their mental health than refugee children who flee with their parents. URM are therefore seen as the most vulnerable subgroup within the group of refugee children (Zijlstra et al., 2019).

At a young age, these adolescents have often already had traumatic experiences, before, after, and during their flight. It appears that in the country of origin or during the flight, there have often been experiences of loss, sexual abuse, exposure to violence, drugs and human trafficking (Emmelkamp, 2023b; Keles et al., 2016; Kulu-Glasgow et al., 2020). These factors may increase the risk of developing psychological disorders, such as psychological distress, emotional stress and depressive symptoms (Bean et al, 2007; Carswell et al., 2011). Keles and colleagues (2016) found that a relatively large population of adolescents retained or developed mental health problems during their stay in the host country, conform other research findings (Bean et al., 2007; Emmelkamp, 2023a; Carswell et al., 2011). Most URM must deal with post-migration stressors, such as finding a home, dealing with immigration policy and experiences of discrimination (Emmelkamp, 2023a). Furthermore, schooling is often disrupted, and educational opportunities decrease (Emmelkamp, 2023a). The absence of attachment and supportive relationships in schools may increase the risk of developing anxiety problems and depressed mood in refugee children (Emmelkamp, 2023a). Post-Traumatic Stress Disorder (PTSD), depression, anxiety, and externalizing behavior appear to be the most common mental health problems among URM

(Heptinstall et al., 2004; Müller et al., 2019). Due to the vulnerability of this group, special care and attention must be paid to protect the development of these adolescents.

Self-sufficiency

Enhancing self-sufficiency in emerging adults may contribute to a more successful transition from adolescence to adulthood (Fassaert et al., 2013). Self-sufficiency is defined as the ability of individuals to attain an acceptable level of functioning regarding various areas of life (Fassaert et al., 2013), such as housing, education, work and income, social relations, physical and mental health (Schwartz-Tayri & Spiri, 2017). Before the age of 18 URM receive organizational help by care providers in achieving this level of functioning, while after passing this age it generally needs to be achieved by the person him/herself. Research shows that certain aspects of self-sufficiency, such as income, substance use (Wahlbeck & Mcdaid, 2012), physical health, Activities of Daily Living (ADLs) (Ohrnberger et al., 2017), social network (Allen et al., 2014) and social support (Seff et al., 2024) are determinants of mental health. Research into what young people of different ethnic backgrounds themselves understand by 'adulthood' showed that ‘being able to take care of yourself’ was mentioned most often (Goodkind et al., 2011), emphasizing the importance of self-sufficiency.

Research of Willroth and colleagues (2021) suggests that elements of self-sufficiency, such as finances, affect mental health. This could be due to difficulties during the transition to adulthood. However, other studies found mixed results regarding mental health during the transition to adulthood (Taverna, 2023; Martinez et al., 2012; Dinisman, 2016). Research from Kalverboer and colleagues (2017) about different care facilities for URM in the Netherlands showed the importance of personal involvement from their guardian and the desire for an affectionate bond that would last after their eighteenth birthday. Most minors were eager to work out plans for the future, but their wishes and the official duties of their guardian did not always align. The lack of these essential conditions, that are important for healthy development, can lead to underdevelopment of coping strategies necessary for growing up into a self-sufficient adult (Kalverboer et al., 2017).

Life satisfaction

Life satisfaction refers to an individual’s overall assessment of their life experiences and contentment. It typically involves a person’s evaluation on various life domains, such as health, education, income, fulfillment and social relationships (Owen, 2025). This definition reflects the view that life satisfaction refers to a subjective evaluation, which is embedded in a cultural, social and ecological context. Researchers note the absence of a universally accepted conceptual definition, with considerable overlap between life satisfaction and quality of life

(Charlemagne-Badal et al., 2015). In this study, life satisfaction is conceptualized as a global subjective assessment of one's quality of life. It was measured using a single-item indicator drawn from the Multicultural Quality of Life Index: 'How satisfied and happy are you with your life in general?' (Mezzich et al., 2011).

Life satisfaction is an important indicator of youth's overall happiness and a key predictor of important life outcomes. For example, low life satisfaction is associated with increased psychopathology, school disengagement, substance abuse and other risky behavior (Willroth et al., 2021). If life satisfaction relates to mental health, influencing life satisfaction (e.g. through education or social relations) could lead to smoother integration and improve prospects of URM (Willroth et al., 2021).

The Dutch situation

In 2023, 5800 URMs asked for asylum in the Netherlands (Eurostat, n.d.). Most of these minors are boys of Syrian, Eritrean and Somali descent (CBS., 2024). In the Netherlands, all minors must be under authority of a guardian. This responsibility lies with youth protection institution Nidos, which ensures that the minor receives shelter and guidance (Nidos, n.d.). Additionally, these minors have the right to receive an education (Zijlstra et al., 2017). Depending on their age and stage in the asylum procedure, URMs are placed in a Process Reception Location (POL), foster family (OWG), a children's residential group (KWG), small residential unit (KWE) or small residential facility (KWV), which differ in size and supervision level (Kulu-Glasgow et al., 2020; Zijlstra et al., 2017). This study focusses on URMs in these forms of residence, or those living independently.

In the final phase of guidance from Nidos, the focus is on future perspective, resilience and self-sufficiency (Schippers, 2017). However, when URMs turn 18, these facilities end, and they must transition into independence (Ruitenburg et al., 2022). Often, they only have less than two years to become self-sufficient in the Dutch society, as most minors arrive in at the age of 16 or later (NJI., 2023). Research shows that the time to prepare for this transition to independence, from eighteen minus to eighteen plus, is short (Wade, 2011; Ruitenburg et al., 2022).

Despite the challenges these URM face, little research has explored how self-sufficiency and life satisfaction relate to their mental health. By addressing this gap, this study aims to inform practice and policy to better support URMs in their transition to adulthood and independence. Rather than viewing mental health in isolation, addressing the broader factors

related to self-sufficiency (Hacquebord, 2023) and life satisfaction (Owen, 2025) can lead to more sustainable and impactful interventions.

The current study

The current study explores the relation of self-sufficiency and life satisfaction with mental health for URM and examines the potential role of age upon arrival, months in the Netherlands, continent of birth and living situation. Figure 1 shows a visual representation of the conceptual model.

The first sub-question describes possible patterns of self-sufficiency and life satisfaction over time: *What are developmental trajectories of self-sufficiency and life satisfaction across the three measurement moments and how do they relate to mental health for URM?* No direction of self-sufficiency was hypothesized as it is expected that an increase or decrease in self-sufficiency depends on multiple factors, such as a smooth transition to 'adulthood' (Taverna, 2023). Research shows that life satisfaction decreased between age 17 to 21 (Willroth et al., 2021). Therefore, it is hypothesized that for life satisfaction, there will be a general decrease over time, reflected in different trajectories.

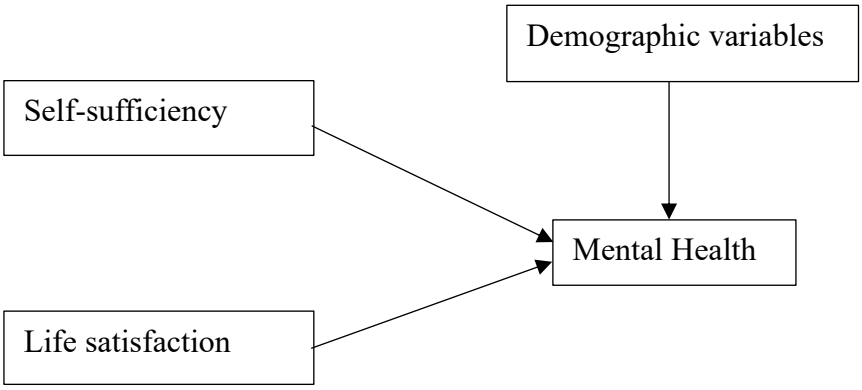
The second sub-question examines how self-sufficiency and life satisfaction relate to mental health: '*To what extent do self-sufficiency and life satisfaction relate to mental health among URM?'* Research shows that opportunities similar to the domains of the self-sufficinency matrix by Fassaert et al. (2013) are determinants of mental health. It is therefore hypothesized that higher self-sufficiency relates to higher mental health. Research suggests that lower life satisfaction is associated with increased psychopathology, school disengagement, substance abuse and other risky behavior (Willroth et al., 2021; Dangmann et al., 2021). Thus, it is hypothesized that life satisfaction is positively related to mental health.

The third, main research question examines whether self-sufficiency and life satisfaction relate to mental health after adjusting for demographic variables: *Are self-sufficiency and life satisfaction associated with mental health among URM, after adjusting for potential confounders?* First, age upon arrival in the Netherlands and the number of months spent in the host country are included as they may impact the process of integration and mental health (Bean et al., 2007). Realmuto et al. (1992) suggests that younger children are protected as they do not yet fully comprehend the magnitude of war related experiences. Second, the continent of birth is included, as experiences before migration and cultural background may influence mental health (Carswell et al., 2011). Third, the living situation in the Netherlands is included as it may determine how cared for and supported they feel. URM living together were more likely to have support available than URM living alone (Kalverboer

et al., 2017). Finally, the presence or absence of assistance is included, as it can play a key role in mental health outcomes (Kalverboer et al., 2017). It is expected that self-sufficiency and life satisfaction will still be associated with mental health after adding potential confounders. By considering these factors, this study aims to provide a more nuanced understanding of how self-sufficiency and life satisfaction relate to mental health of URM.

Figure 1

Self-sufficiency and life satisfaction in relation to mental health, corrected by living situation, continent of birth, age upon arrival and months in the Netherlands: a conceptual model.



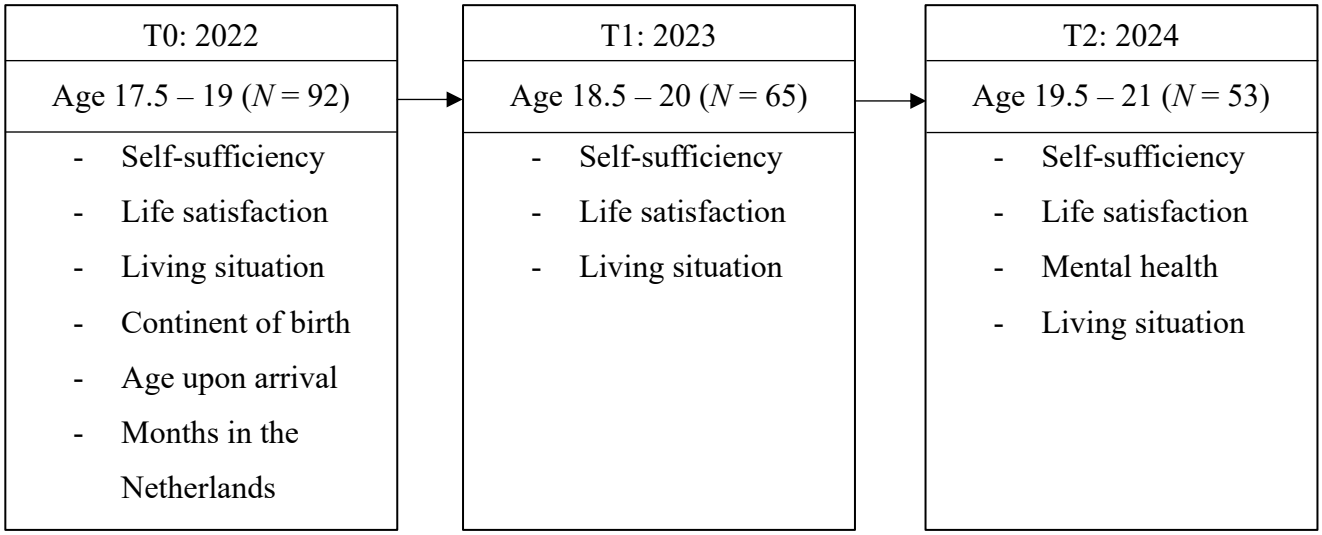
Method

Study design

This research is part of the longitudinal study of L. Hacquebord MSc "*On their own two feet: A study into the transition to adulthood of unaccompanied refugee minors*", which consists of three annual measurement moments: time point 1 (T0: 2022), time point 2, (T1: 2023), and time point 3 (T2: 2024) (see figure 2). The research of L. Hacquebord has been approved by the ethics committee of the Faculty of Behavioral and Social Sciences of the University of Groningen (EC-GMW). In this research, the scores on the various self-sufficiency domains, the assessment of life satisfaction, the mental health outcomes and the demographic characteristics were measured quantitively and through questionnaires. Self-sufficiency and life satisfaction were both measured at all three time points. The demographic independent variables were measured once at time point 1, apart from living situation, which was measured at each time point. The dependent variable mental health was measured once on time point 3.

Figure 2

Visual representation of the research design



Population and sample

The target population consisted of URM, aged between 17.5 and 19 years at time point 1, who had fled to Europe and received a residence permit in the Netherlands. The sample consisted of $N = 92$ at time point 1, $N = 65$ at time point 2, and $N = 53$ at time point 3. This is a convenience sample, since the URM voluntarily registered as participants after being approached. Table 1 represents demographic frequencies at time point 1.

At time point 1, the sample consisted of 8.7% women ($n = 8$) and 91.3% men ($n = 84$). The mean age upon arrival was 15.7 years, and the average time spent in the Netherlands was 18.1 months. All participants originated from countries in Asia and Africa. The largest groups came from Syria ($n = 55$, 59.8%) and Eritrea ($n = 17$, 18.5%). The other participants came from 8 other countries (Afghanistan, Ethiopia, Iran, Yemen, Pakistan, Sierra Leone, Sudan, Somalia). Living situation was grouped into 'living together' (e.g. KWG, OWG or with family) and 'living alone' (e.g. KWE, student housing or independent via COA). At time point 1 most participants lived alone ($n = 51$, 55.4%), primarily in small-scale residential units (KWE, $n = 45$, 48.9%). The rest lived together ($n = 41$, 44.6%), mostly in children's residential groups (KWG, $n = 35$, 38.0%). All but one person received some form of assistance. Due to only one person receiving no assistance, this variable was excluded from further analysis.

Table 1

Demographic characteristics of the sample[a]

Variable		*n*	%
Age upon arrival	9	1	1.1
	12	1	1.1
	14	3	3.3
	15	24	26.1
	16	53	57.6
	17	10	10.9
Months in the Netherlands	5	1	1.1
	6	2	2.2
	7	2	2.2
	8	1	1.1
	9	4	4.3
	10	4	4.3
	11	4	4.3
	12	6	6.5
	13	2	2.2
	14	10	10.9
	15	10	10.9
	16	6	6.5
	17	7	7.6
	18	5	5.4
	19	4	4.3
	20	4	4.3
	21	3	3.3
	22	2	2.2
	23	1	1.1
	24	1	1.1
	25	4	4.3
	27	1	1.1
	29	1	1.1
	31	2	2.2

	34	1	1.1
	37	1	1.1
	41	1	1.1
	60	1	1.1
	112	1	1.1
Continent of birth	Asia	63	68.5
	Africa	29	31.5
Living Situation	Together	41	44.6
	Alone	51	55.4
Assistance	Yes	91	98.9
	No	1	1.1

[a] $N = 92$.

Variables and instruments

Self-sufficiency

A semi-structured interview was conducted at each time point to assess the self-sufficiency of URM. The interview protocol was based on the Self Sufficiency Matrix Dutch version for Unaccompanied Minors (SSM-D-UM), developed by Hacquebord (2023) (Appendix B), which was based on the Dutch version of the SSM (SSM-D) by Fassaert et al. (2013). This is a measurement instrument that has been developed to map the functioning of people in several important domains of life. The SSM-D-UM consists of the following nine domains: education and work, time spent, domestic relations, mental health, physical health, substance use, social network, community involvement, and justice. Based on the answers to the questions from the interview, the main researcher assigned a score on a four-point scale per domain, using an assessment scale. The maximum score is 36 (completely self-sufficient); the minimum score is 9 (not self-sufficient). Research by Hacquebord (2023) into the psychometric properties (interrater reliability and construct validity) of the SSM-D-UM showed substantiate interrater reliability, expressed in Cohen's weighted kappa. The percentages of agreement, varied between 50 to 94, with a mean of 76. The nine domains formed a satisfactory strong scale consisting with a validity sufficient for research ($H = .36$; *rho* = .78) (Hacquebord, 2023).

Life Satisfaction

To map the life satisfaction, the last item of the MQLI – Multicultural Quality of Life Index – about the global perception of quality of life, was used (Mezzich et al., 2011)

(Appendix C). The question: ‘How satisfied and happy are you with your life in general?’ was asked by means of giving a report grade ranging from 1-10. Test-retest reliability for this item resulted in a substantial reliability coefficient of 0.73 (p <.001) (Mezzich et al., 2011). However, he psychometric properties of using this single item in isolation have not been formally validated in previous research.

Mental Health

Mental health was measured using the Mental Health Inventory-5 (MHI-5), a brief five-item subscale of the Short Format 36 (SF-36), an internationally validated measure of general health (Ware & Sherbourne, 1992). The MHI-5 measures general mental health and can be used to screen for symptoms of depression and anxiety (Hoeymans et al., 2004) (see Appendix D). The instrument consists of five questions relating to how people have felt over the past 4 weeks. Each item is rated on a six-point Likert scale ranging from all of the time to none of the time. Responses are transformed into a total score ranging from 0-100 using a standard linear transformation, where higher scores indicate better mental health. A score of 60 or more qualifies a respondent as mentally healthy, while scores less than 60 qualify as mentally unhealthy. The MHI-5 is a valid and reliable tool for assessing general mental health. Its psychometric quality is supported by comparison with another established mental health measure: the General Health Questionnaire (GHQ-12), showing moderate to strong correlation (r = .64, κ = .49; Hoeymans et al., 2004). The MHI-5 also demonstrates good internal consistency (Cronbach's α = .84; McCabe et al., 1996). Given its brevity, strong psychometric properties, and open accessibility, the MHI-5 is well-suited for research.

Demographic questionnaire

Demographic information was collected via a questionnaire (see Appendix A). For the current study the following demographic variables were included: continent of birth (Asia or Africa, measured based on the region in which the country of birth is located), age upon arrival (calculated from the date of birth and date of arrival in the Netherlands), months in the Netherlands (calculated from the date of arrival until the date of the first appointment) and living situation (measured by living together or alone, based on type of residence). As living situation was a time-varying variable, only the situation at time point 3 was used in the analyses, as this best reflects the participant’s current context and was thus most relevant for interpreting mental health outcomes.

Procedure

URMs aged 17.5 to 18 were recruited via Nidos, which had created a list of young people who met these inclusion criteria. Mentors and guardians were asked to inform the URMs about the study using an information letter and video. Interested participants could contact the researcher directly or have contacts shared by the guardian. In addition, Nidos contract partners could refer eligible youth to the researcher.

URM aged 18.5 to 19 were no longer under guardianship of Nidos and were recruited via the association of Dutch municipalities (VNG) and several social organizations specifically for this target group, like Vluchtelingenwerk Nederland (Refugee Work Netherlands). Contact persons at these organizations received an information letter and video to share with interested URMs. Contact details of URM who wanted to participate in the research were shared with the researcher by the contact person of the organization or the interested URM themselves.

An appointment was scheduled with interested URMs at a location that was convenient for the young person (e.g. the young person's home or a Nidos office). It was determined whether the young person had sufficient command of the Dutch language or whether a telephone interpreter had to be used. At the start of each appointment, informed consent was obtained, and participants were informed about their rights, including the right to withdraw at any time. Interviews were conducted by the researcher or a master student and, if permitted, audio recorded. Otherwise, extensive notes were taken. Questionnaires were completed on a tablet, with or without interpreter support. After each measurement, participants received a €10 gift voucher.

All audio-recorded interviews were transcribed (using Sonix, F4), coded (in ATLAS.ti), and analyzed by the main researcher. Only interviews with consent for recording were transcribed. All data (recordings, transcripts and notes) were saved on a secure hard drive from the University of Groningen or kept in a locked cabinet at the university. This way the privacy of the participants was guaranteed. The data has been used to gain insight into the development of self-sufficiency, the development of life satisfaction and mental health results among URM.

Analysis plan

All data were analyzed using IBM SPSS Statistics 28. First, a missing data analysis was conducted to investigate the characteristics of the attrition. Participants who dropped out after time point 1 or 2 (group 1) were compared with those who completed all time points (group 2) on self-sufficiency, life satisfaction, living situation at timepoint 1, continent of

birth, age upon arrival and months in the Netherlands. Chi-square tests were used to assess group differences on categorical variables, and independent samples *t*-tests were used to compare means of continuous variables between the two groups. Both statistical significance and practical relevance were considered when interpreting the results. All subsequent analyses were conducted using data from the 53 pariticpants who completed all three time points.

To answer *sub-question 1*, boxplots were created to describe the distribution, mean, median, standard deviation, and potential outliers, of self-sufficiency and life satisfaction across the three time points. To explore longitudinal trends and individual trajectories over time, line graphs were created. Participants were grouped based on direction, visualized using clustered boxplots. Group differences in mental health were assessed using independent samples *t*-tests and ANOVAs.

Pearson correlations were calculated between mental health at time point 3, and both self-sufficiency and life satisfaction at each time point. The time point with the strongest correlation was considered the best predictor of mental health at time point 3. The chosen time point was then used to answer *sub-question 2*. Linearity and outliers were checked via scatterplots. Correlation coefficients were interpreted as follows: <.10 = very weak, .10 - .30 = weak, .30 - .50 = moderate, .50 - .70 = strong, and ≥.70 = very strong.

Bivariate analyses explored associations between background variables and mental health. Independent samples *t*-tests were created to compare mental health means between participants from Asia and Africa, and between those living together versus alone at time point 3. Boxplots visualized mental health distributions across these groups. Pearson correlations and scatterplots were used to examine the direction and linearity of the relations between mental health and both age upon arrival and months spent in the Netherlands.

To answer the *third main research question*, a multiple regression analysis was conducted in three steps. In model 1, self-sufficiency and life satisfaction on the chosen time point (sub-question 2) were entered as predictors of mental health. In model 2, the same predictors were included, along with potential confounders, which were identified through prior bivariate analyses. In addition, background variables identified as relevant in the missing data analysis were included as potential confounders. In model 3, self-sufficiency and life satisfaction were entered along with the only confounders that were found to be significant in model 2, to evaluate the most parsimonious model. This approach allowed for evaluating the unique contribution of self-sufficiency and life satisfaction, both before and after adjusting for relevant background characteristics. Effect sizes were interpreted according to Cohen's (1988) guidelines: standardized regression coefficients (β) of .10 indicate small effects, .30 medium

effects, and .50 large effects. A significance level of .05 was applied, and 95% confidence intervals were used to assess effect sizes and possible the relevance of effects. Model fit was evaluated using R^2 and adjusted R^2 values.

Assumptions of linearity were assessed using scatterplots. Homoscedasticity was examined via a residuals plot. To check for influential cases and outliers, standardized residuals and Cook's Distance were examined. Independence of observations was assessed using the Durbin-Watson statistic, with values between 1.5 and 2.5 considered to indicate sufficient independence. The assumption of multicollinearity was evaluated via Variance Inflation Factor (VIF) statistics, with values below 4 and close to 1 indicating acceptable levels. Normality was checked using a normal probability P-P plot.

Results

Missing data

Of the original sample (N = 92, 100%), 39 participants (42.4%) dropped out after time point 1 (n = 27, 29.4%) or 2 (n = 12, 13%) (group 1). The remaining 53 participants (57.6%) completed all three measurement moments (group 2).

For age upon arrival a significant difference was found, t (90) = -1.24, p = .046, 95% CI [-0.71, 0.17]. On average, the dropouts (M = 15.8 years, SD = 0.6) were just over three months older than participants who completed all time points (M = 15.6 years, SD = 1.3). The relatively wide confidence interval suggests the difference may reflect a small to moderate effect. For living situation at time point 1, a significant difference was found, χ^2 (1) = 3.85, p = .050. Group 1 consisted of a higher proportion of participants living together (n = 22, 56.4%) compared to group 2 (n = 19, 35.8%), while group 2 had relatively more participants living alone (n = 34, 64.2%) than group 1 (n = 17, 43.6%). For further analyses, it was decided to include time point 3 of this variable based on this outcome in connection with its practical relevance. At the third time point, most participants who lived together lived with their families (n = 22, 41.5%), and most of the respondents who lived alone lived independently via COA (n = 16, 30.2%).

For continent of birth difference was not statistically significant, χ^2 (1) = 2.24, p = .14, but group 1 included proportionally more participants from Asia (n = 30, 76.9%) than group 2 (n = 33, 62.3%). While group 2 had more participants from Africa (n = 20, 37.7%) than group 1 (n = 9, 23.1%). Although not significant, these differences suggest that continent of birth may still be a relevant background variable to consider. No significant nor relevant differences were found between group 1 and 2 for self-sufficiency, t (89) = -0.28, p = .581, 95% CI [-1.64, 1.23], life satisfaction, t(86) = -0.50, p = .617, 95% CI [-1.02, 0.61], and

months in the Netherlands, $t(90) = 0.60$, $p = .159$, 95% CI [-3.73, 6.97]. These variables probably did not play a systematic role in the dropout.

In summary, no significant nor relevant differences were found between group 1 and 2 for self-sufficiency, life satisfaction, or months in the Netherlands. However, age upon arrival and living situation differed significantly, and continent of birth showed potential practical relevance. These findings suggest that some background variables may be associated with attrition.

Sub-question 1: Developmental trajectories of self-sufficiency and life satisfaction across the three time points

As figure 3 shows, there is a slight upward trend in self-sufficiency scores across the three time points: $M = 29.3$ ($SD = 3.3$) at time point 1, $M = 30.4$ ($SD = 4.0$) at time point 2, and $M = 30.6$ ($SD = 2.7$) at time point 3. The overall scores ranged from 17 to 35. The median increased slightly from time point 1 to 2 and then remained stable at time point 3. At time points 1 and 2, several outliers were observed at the lower end of the scale, indicating that a few participants scored noticeably lower than the rest. Figure 4 displays a similar upward trend for life satisfaction: M = 6.9 ($SD = 1.9$) at time point 1, M = 7.6 ($SD = 1.7$) at time point 2, and M = 8.1 ($SD = 1.4$) at time point 3. The median increased between the first two time points and remained stable at time point 3. The spread of the scores was greatest at time point 1 and gradually became smaller at time points 2 and 3, indicating reduced variability over time.

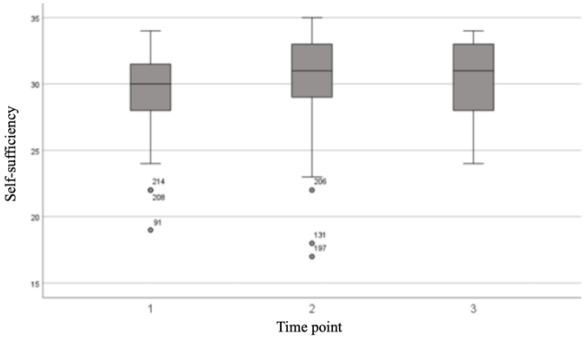
Visual inspection of individual line graphs revealed various trajectories in both self-sufficiency and life satisfaction, which were categorized into three groups of patterns: increasing, decreasing, or constant (see appendix E). In classification, the change between time points 2 and 3 was chosen as most decisive for the categorization. Figure 5 shows the distribution of mental health scores across these patterns, separated for life satisfaction and self-sufficiency. Mental health scores ranged from 36 to 100. The median mental health score is between 64 and 66 across all groups, with exception from the self-sufficiency decreasing group, where the median is notably higher at 74. Most trajectories for life satisfaction showed an increasing pattern ($n = 37$), while only two participants demonstrated a decreasing trajectory (see figure 5). This pattern does not align with the initial hypothesis.

Because the constant group for life satisfaction was too small to include in comparisons, only the increasing and decreasing group of life satisfaction were compared. No significant differences were found between these groups, $t\ (49) = 0.21$, $p = .836$, 95% BI [-9.87, 12,16]. For self-sufficiency the increasing, decreasing and constant group were

compared. Although no significant differences in mental health were found between the groups, F (2, 47) = 0.43, p = .652, the decreasing group showed a slightly higher mean mental health score (M = 73.2, SD = 14.7) compared to the increasing (M = 67.3, SD = 18.5) and constant groups (M = 67.6, SD = 17.5).

Figure 3

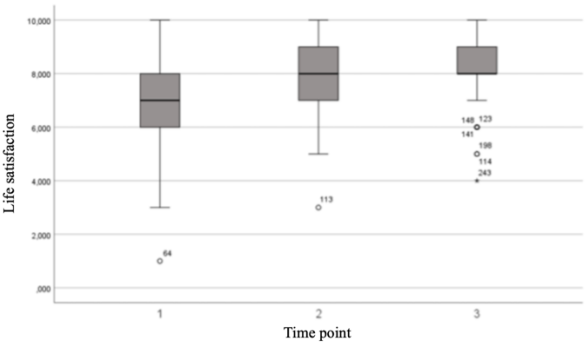
Boxplots per time point of self-sufficiency



Note. At time point 1 data were missing for three participants (n = 50)

Figure 4

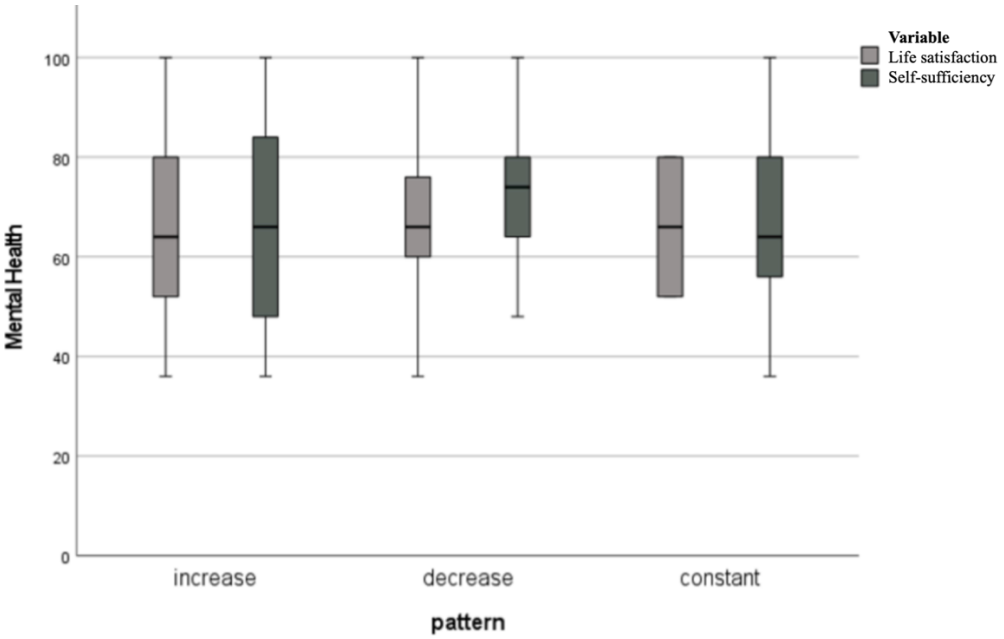
Boxplots per time point of life satisfaction



Note. At time point 1 data were missing for one participant (n = 52); at time point 2 data were missing for two participants (n = 51).

Figure 5

Clustered boxplot of mental health per pattern, separated for life satisfaction (LS) and self-sufficiency (SS)[a]



Note. Group sizes: increase (LS n = 37, SS n = 18), decrease (LS n = 14, SS n = 11), constant (LS n = 2, SS n = 22).

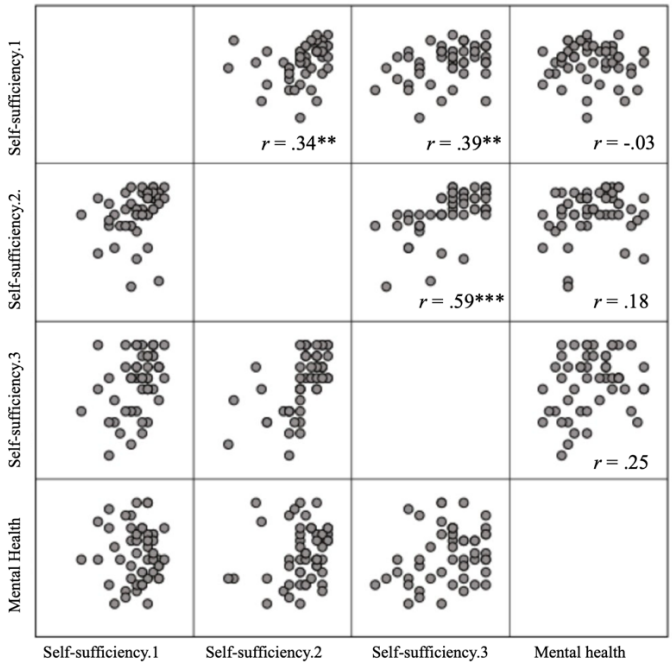
[a] Two participants had missing data on self-sufficiency at time point 2, resulting in complete data on self-sufficiency patterns for 51 participants.

Sub-question 2: Bivariate relation of self-sufficiency and life satisfaction with mental health

As shown in figure 6, the correlations of self-sufficiency with mental health were not significant at any of the three time points. The third time point demonstrated the strongest, albeit weak to moderate, positive correlation with mental health, r (53) = .25, p = .077, and was selected for further analyses. This suggests that self-sufficiency measured closest to the mental health assessment may be most relevant, although the overall relation remains limited. The hypothesized relation was not found based on the analysis. As shown in figure 7, all correlations of life satisfaction with mental health were significant and increased in strength over time. The third time point showed the strongest positive correlation with mental health r (53) = .51, p < .001, and was selected for further analyses. The strength of the positive correlation suggests that higher levels of reported life satisfaction were associated with better mental health outcomes, supporting the expected association.

Figure 6

Scatter matrix of self-sufficiency scores per time point with mental health

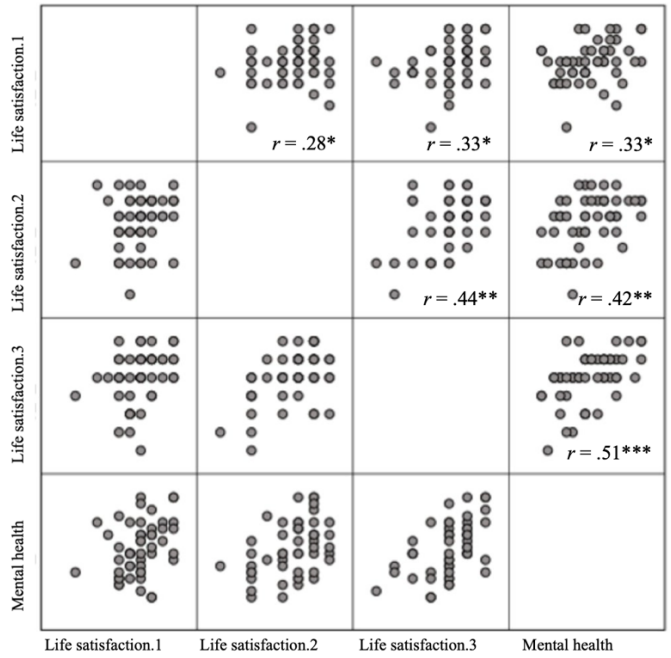


Note. Pearson correlations are shown at the bottom right.

* $p < .05$, ** $p < .01$, *** $p < .001$

Figure 7

Scatter matrix of life satisfaction scores per time point with mental health



Note. Pearson correlations are shown at the bottom right.

* $p < .05$, ** $p < .01$, *** $p < .001$

Bivariate relations between the demographic variables and mental health

Bivariate analyses between the demographic variables and mental health revealed non-significant results for continent of birth, living situation at time point 3, and months in the Netherlands, but a significant result for age upon arrival (see table 2).

For continent of birth, mean mental health scores were 68.5 (*SD* = 19.4) for participants from Asia, and 66.2 (*SD* = 13.1) for those from Africa. As shown in Figure 8, mental health scores among participants from Asia showed greater variability, indicating a larger spread of scores within that group. Regarding living situation, participants living together had higher mean mental health scores (*M* = 71.3, *SD* = 18.0) than those living alone (*M* = 63.9, *SD* = 15.8). Figure 9 shows a slightly higher distribution for the living together group. The wide 95% CI [–1.93, 16.76] suggests substantial uncertainty around the effect size, ranging from negligible to potentially moderate or large. Living situation is therefore a possible predictor of mental health. Number of months in the Netherlands was non-significantly correlated with mental health, *r* (53) = .24, *p* = .079. The confidence interval suggests a possibly moderate positive relation, with some uncertainty about the actual direction and strength of the association. By contrast, age upon arrival in the Netherlands showed a moderate, negative and significant correlation with mental health, *r* (53) = -.39, *p* = .004.

In summary, continent of birth does not appear to be related to mental health, while living situation, age upon arrival and months in the Netherlands may be relevant factors.

Table 2

Test statistics of demographic variables with mental health

Variable	Test statistic	*p*	95% CI
Continent of birth	*t* (51) = 0.51	.611	-7.57, 12.14
Living situation	*t* (51) = 1.59	.117	-1.93, 16.76
Age upon arrival	*r* (53) = -.39	.004**	-0.60, -0.14
Months in the Netherlands	*r* (53) = .24	.079	-0.03, 0.48

Note. For t-tests the 95% CI refers to the confidence interval of the mean difference in mental health between the groups. For correlations, the 95% CI refers to the confidence interval of the correlation coefficient.

* $p < .05$, ** $p < .01$, *** $p < .001$

Figure 8

Boxplot of the distribution of mental health for continent of birth

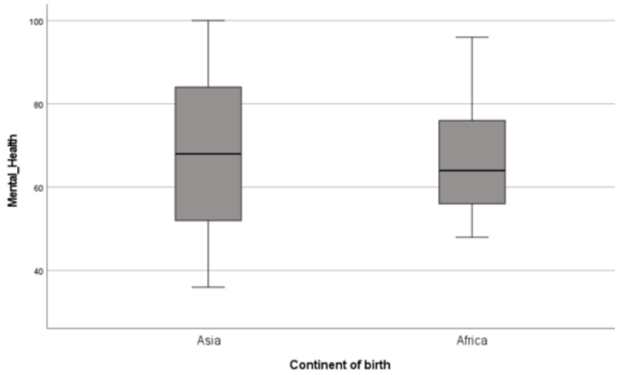
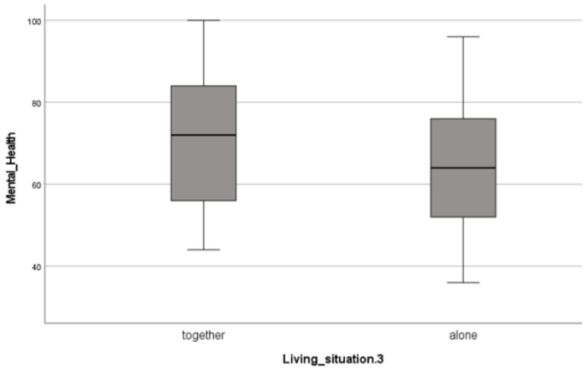


Figure 9

Boxplot of the distribution of mental health for living situation



Main question 3: Multiple regression analysis

The results of the regression analyses are shown in Table 3. Model 1 is significant, F (2, 50) = 8.60, p <.001, and explains 22.6% of the variance in mental health (adjusted R^2 = .226). Life satisfaction is positively significantly related to mental health with a medium to large effect (β = 0.49). In contrast, self-sufficiency is not (β = 0.03).

All demographic variables were included as confounders in model 2 because of their potential relevance as demonstrated by the missing data analysis and prior bivariate analyses. Model 2 is also significant, F (6, 46) = 5.36, p <.001, with an increased explained variance of 33.5% (adjusted R^2 = .335). Life satisfaction (β = 0.37) and age upon arrival (β = -0.59) are significantly related to mental health; self-sufficiency (β = 0.14), months in the Netherlands, living situation and continent of birth are not.

Model 3 includes only the main variables (self-sufficiency and life satisfaction) together with the single significant demographic variable from model 2, age upon arrival. This model is significant, F (3, 49) = 9.85, p <.001, and explains 33.8% of the variance (adjusted R^2 = .338). Within this more parsimonious model, life satisfaction (β = 0.42) and age upon arrival (β = -0.35) remain significant predictors with medium to large effects, while self-sufficiency remains non-significant (β = 0.10). In model 3, the standardized coefficient for life satisfaction increased, while the effect of age upon arrival decreased compared to model 2. This suggests that the unique contribution of life satisfaction became more prominent when non-significant demographic variables were excluded, and that the effect of age upon arrival may have partly overlapped with these variables.

The assumptions for model 3 have been checked. Linearity was confirmed, as no non-linear patterns were observed (see figures 6, 7 and Appendix F). As figure 10 shows, residuals were evenly distributed around 0 (between -2 and 2), and although some variation point density existed, this was not considered a serious violation of homoscedasticity given the sample size. The residuals plot indicated that no standardized residuals exceeded 3, and no cases had a Cook's Distance greater than 1, indicating no influential outliers. Durbin-Watson statistics (1.94) confirmed independence of residuals. All VIF values ranged from 1.04 to 1.27, indicating multicollinearity assumption was met. The P-P plot (see figure 11) indicates a slight deviation from normality, but with all other assumptions met and a sufficient sample size (n = 53), the regression results can be considered robust to this deviation from normality.

Table 3

Standard multiple regression

	Model 1			Model 2			Model 3		
	B (se)	95% CI	*p*	B (se)	95% CI	*p*	B(se)	95% CI	*p*
Constant	12.31 (24.11)	-36.11, 60.73	.612	135.57 (54.77)	25.32, 245.82	.017 *	81.56 (31.70)	17.87, 145.25	.013 *
Self-sufficiency	0.22 (0.87)	-1.52, 1.96	.801	0.92 (0.86)	-0.80, 2.64	.287	0.62 (0.81)	-1.01, 2.26	.448
Life satisfaction	6.00 (1.66)	2.68, 9.33	<.001 ***	4.49 (1.68)	1.10, 7.88	.010 **	5.17 (1.55)	2.05, 8.29	.002 **
Age upon arrival				-8.05 (3.05)	-14.19, -1.90	.011 *	-4.81 (1.57)	-7.96, 1.67	.003 **
Months in the Netherlands				-2.90 (0.25)	-0.78, 0,20	.244			
Living situation				-3.78 (4.79)	-13.42, 5.86	.434			
Continent of birth				-0.61 (4.68)	-10.94, 7.62	.897			
R^2 and adj. R^2	.256, .226			.411, .335			.376, .338		

Note. * $p < .05$, ** $p < .01$, *** $p < .001$

Figure 10

Residual plot

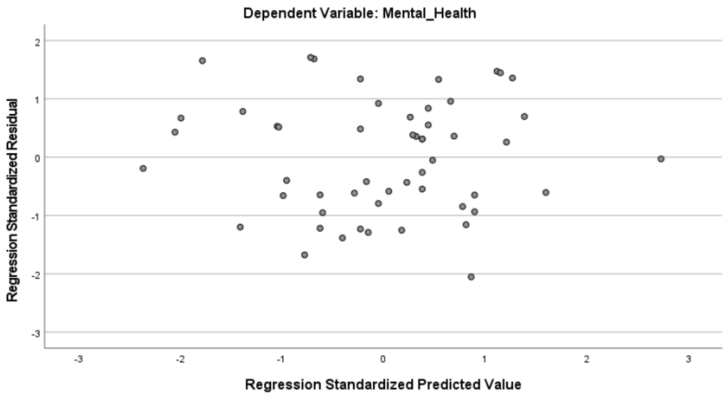
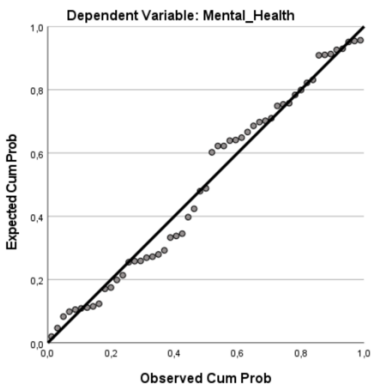


Figure 11

P-P plot



Discussion

This study sought to answer the question: '*To what extent do self-sufficiency and life satisfaction relate to mental health for unaccompanied refugee minors?'* No relation was found between self-sufficiency and mental health, and no strong bivariate associations were found at any of the three time points. In contrast, life satisfaction positively related to mental health, even after adjusting for demographic variables. Additionally, age upon arrival showed a moderate, negative association with mental health, indicating that younger age upon arrival was linked to more favorable outcomes.

Reflection on the findings

Both self-sufficiency and life satisfaction showed upward trends time, suggesting overall positive adjustment. However, individual trajectories varied, with some participants showing stable or even decreasing scores, indicating that the general increase masks diverse personal experiences. Notably, the increase in life satisfaction contrasts with the hypothesis that life satisfaction declines over time and contradicts with previous findings (Willroth et al., 2021). A possible explanation is that life satisfaction increased as these participants became more accustomed to the new culture and host country (Bean et al., 2007).

The hypothesis that higher self-sufficiency is associated with better mental health was not supported. Despite slight increase in self-sufficiency over time, its association with mental health was weak and non-significant, contrasting with earlier studies (Wahlbeck & Mcdaid, 2012, Ohrnberger et al., 2017, Allen et al., 2014; Seff et al., 2024). This suggests that self-sufficiency, as operationalized in this study, may not directly reflect psychological well-being in this population, or that other factors may have mediated the relation. The hypothesis that higher life satisfaction would be associated with better mental health was supported, aligning

with previous research that lower life satisfaction is associated with increased psychological distress (Willroth, et al., 2021; Dangmann et al., 2021).

Age upon arrival was associated with mental health, supporting previous findings that earlier arrival can facilitate better adjustment and integration (Bean et al., 2007; Realmuto et al.,1992). Younger refugees may benefit longer form the structure, social support and opportunities that Nidos provides and have more time to prepare for the transition to adulthood (Ruitenburg et al., 2022). No significant relation was found between living situation and mental health. However, mental health mean scores were higher for URM living together (M = 71.3) compared to those living alone (M = 63.9). Although this result was not significant, the wide confidence interval suggests a potentially small to moderate effect, which further emphasizes the need for support regarding mental health for URM who live alone, conform previous research (Zijlstra et al., 2017). The regression model did not reveal a significant outcome for months in the Netherlands, suggesting that number of months spent in the Netherlands does not relate to mental health. It is notable that life satisfaction did increase over time and was highly correlated with mental health. This suggests that time alone is not a sufficient explanation for improved mental health. Perhaps the quality of that time, reflected in increase of life satisfaction, may be a more meaningful factor (Willroth et al., 2021).

Strengths and limitations

A strength of this study is its partially longitudinal design, which allowed for an exploration of individual trends in self-sufficiency and life satisfaction. However, the line graphs were roughly divided into different groups, and the time points are one year apart. Therefore, fluctuations in self-sufficiency and life satisfaction may be more dynamic than can be captured through annual measurement moments. Additionally, the line graphs may oversimplify the diversity of individual patterns. The primary research question was addressed cross-sectionally, meaning causal between self-sufficiency, life satisfaction, and mental health cannot be made.

Secondly, grouping countries of birth into the broad categories Asia and Africa may obscure important within-group differences, as these labels group together individuals with highly diverse cultural, socio-political, and migration backgrounds. Individual migration experiences, such as experiences of trauma and a loss of culture and support, may be more relevant to mental health than continent alone (Carswell et al., 2011). Furthermore, selective attrition may have biased the results and poses a threat to internal validity. Dropouts were more likely to come from Asia, were on average older upon arrival in the Netherlands and more likely to live together. However, to account for this, these variables were included as

covariates in the regression analyses, thereby partially correcting for potential bias. A strength of the study was the stepwise regression model, using both unadjusted and adjusted models, which allowed for insights into both the unique and shared contribution of the predictors.

The relatively small sample ($N = 53$) limited statistical power and may explain the lack of significant findings in some of the analyses, such as outcomes regarding living situation. Generalizability and external validity are limited due to the sample of predominantly male (91%) participants from Syria or Eritrea. Recruitment was non-random and largely dependent on the cooperation of Nidos, likely excluding the most vulnerable or hard-to-reach URMs.

A strength of the study was the use of validated instruments (SSM-D-UM, MQLI, MHI-5), which increased the construct validity of this study. The SSM-D-UM was scored by a Dutch researcher, which may have introduced cultural bias. Differences in interpretations of the nine self-sufficiency domains between the researcher and participants could pose a threat to construct validity (Taverna, 2023). Furthermore, the use of only nine of the original thirteen domains of the SSM-D-UM limits its content validity, as not all aspects of self-sufficiency were included. Life satisfaction was assessed using a single item from the MQLI. What constitutes a 'good life' may differ significantly between individuals and cultural backgrounds, affecting construct validity. Mental health was measured using the MHI-5, which is an effective and validated screening tool with good internal consistency. However, due to its brevity, it provides only a global indication of psychological well-being and may limit its ability to capture the full complexity of mental health issues relevant to URM.

Recommendations for research, policy and practice

Future studies should aim to include larger and more diverse samples including more female participants broader country representation to increase statistical power generalizability. This may be facilitated through stronger collaboration with national organizations, such as Nidos or governmental bodies. Standardized inclusion procedures across different care settings could help improve both reach and generalizability. Secondly, frequent data collection at shorter intervals is recommended to capture dynamic changes in self-sufficiency and life satisfaction that may be missed in annual assessments. Incorporating mixed-methods designs that include qualitative input from URMs is recommended to deepen understanding into how URMs define self-sufficiency and well-being, and what they perceive as meaningful support or barriers. Such mixed-method approaches would not only enrich the

data but also give voice to the target population, allowing for more inclusive and context-sensitive research and policy development.

Practical implications of the study findings include that policy makers are recommended to extend the structural support beyond the age of 18, enabling sustained guidance and resources during this critical transition period. This gives URM more time to prepare for independence, which is essential for a successful integration and higher mental health.

Furthermore, due to the strong association between life satisfaction and mental health, practitioners should prioritize activities that enhance life satisfaction. Given the subjective individual nature of life satisfaction, interventions should allow room for personal preferences and values. Identifying factors linked to higher life satisfaction among these adolescents can support the development of culturally sensitive activities in schools and residential facilities tailored to the needs of URMs, to improve their well-being. However, supporting URM at individual level requires flexibility, time and recourses, which is difficult given the high workload and limited capacity within the youth care system (Langenberg et al., 2023). Nevertheless, since life satisfaction can be assessed with a single question, it provides an accessible and time-efficient way to obtain an initial indication of potential mental health problems.

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Appendix A.

Demographic questionnaire

Algemeen

- Geslacht
  - o Man
  - o Vrouw
  - o Anders

- Geboortedatum: …

- Geboorteland: …

- Heb je nog in andere landen gewoond voordat je naar Nederland kwam?
  - o Nee
  - o Ja
    - ▪ Welk(e)? …

- Datum aankomst in Nederland: …

- Verblijfsvergunning sinds: … [datum]

- Opvangvorm:
  - o OWG
  - o KWG
  - o KWV
  - o Anders: …

- Woonplaats: … [gemeente]

- Aantal voogden: …

- Bezig met gezinshereniging:
  - o Nee
  - o Ja
    - ▪ Status: …

Onderwijs

- Onderwijs voor aankomst in Nederland:
  - • Aantal jaren: …
  - • Soort onderwijs: …

- Huidige opleiding:

  - o ISK
  - o MBO, niveau 1/2/3/4
  - o VMBO, basis/kader/gl/theoretisch
  - o Havo
  - o VWO
  - o HBO
  - o Universiteit
  - o Geen
  - o Anders: …

- Opleiding afgerond:
  - o ISK
  - o MBO, niveau 1/2/3/4
  - o VMBO, basis/kader/gl/theoretisch
  - o Havo
  - o VWO
  - o HBO
  - o Universiteit
  - o Geen
  - o Anders: …

Werk

- Soort werk (sector):

- Soort contract
  - o zwart/wit
  - o bepaalde/onbepaalde tijd

- Aantal uren:
  - o <12 uur per week
  - o 13-24 uur per week
  - o 25-35 uur per week
  - o >36 uur per week

Hulpverlening

- Ik krijg hulp van: (meerdere antwoorden mogelijk)
  - □ Voogd
  - □ Gemeente
  - □ Opvangouder(s)
  - □ Mentor
  - □ Vrijwilliger
  - □ Niemand
  - □ Anders: …

- Zij helpen mij vooral met:
  - Persoon 1:
  - Persoon 2:
  - Persoon 3:

- Zij helpen mij … uren per week/maand
  - Persoon 1:
  - Persoon 2:
  - Persoon 3:

Appendix B.

SSM-D-UM

		ONVOLDOENDE	MATIG	VOLDOENDE	GOED
Financiën		Maandelijks te weinig geld om basisbehoeften te betalen en groeiende schulden			Ruimte om te sparen Geen schulden
Werk en opleiding	Leerplichtigen	Geen school/opleiding			Opleiding > startkwalificatie
	Niet-leerplichtigen	Geen school en geen werk			Vast werk, naar vermogen, ≥ 32 uur *of* Opleiding naar wens en vermogen
Tijdsbesteding		Geen activiteiten *of* Geen structuur en omgekeerd dag-nacht ritme			Zowel plezierige als nuttige activiteiten, naar tevredenheid en veel structuur en regelmaat
Huisvesting		Dakloos / Dreigende huisuitzetting *of* Onveilige huisvesting			Veilige, stabiele huisvesting met autonomie die past bij leeftijd/situatie
Huiselijke relaties		Negatieve invloed van of richting huisgenoten en geen actie om negatieve interacties aan te pakken *of* Huiselijk geweld			Steun van huisgenoten, open communicatie *of* Woont alleen (naar tevredenheid)
Mentale gezondheid		Dagelijks functioneren ernstig beperkt Geen behandeling of minimale behandeltrouw			Geen beperkingen in dagelijks functioneren
Lichamelijke gezondheid		Dagelijks functioneren ernstig beperkt Geen behandeling of minimale behandeltrouw			Lichamelijk gezond
Middelengebruik		Niet zonder middelen kunnen en dagelijks functioneren hierdoor beperkt Geen behandeling of minimale behandeltrouw			Geen afhankelijkheid van middelen
ADL (persoonlijke hygiëne, inkopen doen, koken, vervoeren, huishoudelijk werk, administratie, post)		Uitvoering onvoldoende			Uitvoering alle gebieden, zonder hulp
Sociaal netwerk		Contacten overwegend gespannen *of* Geen contacten			Contacten overwegend steunend en harmonieus Kan – naar behoefte – over alles praten met vrienden/familie
Deelname aan de maatschappij		Geen participatie			Veel participatie (>1 regelmatige activiteit buitenshuis)
Kennis van de maatschappij		Geen kennis van instanties en kan niet zelf contact leggen Niet op de hoogte van relevante van wet- en regelgeving			Kent organisaties/instanties die bij de leeftijd/situatie horen en kan zelfstandig contact leggen Is op de hoogte van relevante van wet- en regelgeving
Justitie		Strafblad; meerdere delicten			Geen contact met politie/justitie

Appendix C.

MQLI

Multicultural Quality of Life Index

(Mezzich, Cohen, Ruipérez, Liu & Yoon, 1999)

Subject Version

Subject Name: _____ Subject Code: _____ **Average score**

Age: _____ years Gender: ☐Female ☐Male Interviewer: _____

Ethnic group: _____ Date: _____ ____. ____

Instructions: Please indicate the quality of your health and life at present, from "poor" to "excellent", by placing an X on any of the ten points on the line for each of the following items:

1. **Physical Well-being** (feeling energetic, free of pain and physical problems)

Poor Excellent
1 2 3 4 5 6 7 8 9 10

2. **Psychological/Emotional Well-being** (feeling good, comfortable with yourself)

Poor Excellent
1 2 3 4 5 6 7 8 9 10

3. **Self-Care and Independent Functioning** (carrying out daily living tasks; making own decisions)

Poor Excellent
1 2 3 4 5 6 7 8 9 10

4. **Occupational Functioning** (able to carry out work, school and homemaking duties)

Poor Excellent
1 2 3 4 5 6 7 8 9 10

5. **Interpersonal Functioning** (able to respond and relate well to family, friends, and groups)

Poor Excellent
1 2 3 4 5 6 7 8 9 10

6. **Social-Emotional Support** (availability of people you can trust and who can offer help and emotional support)

Poor Excellent
1 2 3 4 5 6 7 8 9 10

7. **Community and Services Support** (pleasant and safe neighborhood, access to financial, informational and other resources)

Poor Excellent
1 2 3 4 5 6 7 8 9 10

8. **Personal Fulfillment** (experiencing a sense of balance, dignity, and solidarity; enjoying sexuality, the arts, etc.)

Poor Excellent
1 2 3 4 5 6 7 8 9 10

9. **Spiritual Fulfillment** (experiencing faith, religiousness, and transcendence beyond ordinary material life)

Poor Excellent
1 2 3 4 5 6 7 8 9 10

10. **Global Perception of Quality of Life** (feeling satisfied and happy with your life in general)

Poor Excellent
1 2 3 4 5 6 7 8 9 10

Appendix D.

MHI-5

De 'Mental Health Inventory 5' ofwel 'MHI-5' is een internationale standaard voor een specifieke meting van de psychische gezondheid, bestaande uit 5 vragen. De MHI-5 is feitelijk een deelschaal van de Short Format 36 ofwel SF-36, een uitvoerige internationale standaard voor de meting van gezondheid. De MHI-5 betreft vragen die steeds betrekking hebben op hoe men zich in de afgelopen 4 weken voelde. Gevraagd is:

1. Voelde u zich erg zenuwachtig?
2. Zat u zo erg in de put dat niets u kon opvrolijken?
3. Voelde u zich kalm en rustig?
4. Voelde u zich neerslachtig en somber?
5. Voelde u zich gelukkig?

Iedere vraag heeft de volgende 6 antwoordcategorieën:

- Voortdurend
- Meestal
- Vaak
- Soms
- Zelden
- Nooit

Bij de positief geformuleerde vragen van de MHI vragenlijst (vraag 3 en 5) zijn voor de antwoordcategorieën in volgorde de waarden 5, 4, 3, 2, 1, en 0 toegekend. Bij de negatief geformuleerde vragen (vraag 1, 2 en 4) zijn precies de omgekeerde waarden toegekend. Vervolgens zijn per persoon de somscores berekend en zijn deze vermenigvuldigd met 4, zodat de minimale somscore van een persoon 0 (zeer ongezond)en de maximale score 100 (perfect gezond) kan bedragen. Bij een score van 60 of meer is een respondent gekwalificeerd als psychisch gezond en bij een score van minder dan 60 als psychisch ongezond.

Appendix E.

Line graphs

Figure E1

Line graph of participants with an increase in self-sufficiency over time

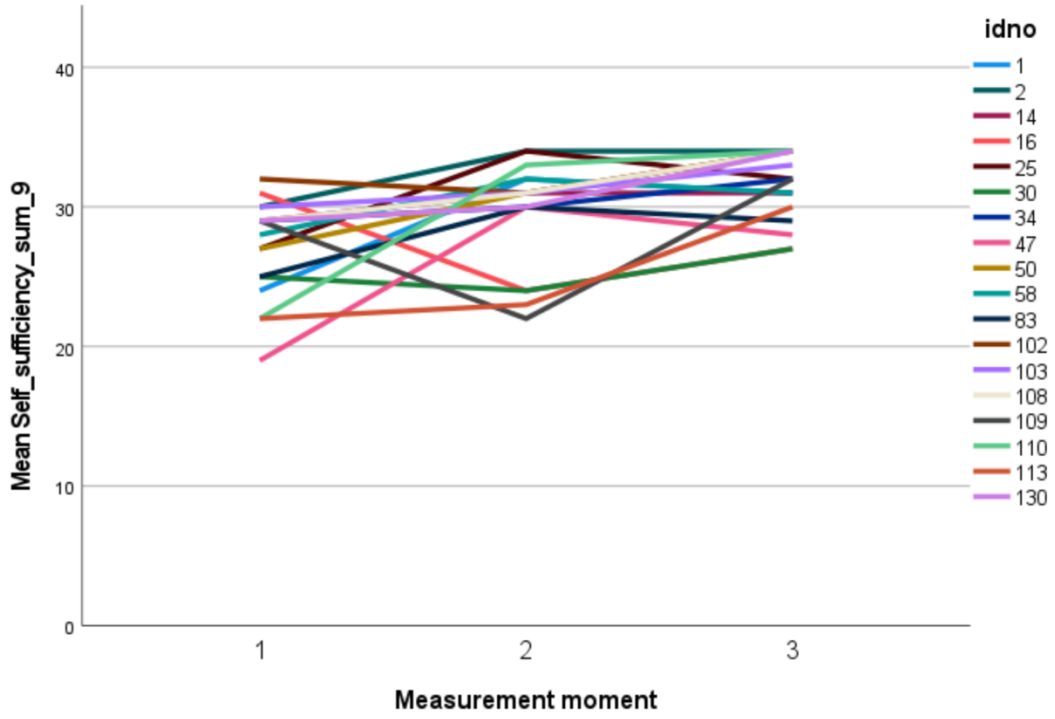


Figure E2

Line graph of participants with a decrease in self-sufficiency over time

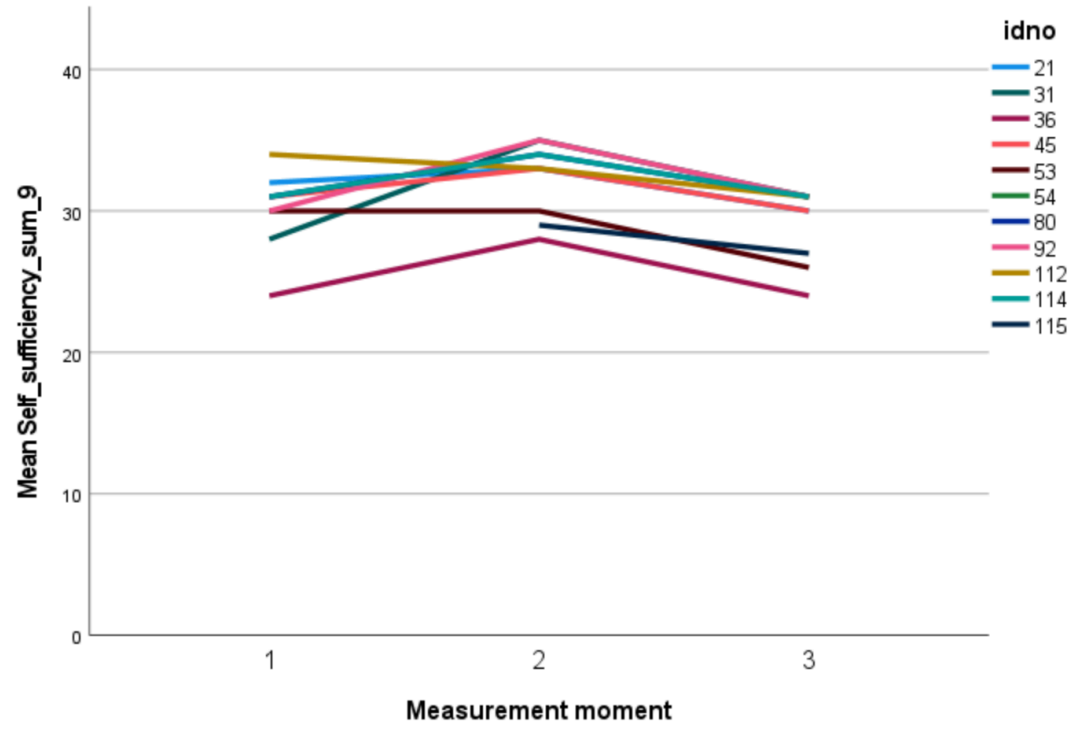


Figure E3

Line graph of participants who had constant scores at self-sufficiency over time

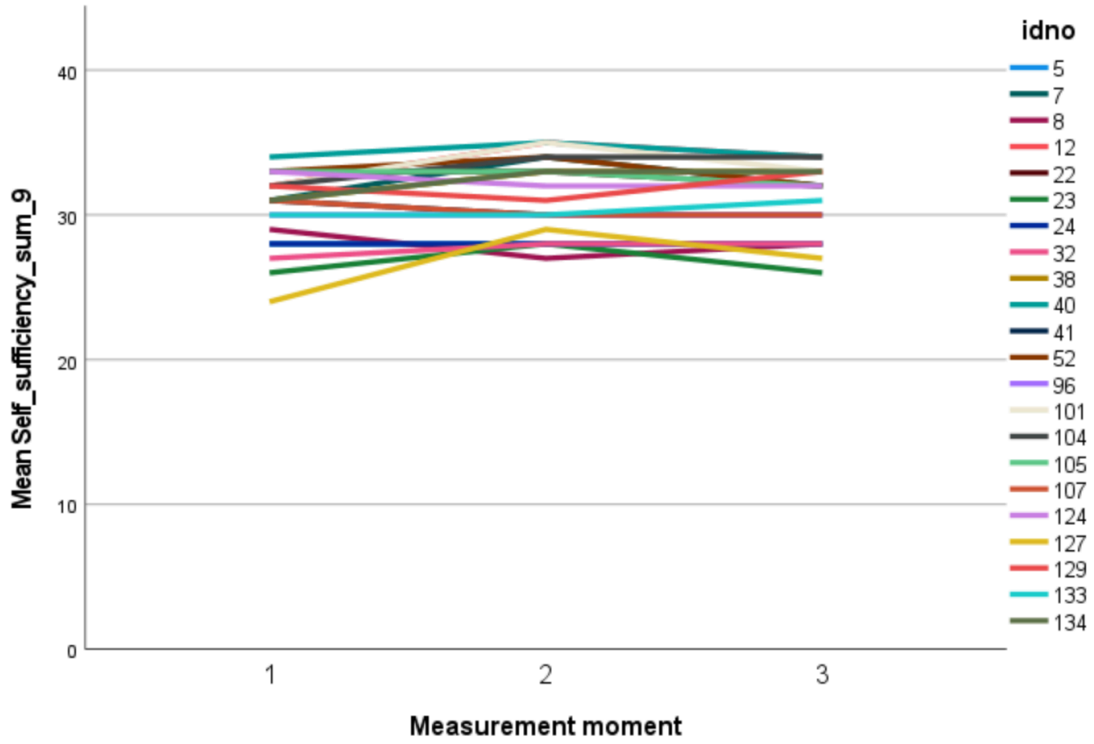
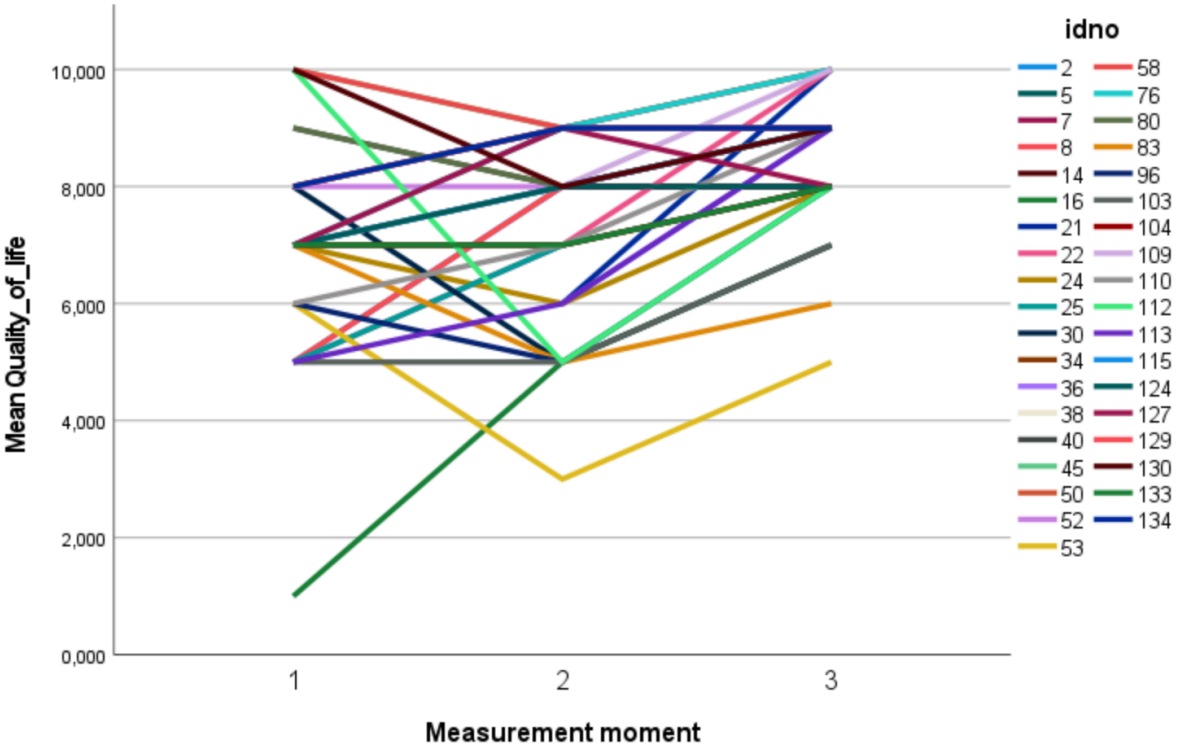


Figure E4

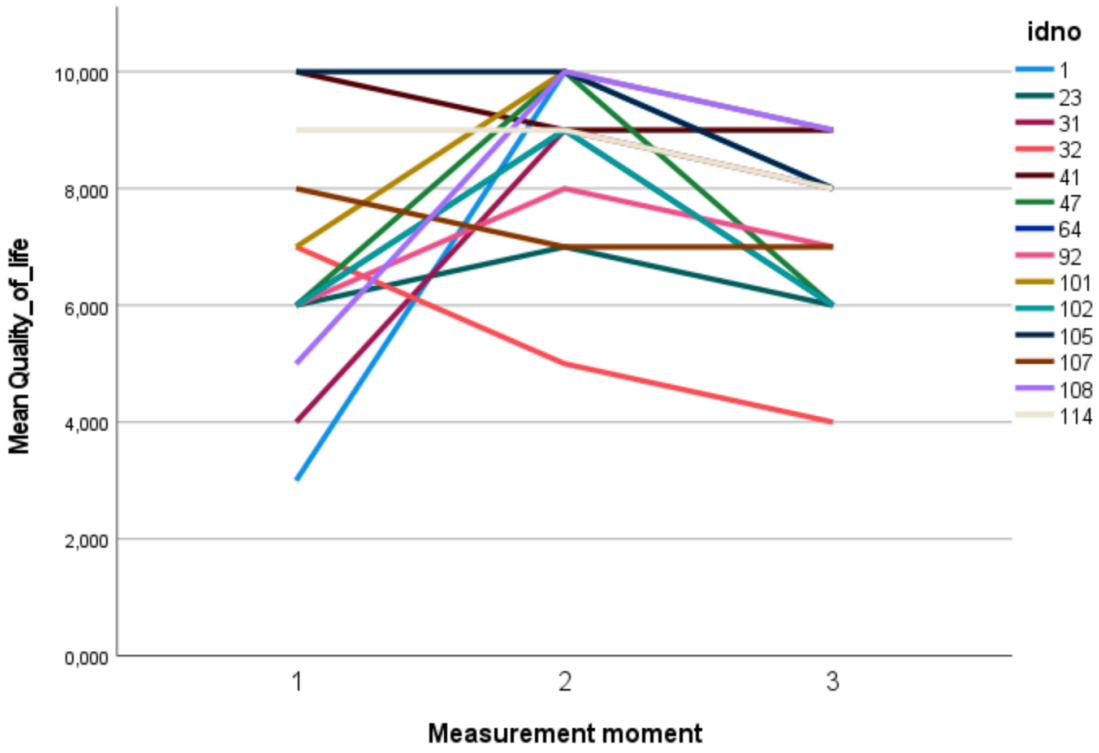
Line graph of participants with an increase in life satisfaction[a] over time



[a] The name on the y-axis 'Mean_Quality_of_Life' refers to life satisfaction

Figure E5

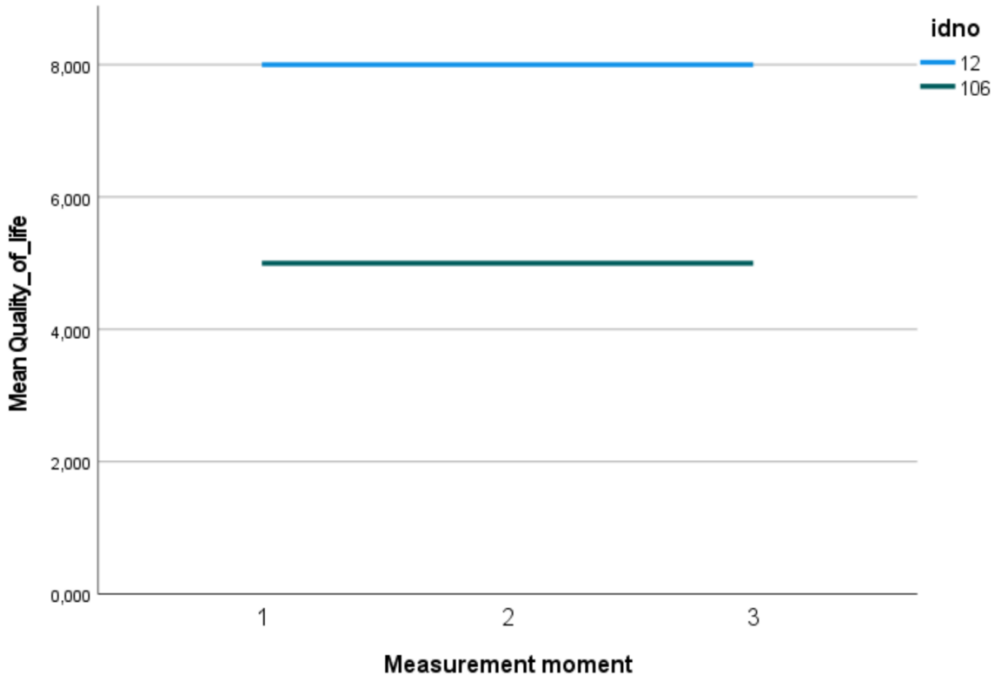
Line graph of participants with a decrease in life satisfaction[a] over time



[a] The name on the y-axis 'Mean_Quality_of_Life' refers to life satisfaction

Figure E6

Line graph of participants who had constant scores life satisfaction[a] over time

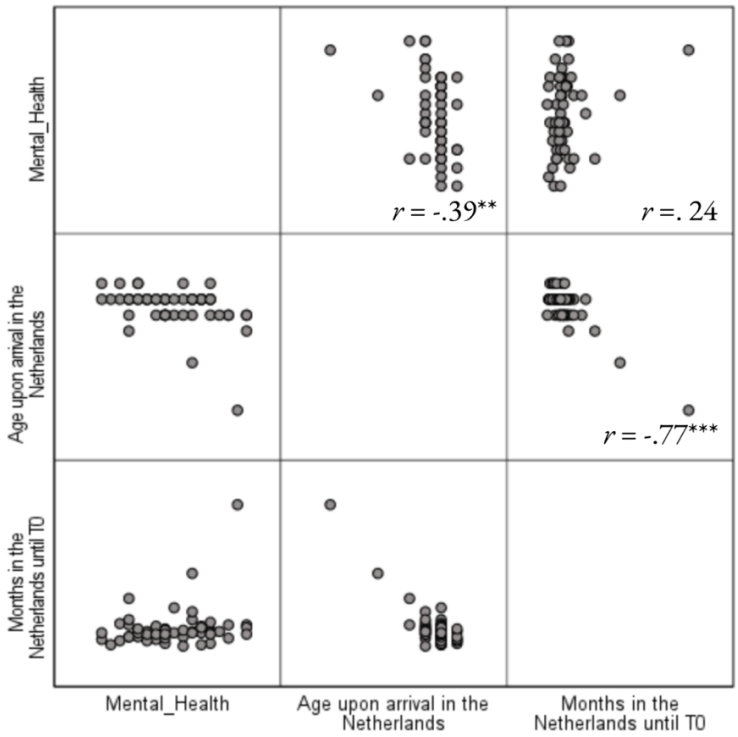


[a] The name on the y-axis 'Mean_Quality_of_Life' refers to life satisfaction

Appendix F.

Scatterplot matrix

Scatterplot matrix of age upon arrival, months in the Netherlands and Mental Health



Note. Pearson correlations are shown at the bottom right. * p = .05, ** p = .01, *** p <.001